

Leadership



INTERVIEWS • INSIGHTS • INTELLIGENCE

Personal finances

The effects of disruptive technology

Is Phakisa the answer?

Reviving mining in SA

A historic milestone

Leadership magazine celebrates its 400th edition

A platform for job creation?

New technologies, extraordinary opportunities

Prof. Pieter Steyn

Driving continuous learning from the top

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A large industrial robotic arm, painted in a light teal or grey color, is shown in a factory setting. The arm is positioned vertically, with its upper section extending towards the top right of the frame. In the lower right corner, a bright, intense burst of orange and yellow sparks is visible, indicating a welding or grinding process. The background is dark and industrial, with various metal structures and pipes. A semi-transparent dark blue diagonal band runs across the image from the top left to the bottom right, serving as a backdrop for the text. The text is white, bold, and sans-serif, arranged in four lines.

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BCX



Renewed optimism for project delivery company

Commenting on the outlook for 2019, Denver Dreyer, CEO of project delivery company WorleyParsons RSA, says that while the days of mega projects that provided a solid stream of income for a long period of time are mainly a thing of the past, there is a renewed optimism in the industry.

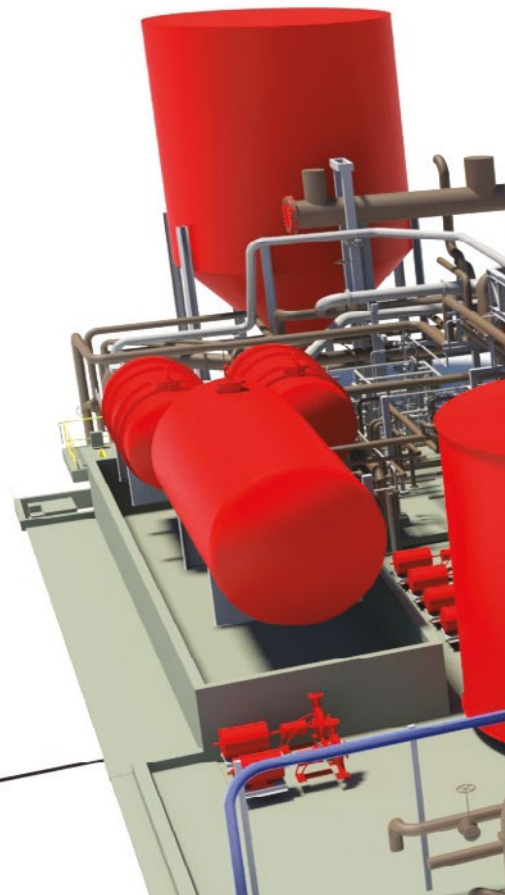
As part of one of the world's largest project delivery organisations, WorleyParsons delivers projects, provides expertise in engineering, procurement and construction management, and offers a wide range of consulting and advisory services through its consulting arm Advisian. WorleyParsons recently announced its acquisition of Jacobs ECR, which will combine the operations of the two leading global technical services providers to create a pre-eminent global sector leader across hydrocarbons, chemicals and minerals & metals.

Despite the current local economic climate, Dreyer says that WorleyParsons RSA is on an upward trajectory with awards for various smaller value projects which are collectively making a substantial contribution towards its location targets. The project delivery company has seen a surge in the southern African platinum market, with a number of significant platinum projects to the combined value of almost R100-million currently underway in sub-Saharan Africa. These contracts are mainly stay-in-business projects, with services ranging from feasibility studies to a mix of engineering, procurement and construction management.

WorleyParsons has extensive experience in process plant and shaft sinking projects in the platinum sector and has provided a full range of services across the mining value chain for major platinum projects including pre-feasibility, feasibility and early works projects, EPC management, bulk materials handling, procurement, manufacture,

installation and commissioning, surface infrastructure, personnel logistics, and multiple optimisation projects.

Dreyer says that WorleyParsons is also seeing an increase in studies, particularly in the thermal



coal sector, as well as in global resources that will be required during the transition to a low-carbon economy. These include nickel, precious metal groups, lithium, cobalt, and graphite that are necessary for the development of technologies such as electric vehicles, wind turbines, solar panels and energy storage technologies.

He adds that almost all of these studies are driven by digital technology and WorleyParsons as an organisation is investing in this field in order to stay at the cutting edge of digital innovation across the sectors in which it operates.

"The world is changing at a rapid pace. Organisations across the globe have a strategic objective to 'go digital' or be at risk of becoming obsolete, but few know how to use technology to add real value to their operations," says Dreyer. "WorleyParsons has the knowledge and expertise to offer a roadmap to help our customers navigate what is unfamiliar territory for many. 'Going digital'

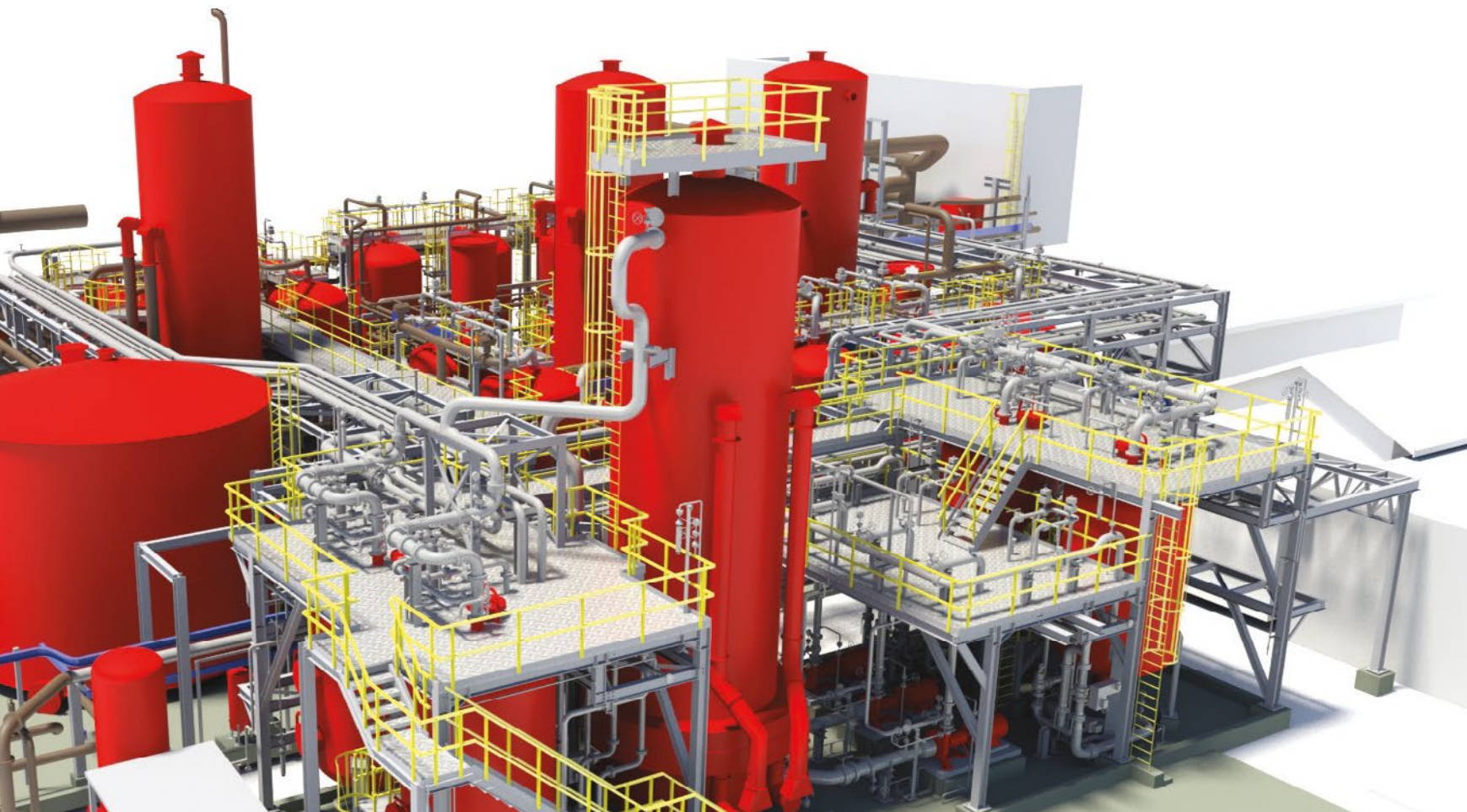
is very different to the traditional way of doing work, particularly in the mining sector which has seen very little change in mining methods in decades. It requires a change in mindset of the entire project team, including the customers' side, right down to mine personnel. Our customers' teams must be aligned with ours to embrace technology and understand the immense benefits of it."

Dreyer comments that although it will take time for the local mining sector to fully realise the benefits of digital transformation, the company intends to mainstream digitisation across its larger projects. WorleyParsons RSA is currently collaborating with one of its international counterparts to develop a ground-breaking 'intelligent' mine for a major mining client, which is set to be one of the world's most technologically advanced mines.

"We have people who understand data management and the application of data in an operational context, and can develop digital

design techniques from concept development to detailed design, implement data analytics to plant maintenance and operations to improve maintenance and plant availability, and apply digital processes and smart tools through the design, development and implementation phases. With this capability, we can develop the intelligent mine concept into a full lifecycle service offering," he says.

"As a company, we are focusing on creating a profitable and sustainable location, investing in the future and preparing for what will be a cautious return of the mining market in South Africa and beyond. We are ideally positioned to help companies tackle their projects with energy and innovation, taking them right through to execution," concludes Dreyer.

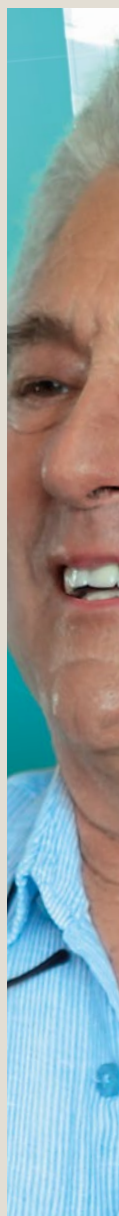


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Cranfield College's Professor Pieter Steyn is at the centre of the future, ensuring all their courses are Fourth Industrial Revolution-based, thus preparing their students to perform in the new economy

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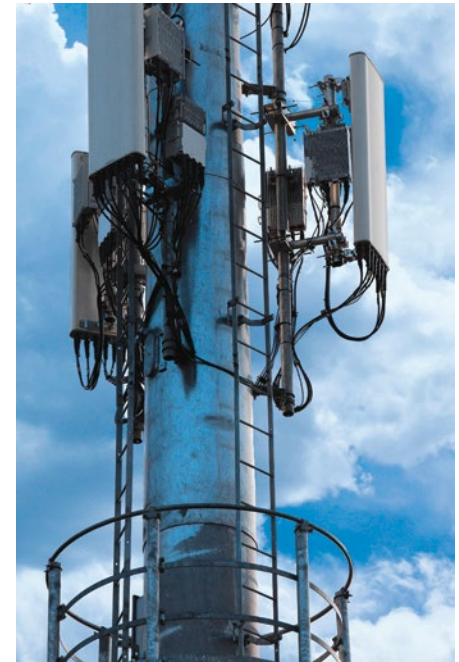
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Leadership

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Robbie Stammers

Stammers was the Editor of Leadership for over 100 editions and won numerous awards across many titles, including Best Editor of the Year on no less than three occasions, Best Business Magazine of the Year with Leadership locally and Best Business Magazine of the Year internationally. He is also the founder of The Intrepid Explorer magazine, Cape Etc and he launched the award-winning local edition of the USA magazine, Fast Company.



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Manyonga graduated from the University of the Free State with a BA in Governance and Political Transformation. The Editorial Assistant for Reignmakers believes words have the power to inform and transform. Her creativity radiates in her work as a storyteller, Social Media Content Creator and her various outfit choices. She is a creativerwriter with a fiery energy and deep passion for fashion



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Skae has been an Associate Professor and the Director of Rhodes Business School since 2010, which has 'leadership for sustainability' as its essence. His areas of interest are business analysis, ethics, finance, governance and leadership and strategic management. He is often called upon to provide analysis and commentary on governance matters.



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Leadership

The spirit of resilience and innovation

In the rollercoaster ride of uncertainty and change that seems to have become the norm in South Africa, and the world generally, there are two positive descriptions that can be attributed to the South African mining industry, and also more broadly to South Africa, and Africa—"resilient" and "innovative".

The South African mining industry, like the mining sector in most countries with vast mineral resources, is a barometer for how well South Africa is doing because of its significant contribution to growth, development and transformation, and how it impacts on related sectors such as construction and engineering. The industry has worked its way through some fairly tough cycles in the past and is going through one at the moment. This is reflected in the general state of the South African economy.

While the resilience of an organisation is often attributed to good leadership, this is only the starting point. The culture of resilience should be attributed to all stakeholders, including the government, business, trade unions, and non-governmental organisations. Most importantly, South Africa's resilience should be attributed to the most critical asset of a business—its employees. The recognition and acknowledgement of the contribution that employees make can go a long way towards ensuring that business is sustainable.

South Africa is well-regarded, internationally, for providing innovative solutions to complex challenges. This is critical to ongoing sustainability and starts with the acknowledgement that the Fourth Industrial Revolution, the Internet of Things (IoT) and artificial intelligence (AI) are real, and will continue to have a significant impact on how things are done.

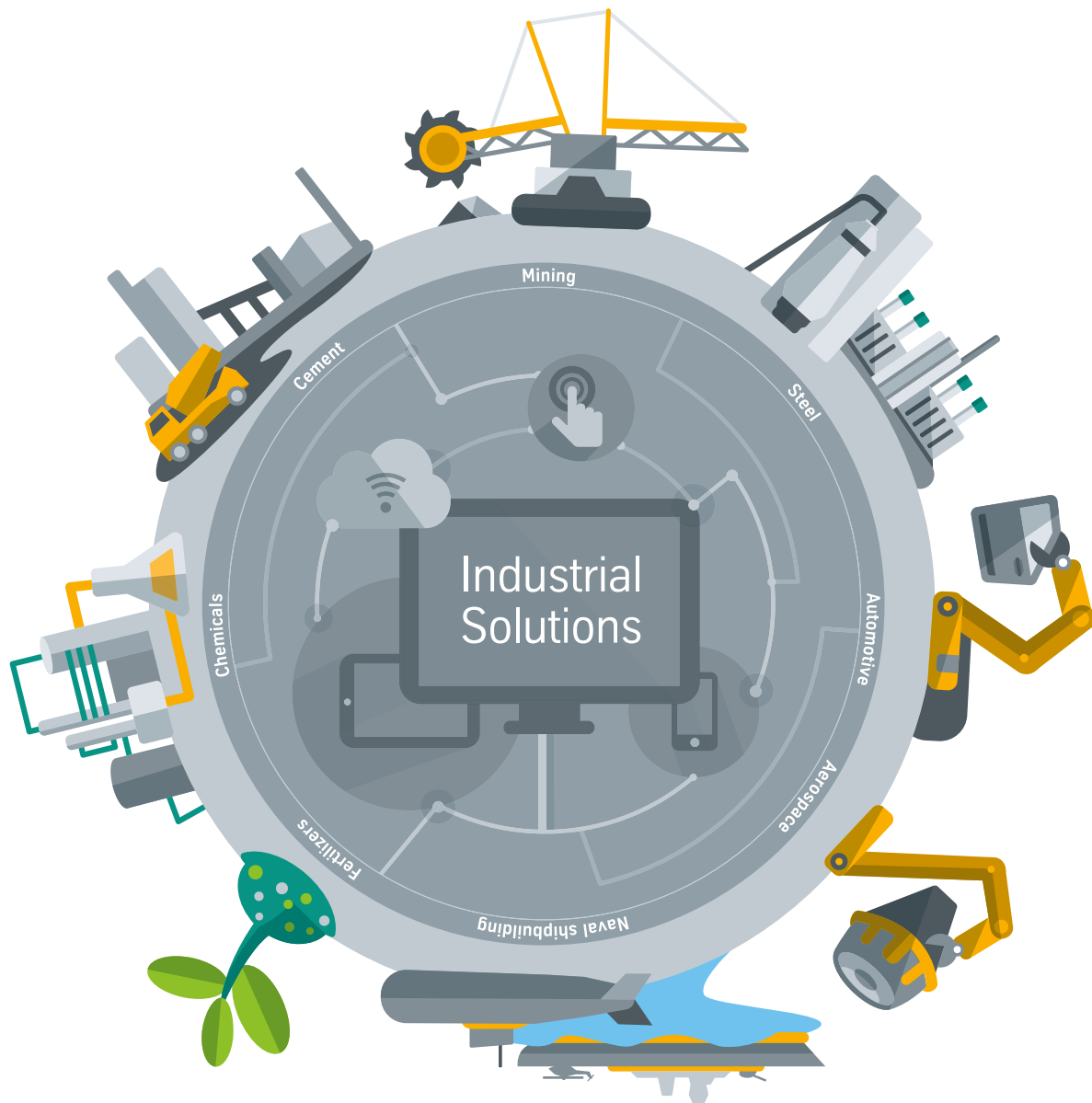
To remain resilient and sustainable will also take an exceptional level of maturity from all role-players and will require leadership teams to be inclusive, consultative and flexible enough to identify and respond to changes, which seem to be coming more rapidly every day. Decision-making is probably more of a science than an art and knowing when to take which decision, and who should be included in key decision-making, will be critical to effective and efficient decision-making in our fast-paced world.

In the face of ongoing political, policy and regulatory uncertainty, it is just as important, however, to develop and maintain a moral compass, which ensures that honesty and integrity form the bedrock of everything we do.

Foreword



WARREN BEECH
Partner and Head of Mining



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Leadership

Honorary Publisher's note: Royston Lamond

By any criteria, the 400th edition of any magazine is a hefty milestone. To Cape Media Corporation, it is a source of immense pride.

Leadership was born out of the passion of Hugh Murray, an insightful Journalist, whose deep concerns for the South Africa of a generation ago kept him in avid conversation with the political and business leaders and the groundswell of new people wanting a better country. In 1981, he assembled some of the finest minds to give birth to his idea, and with resounding clarity, steered the first edition to the printers.

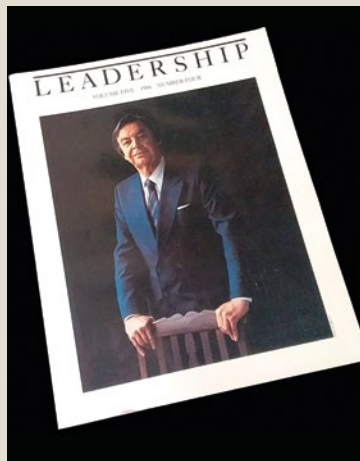
For him, it was pioneering work that set a high benchmark in the world of communications. Bold covers, uncluttered and noble; excellent photography; superb layouts; and most of all, confrontational interviews with the leaders, to dig deep into their psyche, and unlock the mood, mechanics and the very essence of how they were thinking. Through *Leadership*, we also learnt what ambassadors and world leaders were thinking and how it affected us.

Sometimes, stories were so hot that security police wanted to know sources, and the trail of breaking news knocked deadlines off balance. Financial collapses and pick-me-ups were the order of the day. But in its wake, *Leadership* collected 13 Mondi awards for superb journalism.

As the years rumbled on with the presses kept busy, Cape Media came to the rescue of the *Leadership* brand, put it onto a sound financial footing, gave it a change of look and collected the most astounding array of awards along the way.

It has become the most highly decorated magazine in the history of South African publications.

To this end, it is appropriate to say congratulations, not only to the current team, but to those who paved the way. We stand on the shoulders of giants.



Publisher's Note



ROYSTON LAMONT
Guest Publisher



*"THE **FUTURE** BELONGS TO
THOSE WHO BELIEVE IN THE
BEAUTY OF THEIR **DREAMS**"*

ELEANOR ROOSEVELT

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Leadership

Consistency breeds glory

Four-hundred editions! For anything to be done 400 times, there needs to be a clear focus, plan and a strong will to make things happen. *Leadership* magazine embodies these elements. From the days of Hugh Murray, to Robbie Stammers, up until today, *Leadership* magazine has been a consistent and influential media platform in South Africa. Well done to everyone who has taken it this far. It has been a worthwhile journey and the magazine's staying power is a testament to the hard work and determination behind the scenes.

Eight years ago, while completing my postgraduate Honours Degree in Media, Journalism and Philosophy (B.Phil) at Stellenbosch University, I had the pleasure of meeting Royston Lamond (our guest Publisher for this issue), who was the Publisher of the famous *Leadership* magazine at the time. As he addressed our selected class of 20 speaking about the current state of the media, business-to-business publishing and the future of media in South Africa, it hit me. This was for me; this was the type of media sector that would get me excited. After his address, I managed to have a 2-minute chat, which resulted in me receiving his promise to link me with the then award-winning Editor of the magazine, Robbie Stammers.

This was a big deal, as I had heard of Stammers and was generally fascinated by his work. The week before I completed my studies, I managed to get hold of Lamond who confirmed my audience with Stammers. Bright-eyed, thirsty for knowledge and exposure, and praying for an opportunity to prove my capabilities, I had a fantastic meeting with Stammers and secured an internship at the oldest and most prestigious magazine title in South Africa. It was a big deal.

Three years later, I was the Deputy Editor of this famous magazine. Today, after some fantastic awards in my industry, it has all come full circle as I am the proud Editor of this title, with my mentor and business partner, Robbie Stammers, as a Consulting Editor. It is a big deal.

As we celebrate our 400th issue, I will quote the Tabbie's judges' note when awarding *Leadership* magazine the silver medal for the best editorial feature in 2013 (Sleeping with the Enemy, written by Miriam Mannak). "This masterfully written and compelling feature ventures to where few features dare to journey: to a recent massacre in its own country. The reporting and research are superb. The story brings the tragedy to life but goes beyond just a news rehash."

As I begin my tenure, the focus and aim will be to produce more work of this quality and to keep pushing the boundaries in our niche. Read, enjoy and celebrate with us.

Editor's Note



A stylized, handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke.

EVANS MANYONGA
Editor

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The Fourth Industrial Revolution

Professor Steyn is at the centre of the future

The Fourth Industrial Revolution is underway, in full force. Forget the doom and gloom around innovation, technology and artificial intelligence (AI). The world is constantly in flux and fighting against the future is as good as fighting the inevitable. Those who don't swim with the tide will sink in the deep waters.

Cranefield College, a market leader in quality education, has streamlined its courses to ensure students and employers are at the core of all their offerings. The man driving Cranefield steadily and ahead of time is its Principal and founder, Professor Pieter Steyn an Engineer and Academic, who comes from a long line of engineers, most notably, Steyn's great-great-grandfather, Douwe Gerbrandtz Steyn, who built the Castle of Good Hope in 1668.

"I started my career in a very humble way; I enrolled myself as an apprentice. I did a four-year apprenticeship and while I was doing my third- and fourth-year apprenticeship I also completed my first-year engineering at the University of Pretoria with evening classes. ISCOR was kind to us, they gave us one afternoon per week to attend the lab work that the university only offered in the afternoons. If I could have my career over, that would be where I would start again because I learnt a lot as an apprentice. When you work with people at that level, you gain valuable human experience besides the technical. After qualifying



as an Engineer, I established the consulting engineering firm, Steyn and Van Rensburg. We did some major projects—like Bank City in Johannesburg, Standard Bank Johannesburg, the well-known Mandela Square and many shopping centres throughout Southern Africa”, Prof. Steyn says.

Continuous learning and an appreciation of the opportunities Professor Steyn has been given are continuous themes in our interview. The first year he studied towards his engineering degree was done through night school and this provided him with a unique learning experience.

“Night school was my first-year engineering, then for my second, third and fourth year, I received a bursary from ISCOR, thus, for my second, third and fourth year, I went full-time to complete my studies at the University of Pretoria. I worked at ISCOR for a while, then went on to start the consulting engineering firm which still exists today. Then the University of South Africa contacted me and offered me a job, which I took. I then established the production operations management field of study for the Business Economics Department. I received my doctorate, which is a DCom, as a relatively young man. After engineering, I also completed an MBA at the University of Pretoria,” he explains.

Having worked for 19 years for Unisa, he subsequently joined the Pretoria University Business School (now GIBS).

“In my career as an academic, I taught at both the engineering school as well as the business school. Additionally, we continued with the consulting engineering firm and did all those major projects mentioned earlier—I learnt a lot from that as well,” he says.

Steyn discusses more about himself, Cranefield College and the Fourth Industrial Revolution.

At times, we get academics who are actually not engaged in the field and it is a problem.

Do you agree with this perception?

Yes, because they don't understand the practical side of things. Having established the business helps you because you understand not only how to establish the business but also how to run it—from what's important, all the way to strategising. I learnt a lot from my MBA and the doctorate was highly specialised in production operations and developing algorithms, which is

why I have a better understanding of artificial intelligence.

You are quite versatile. From there, how did you proceed?

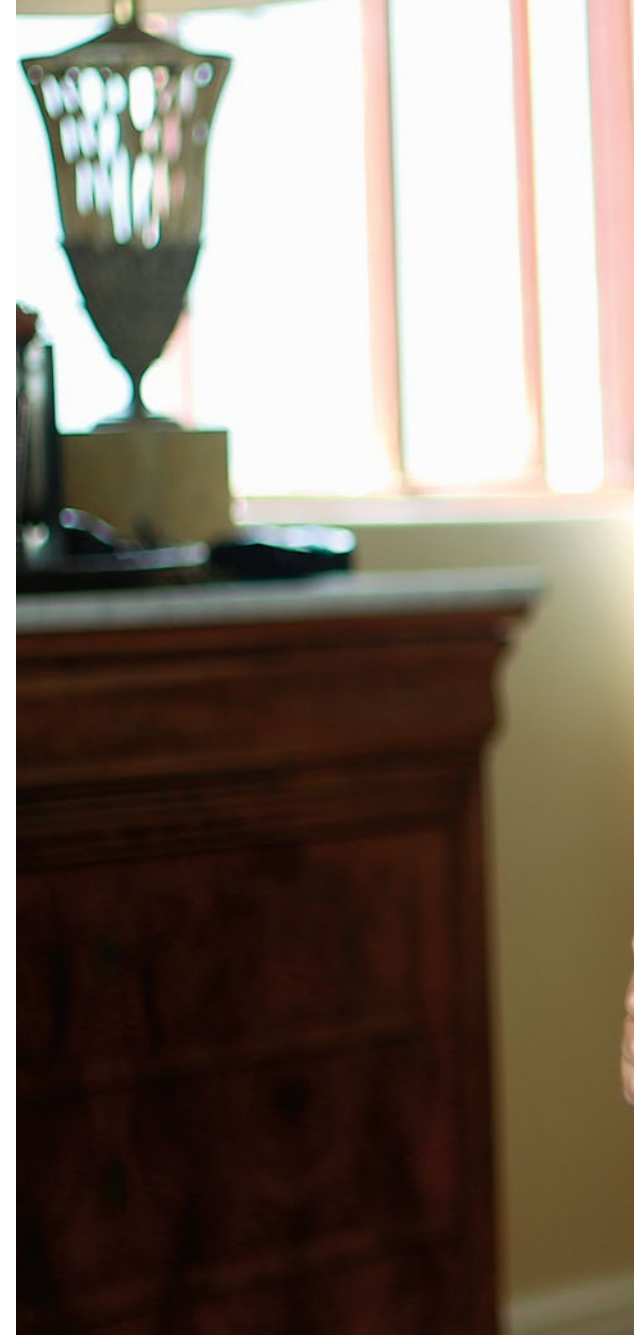
I did other projects, for example, in Swaziland I chaired the commission of enquiry into the governance of all the government departments and their pay system, which was very interesting. In 1994, with the experience I gained in Swaziland behind me, I assisted the Gauteng Provincial Government's welfare department in their transformation and change initiative from the old to the new. That was a marvellous experience.

Please could you provide us with a bit more detail on what that experience was like in Gauteng?

We did a good job. We did a total transformation plan and the smart thing we did, which I learnt from Swaziland, is we brought all the non-governmental welfare organisations, the labour unions and, of course, the government officials on board, so we received input from everyone. We consulted with everyone and that helped me immensely in terms of developing Cranefield's educational programmes at a later stage. In 1998, when I retired at an early age from the University of Pretoria, I started Cranefield. It will be 21 years old this year (2019).

When you moved from the University of Pretoria, what made you decide to establish Cranefield College? What was the vision behind the college?

At the time, I knew that there was a change coming, I had picked up on the evolution of technology that was approaching. In my own research, I picked up the work that the Ohio State University did research on. Together with the American procurement association, they realised that supply chains were going cross-functional and I picked up that move and soon realised that we were moving into a Fourth Industrial Revolution. There was no doubt in my mind that it would bring major change. I also realised, due to my MBA experience and having taught at an MBA school, that even the MBA schools would have to change in future because the world was going to move away from bureaucratic structures. Those structures were going to become cross-functional, meaning you would have to apply project and programme management. I also realised that, in future,



organisations will have to undergo a major transformation. Fortunately, both the Swaziland and the Gauteng projects were essentially about transformation and change. I also realised that the private and public sector organisations would have to move in that direction from bureaucracy to cross-functional structures.

You also had the advantage of having the perspective of the private and public sectors. Did that open your mind substantially in terms of where things are headed?

That indeed helped a lot, and then I published a very interesting article in April 2001. The article was entitled: Managing organisations through projects and programmes, the new economy approach. In it, I essentially not only predicted



The Ohio State University and USA procurement association realised that supply chains were going cross-functional and I picked up that move and soon realised that we were moving into a Fourth Industrial Revolution

but I gave a business model of how you should then manage the cross-functional organisation because your supply chains are going cross-functional, which I had picked up from the Ohio State Research. In addition, the projects were already being managed cross-functionally, the whole organisational value chain changed. I realised that there was going to be a massive need in the market for that kind of leadership, management and governance teaching and that transformational change would take place. Thus, I started Cranefield. The entire goal of forming Cranefield was to establish an academic system enabling the management of change from bureaucracy to cross-functionality, which is your knowledge-based learning organisation that operates cross-functionally. It's not only the transformation from bureaucracy to that, it also

comes down to then leading, managing and governing that, and providing a proper educational system on how one should lead and manage those cross-functional types of organisations. All this happened not knowing that within about 10 years from then, the Fourth Industrial Revolution would come into full force. What is very interesting is that the model I developed at the time, I delivered at an International Project Management Association congress in Berlin in 2004—seven years before the German “Industrie 4.0” surfaced. After that lecture, many German industrialists came to me and even asked me to bring Cranefield to Germany because they felt what I had explained was exactly where the world was going. Being a distance learning educational institution enables us to service students from all over the world.

How have you established yourself in terms of following up on the map?

Over time, Cranefield College received a lot of exposure through the International Project Management Association. I also served on their research management board. I was a member of that for seven years and the chairperson at the time was Professor Brane Semolic from the University of Maribor in Slovenia. Cranefield is also an active member of the European-based research organisation, Lens Living Lab, founded by Prof. Semolic. He and I started conducting research together because our thinking was very similar, he also saw Industry 4.0 coming. It just so happened that we have published many articles on the subject in the last 20 years. One of these entitled “Collaboratism: A Solution to Declining Globalisation and Rising



In my doctorate, I also developed algorithms, which are the basis of AI

Protectionism” was published in the March 2017 edition of the America-based PM World Journal, one of the most respected journals in the world. We won the managing editor’s 2017 top award for that article.

What was the premise?

The premise was the Fourth Industrial Revolution and that globalisation is dead, and in the Fourth Industrial Revolution, the focus is entirely on collaboration and virtual networks of partners. Organisations now and in future will only focus on their core competencies, they will bring in partner organisations to do those things for them that fall outside of their core competency and core business and that’s where the core networks and collaboration come from. In the Fourth Industrial Revolution, four things are affected the most. Firstly, customer expectations are changing massively, then product and service development are changing dramatically and products are now developed through virtual networks. Another major component of all this change is collaborative innovation, so innovation does not only happen in the one company but you bring other companies in to support and assist you with innovation. We all know innovation is, of course, the engine of capitalism. What we are saying also in that article is that, in the collaborative economy that we are living in now, organisations are automatically looking for partners. First, you look for the partner entity closest to you that can help you, then you will move into your region, then you will move nationally and if that doesn’t work for you, you go international to find a partner. Where you start is what we define as protectionism. This stimulates the growth of small and medium-sized enterprises as well as job creation in your immediate vicinity. The fourth component of this change is organisational forms.

New academics and visionaries are debating that, eventually, the world has to have a minimum wage to eradicate poverty, even for people who are not working. Thus, you have a wage that tries to level things up and ensure everyone has a way to survive. What are your thoughts on this?

As you can see, in the Fourth Industrial Revolution, technologies are increasing—and on a side note, change is not going to kill jobs because it has always improved the jobs. People are now being educated at higher levels and that

helps them to get decent jobs, with the Fourth Industrial Revolution now ensuring working in virtual networks of partners and collaborating. The third thing I mentioned earlier is collaborative innovation and the fourth aspect is organisational forms. So, your business models are changing completely. They are all moving from having silo organisations to having cross-functional organisations. It's all brought about by the Fourth Industrial Revolution, no doubt about that, and we are ready for that. If organisations want to stay on top, they have to transform and move away from the bureaucratic practices to virtual networks.

In other words, it's not about cosmetic transformation, but the transformation from the back end of the system of organisations as well?

Indeed, because it's also a paradigm shift, it's a completely new way of thinking and that means the whole culture of organisations will change as well and move away from the old rules of bureaucracies to an open mindset. For transformational leadership, you require transformational leaders who know that there are two main aspects when it comes to leadership: the people, which is always the first, and the strategy, which is the second. Those are very important. When you look at the people side, good transformational leaders have to build trust if they want to motivate people to follow them and for the organisation to perform. In addition, they have to show massive support for people in the organisation, they have to encourage innovation and encourage virtual networks. We live in a "chaordic" environment where you have to make your decisions quickly to stay competitive.

In keeping with that line of thinking, what courses are you offering at Cranefield and what sets you apart from other institutions?

At this point in time, we are predominantly a postgraduate institution. We do have an advanced certificate that is entry level and accredited NQF Level 6. Students learn basic project management, general management and business management, those are the three subjects at that level. If you have those three subjects, you have the best foundation in the world to build on further. Then, we have an advanced diploma, which is NQF Level 8, and where we build on all these aspects. Now,

we bring subjects like programme management, issues around transformation and how to manage transformation and change. Furthermore, the supply chain management then comes into play. Moving to the postgraduate diploma and Master's degree, its strategy, transformational strategy because we believe in emergent strategy, not prescriptive strategy. With emergent strategy, you can move fast, you are continuously monitoring what is going on in your external and internal environment and you make changes as you go, and you have to be

For transformational leadership, you require transformational leaders who know that there are two main aspects when it comes to leadership: the people, which is always the first, and the strategy, which is the second

agile and flexible. In the new economy, you need to lead, create, implement and improve, these are the new management functions. You have to continually improve what you do, that is why we also teach quality management systems and total quality management to our students. One of our Master's graduates is now the Managing Executive of ABSA Investment Management Services. He joined us from the bottom and now has this top job. I can tell you he is not the only one doing well. You asked what gives me the most satisfaction. I can tell you straight away it's the progress that our students make once they have their qualifications. Another Master's graduate from us is the Programme Director of Microsoft Global Consulting based in the United Arab Emirates.

What are the requirements to get into Cranefield?

The average age of our student is 38, which is probably amongst the highest in the world. This is because we are predominantly postgraduate. We are now busy introducing a BBA degree, it is still in the infant stage because it has to go through the Department of Education's accreditation and registration process. That is a tedious process, but we are putting a bachelor's degree in project and supply management in place. Our current students join us with bachelor's

degrees or other higher diplomas, or they receive recognition of prior learning—there is a process for that. We also offer a PhD. Due to our good standing and top recognition in Germany, we have already conferred three doctorates to Germans, and we have only been going with the doctorate for five years.

How many students do you have enrolled at the moment for the PhD?

About 50. Fortunately, we have very good staff because we only draw from the best.

What would you regard as the greatest success the college has had to date?

There are so many but the greatest success is our students that do so well, there are many of them in Africa, America, Europe and Australia. After all, why do you study? You study to be successful in your career and it gives us tremendous pleasure when we see how our students are coming up, even starting their own businesses. The biggest asset that our students get from us is being able to apply tomorrow what they learnt from us today and, of course, our teaching and learning are Fourth Industrial Revolution-based, preparing our students to perform in the new economy. Roughly 84% of our students are black and a lot of them are female—our diversity reflects the population of the country and there are many women.

Many people fear artificial intelligence.

What are your thoughts in terms of artificial intelligence (AI) taking jobs and destroying lives?

As a consulting engineer, I've been involved with AI for a long time and there are a lot of installations that we designed incorporating it. Already in the 1980s, AI was brought in to lift operating systems. In my doctorate, I also developed algorithms, which are the basis of AI. As for killing jobs, that is all nonsense because

if that were the case, the steam engine should never have been invented. Our PhD students are doing remarkable research on renewable energy.

For example, I asked one of our PhD graduates from last year to investigate disruptive technologies and where the future lies. He came up with something remarkable; there is a disruptive technology now, which is called “brilliant light”. The Americans invented it. Dr Randy Mills and his team have been working on this for 15 to 20 years already and it’s just about to make a commercial breakthrough.

The biggest asset that our students get from us is being able to apply tomorrow what they learnt from us today and, of course, our teaching and learning are Fourth Industrial Revolution-based, preparing our students to perform in the new economy

Water is turned into hydrogen and oxygen, and injected into a system that generates electricity extremely cheaply and cleanly. Here, you have a situation where creative innovation is solving the economic and ecological problems for us. You have to make things affordable if you want economies and jobs to grow. In this case, it will simultaneously serve to solve the global warming problem and the energy crises.

What are the dangers of failing to evolve with the Fourth Industrial Revolution?

Organisations who do not move to embrace it are going to lose their competitiveness and get kicked out of the market.

You touched on the importance of exceptional governance and transformational leadership. Would you like to comment further?

Bureaucracies will simply be unable to perform, they will need to transform and change to cross-functional structures that are programme-managed and guided by transformational leaders. This is why programme management has become so important, there is no way you can go cross-functional without programme-managed supply chains and project portfolios.

What goals have you set for yourself as the Principal of Cranefield? What do you see yourself achieving in the near future?

We should expand our postgraduate teaching and learning, especially the PhD. Fortunately, we do have the right tools for that. More research means more innovation and it is going to grow the economy.

However, we are also looking forward to expanding the undergraduate level and our short courses. We have already established a major menu of short courses. Many of them are

the class live, you can go back and watch it again for an extended period of time. Moreover, everything is now paperless, so every student gets e-books and digital study guides.

How would you describe your leadership style?

Definitely participative and transformative. I am a transformational leader and I apply emergent strategy all the time.

What advice would you give to young people who are aspiring to be in leadership roles?

Come and study at Cranefield. You will learn that leaders have to focus on people and strategy, and leaders must fully understand that role modelling is very important.

Who are some of the role models that have inspired you in your career?

Steve Jobs. What I like about him is that he was not only a technologist but also a very good businessman, and he could combine the two.

Elon Musk is also in that bracket but I had a lot of respect for Steve Jobs because even after he left Apple and his replacements failed, he came back and fixed it.

And Nelson Mandela, he was a role model for all, and proved how important it is that a leader’s role modelling of preferred behaviour is important. We need that in organisational leaders, his humanistic style united people.

How do you successfully balance your personal and professional life?

It is always a difficult thing to do, but one must always make time for your family, that is the most important thing.

You have to be a role model of your family’s value system and beliefs. At the same time, be a role model for your children and support them. The professional side of your life helps you to support them financially.

Are you still with your partner from the engineering consulting firm?

Yes, as great friends. Although he and I have both retired from the firm—he last year, and I already before I left the University of Pretoria. When I retired, I left it to him and he ran it very successfully. He continued to act as Cranefield’s consulting engineer for all our technologies. ▲

Evans Manyonga



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Happy 400th edition, *Leadership* magazine

Robbie Stammers, the former Editor of this mighty mag, reminds us of some of his greatest accomplishments and accolades in this historic and special edition



Hugh Murray, founder Leadership Magazine

I am profoundly humbled to write about the fact we are here reading the 400th edition of the oldest and most prestigious business magazine in South Africa, in fact, reasonably the entire continent, if not beyond.

Let's be quite frank, in a time and age where magazines have come and gone, where most of them have dismally fallen more than recent ANC members at the Zondo Commission, this is something to indeed be immensely proud of and to celebrate.

Four hundred editions? Not many magazines can hold their head up as high and still claim they are going nowhere soon. *Leadership* can.

Like Castle beer's old saying, 'The taste that stood the test of time', so has this title.

Leadership was started by my mentor, Hugh Murray, in the early 80s, in a time that many arguably consider the most turmoil of times in our fractured history.

Hugh was the first person my mother took me to see after school when I had said I was interested in becoming a writer. They had attended UCT together and she thought it would be a good idea for me to speak with someone who was in the trade, so to speak. We arrived in his plush offices in Claremont (ironically, the very same building I would be housed in decades later) and Hugh asked me if I thought I could write? I replied that I thought I could.

"Did you see the lady at reception who greeted you on your arrival?" Hugh asked me. I told him I had.

"Well, she got a Cum Laude in Journalism from Rhodes and she cannot write. So, be careful what you wish for. You either have it or you don't, son," he said.

I will never forget it. And, just in case, I went off and studied a BCom in Marketing and Sales—I didn't want to be his next receptionist.

And the rest, as they say, is history. Hugh Murray was with me every step of my career and it was ironic that many, many years later, I became the Editor of *Leadership*. Purely by chance, as Hugh had been long gone by then sadly.

So, I am going to try to share a few pivotal *Leadership* magazine moments that have happened over 400 editions, albeit I cannot share many before my own time, bar the ones I know below. The rest are my own memories.

In 1985, in the early days of *Leadership* magazine's success, although the South African government condemned it and the Zambian government tried to play it down, a meeting between several white South African business leaders and the African National Congress (ANC) took place in Lusaka.

The meeting included its President, Oliver Tambo, and a group of influential South African businessmen and industrialists.

"They will discuss the present situation in South Africa as well as its future. They will share all their opinions," said Tom Sebena, the ANC spokesman at the time.

Referring to the meeting between the ANC and the business leaders, Prime Minister P.W. Botha added, "I regard such attempts as unwise and even disloyal to the young men who are sacrificing their lives in defending South Africa's safety."

An article at the time in the Washington Post said: "Participants are Anton Rupert, chairman of the Rembrandt Group, a major tobacco consortium; Raymond Ackerman, owner of the large Pick n Pay retail chain; Tony Bloom, chairman of the Premier Milling Group, which processes much of South Africa's corn flour, and Hugh Murray, Publisher and Editor of *Leadership* S.A., a glossy, liberal business magazine that has published interviews with black African leaders such as Kenneth Kaunda, who served as the first Zambian President. Murray has confirmed to South African journalists that he will participate in the meeting, and he is considered the key organiser on the South African side."

This was the first of many such meetings and set the tone for *Leadership* magazine's stance. That being that leaders come in every shape, size, colour, creed or gender, irrelevant of their political persuasion. It was and is about their ability to interact with one and all and properly lead by example.

As defined in the Oxford dictionary, "A leader is the person who convinces other people to follow. A great leader inspires confidence in other people and moves them to action."

Another pivotal person who became involved with *Leadership* was David Goldblatt, one of South Africa's most famous Documentary



Former Editor, Robbie Stammers, accepting a prestigious PICA Award

Photographers, who is internationally acclaimed for his work.

In the 1980s, Goldblatt teamed up with Hugh Murray. Goldblatt's role as the Photographic Editor of the magazine gave him the opportunity to publish the work of many of the younger documentary photographers, amongst his own iconic work.

Goldblatt also began working on a 15-year project that would culminate in the publication of *South Africa: The Structure of Things Then*, published in 1998. In 1985, the London office of the ANC called for a boycott of his exhibition that was touring Britain. The ANC made this call as it believed that he had defied the cultural boycott and that he worked for Anglo-American Corporation. Subsequently, the boycott was relaxed when people like Badsha and the acclaimed South African Novelist, Nadine Gordimer, called for the boycott to be lifted against him. Goldblatt then donated the entire exhibition to the Victoria and Albert Museum in London. In 1989, together with some friends, Goldblatt raised funds to set up the Market Photography Workshop in Johannesburg.



The Leadership team that made a clean sweep at the 2009 PICA Awards

What is not well-known is that Goldblatt initiated the first open dialogue between the South African captains of capital and the ANC. He and Murray were in Lusaka to do a feature on President Kaunda and after the interview, Goldblatt suggested that they try to get that interview with Oliver Tambo, the Head of the then banned ANC, which they did.

When I took the helm of *Leadership* in 2005 (to 2011), I was adamant we would return the magazine to its former glory based on what the men above had done. That vision being a magazine based on integrity, honesty and, above all, fine journalism combined with classic design and class (along with then and still current Art Director, Brent Meder and later, the current new Editor, Evans Manyonga as Deputy).

And, to be honest, we didn't do too badly. In fact, my days at *Leadership* will always remain as some of the biggest key moments in my life. Who gets opportunities like interviewing your heroes face-to-face, like Sir Richard Branson, Al Gore, Archbishop Desmond Tutu (who insisted on personally serving the biscuits in his own office!), President Barack Obama (whilst still just a Senator), Zelda le Grange (Madiba's amazing gatekeeper—it took a year for me to finally break her down for an interview), Jacob Zuma (who kept referring to me as 'you people', as in the media), the biggest captains of industry, both locally and abroad, and my childhood hero, Johnny Clegg, who deserves a mention as I was told I only had 30 minutes and left his house two hours later, dancing on air.

In the aforementioned era, the *Leadership* team won Business Magazine of the Year numerous times, Best Design and Cover numerous times, I was blessed with three Business Editor of the Year awards and we won Gold at the Tabbie International Awards for Best Business Magazine in the world out of 500 global entries.

In closing, I must share one of my not finest moments, considering we are celebrating 400 editions. It was talking to Pik Botha. I was usually quite composed and not rattled by big names. *Leadership* had enabled me to meet or speak with many over the years but for reasons I have yet to understand, when I finally got hold of Pik Botha via phone to get a message for a Special Madiba 90th Birthday edition, I became tongue-tied. He took the call and said, "Yes?" in an annoyed fashion. This rattled me, so instead of saying I was the Editor of *Leadership*, I said I was the Leader of Editorship. I corrected myself



The award-winning Leadership cover in the international Tabbi Awards 2012's Cover Photograph category. The judges commented on the cover as follows: "This photograph of Tutu tells a story all on its own. The expression on his face is capturing and draws the reader right in. The large amount of additional copy was placed in such a way that it's not distracting and it frames the photograph nicely."

quickly, but the damage was done. My colleagues around me burst into laughter, as did Pik on the phone...I have yet to live that one down.

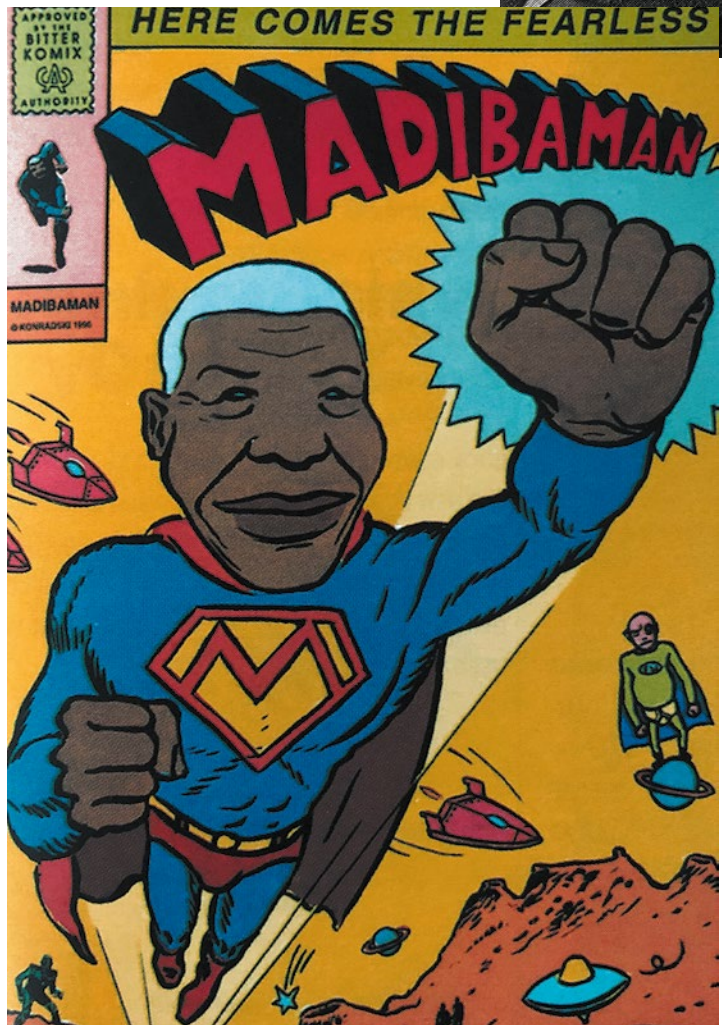
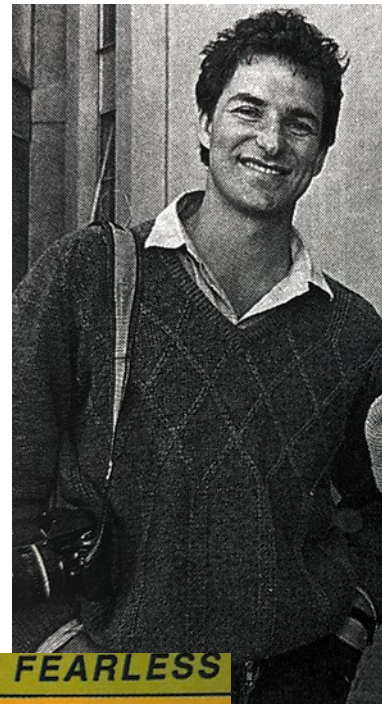
In closing, *Leadership* magazine in its 400th edition is still aimed at a dynamic readership who are not afraid to take life by the proverbial horns, entrepreneurs and those who aspire to leadership roles, across all sectors of the economy. It gives you a 'one on one' with leaders within South Africa and from around the world.

From them and their personal stories, we learn what it takes and means to be a leader.

Leadership magazine's insights and analyses of situations and people within the country bring forth an intelligent interaction with what is happening in the world today.

It's been a privilege, and a big congratulations to your 400th edition! See you at 500! ▲

Robbie Stammers





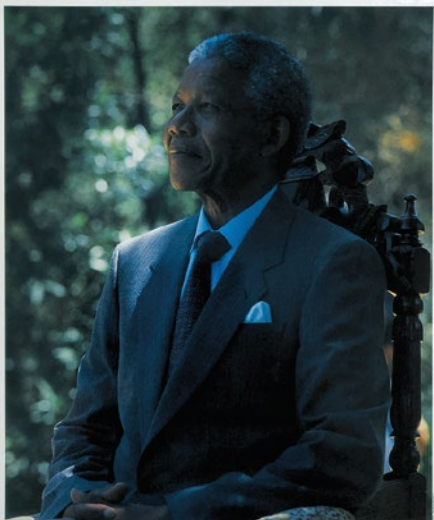
Over the past 38 years, *Leadership* magazine has produced indelible and award-winning world-class illustrations and images. These are some of the highlights. Third image from the top left hand corner: *Leadership* magazine Photographers, Paul Weinberg and Santu Mofokeng



LEADERSHIP

VOLUME NINE

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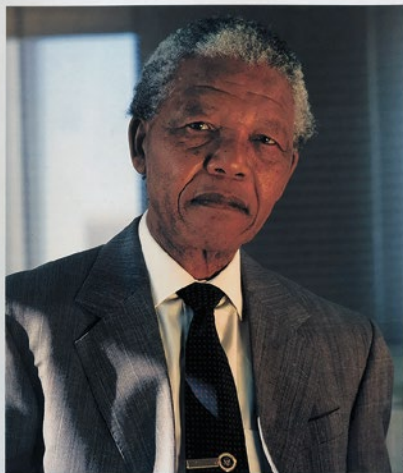
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Icon of our time turns 91

PRESIDENT OBAMA BIRTHDAY WISHES • ZAFIRO OM MANDILA • PETER MAGUBANE • IPL SUCCESS • GLOBAL SPEAKERS

LEADERSHIP POLICY

NO EASY ROAD

Nigel Bruce

Nigel Bruce is
editor-in-chief
of Leadership.

The African National Congress has recently held an important policy-making conference aimed at determining, among other things, a coherent economic stance. The outcome was less than satisfactory for those who had hoped for a forthright appreciation of realities.

It raises some interesting questions which, on reflection, have less to do with economics than with a timid and moribund leadership. To explain why requires an examination of the contrast between the sophisticated economic arguments with which the ANC is faced, and the immediate aspirations of its ordinary members. Reconciling them is no easy task.

Certainly, after the conference there was a discernible shift towards the view that the allocation of resources by free markets was superior to that by bureaucratic command. That was hardly surprising in view of the overwhelming failure of command economies – evidence of which grows by the day as the poverty of Eastern Europe and Russia is laid bare.

The persuasiveness of western governments and many businessmen on the superiority of markets has not left the leadership of the ANC untouched. And yet it persists with half-measures and inappropriate compromises – such as the advocacy of a mixed economy – epitomised in its repeated desire to hold open all of what it calls its options.

More often than not, those options don't exist. Take for example a mixed economy. It has about it the ring of sensible compromise – after all, many industrialised nations have nationalised industries and intervene in their domestic economies supposedly to remedy defects in the free market system.

But that is an assumption open to enormous question. Apart from the inability of overt collectivist societies to provide the basics of modern life, the industrialised countries are all moving away from state ownership and market intervention.

For a mixed economy is a contradiction. If private enterprise is more efficient than government endeavour, why reduce that efficiency by introducing state ownership? Moreover, there are very few examples of state intervention remedying defects in a free market. Mostly, intervention has exacerbated the problems it was intended to overcome, or created greater distortions elsewhere. Interventionists forget too easily that prices are interrelated – tamper with one, and you create ripples that can become waves that swamp or distort price signals elsewhere. Policies and business decisions based on those signals will invariably be the ones that bring reduced efficiencies.

The remedy for market defects is to be found in the work of the 1991 Nobel economics laureate Ronald Coase, who evolved what is known as the Coase Theorem. Simply put (if that is possible) it states that markets are perceived to "fail" because property rights are

not clearly specified. Once that is rectified – and the costs of transacting are reduced to zero – the different parties will bargain their way to efficiency.

Coase himself uses the example of sparks from a locomotive which set fire to farmers' crops. He reasons that if the farmers had the right to enjoin the railroad and prevent it from operating while it emitted sparks, damage to their crops would be negligible. But damage to crops would be substantial if the railroad could operate as it pleased.

If the farmers had the right to enjoin the railroad, they could sell the right to emit sparks – a right which the railroad could buy. On the other hand, if the railroad had the right to emit sparks, it could sell the right – which the farmers could buy. Farmers could then pay the railroad for a contract to cut spark emissions. There would then be an optimum amount of emission arrived at by exchange. Legal entitlements would have been traded for gain, for both had sufficient incentive to do so.

It follows that there is no *prima facie* case for government intervention to correct supposed market failure, except in the provision of some public goods such as law and order and defence.

The ANC appears to have modified its position on nationalisation in two respects. One is that if enterprises were to be nationalised, compensation would be paid. But the calculation of compensation is vague. Apparently it need not be a fair market price, determined between a willing seller and a willing buyer.

The other is that the ANC appears to be limiting public ownership to public utilities. But that too is vague. A compelling case may be made out for the privatisation of many public utilities – such as those that provide energy, water and cleansing services – in order to raise efficiencies. Indeed, public ownership of Eskom has deprived millions of blacks of a relatively cheap energy source. And Eskom, now "commercialised", is running hard to put that right.

There is another aspect to nationalisation. It is seen by some in the ANC as a means of redistributing wealth. In other words, if the utilities were nationalised they would be owned by the "people" and not by mean and rapacious capitalists. But that, too, is a fallacy exposed by Nobel laureates James Buchanan and Gordon Tullock. Their work, known as the economics of public choice, suggests that "government failure" accounts for more distortions and inefficiencies than "market failure".

Observation has indicated to them that the interests of politicians or governmentists do not, in fact, necessarily coincide with those of ordinary people. They argue that property rights should be inside government (such as nationalised industries) and not freely transferable. If they were, they would be private property. If the technical definition of inefficiency in welfare economics be

accepted, the conclusion must be that government never has been, is not now, and never can be systematically efficient.

However, a balance has to be found "between anarchy and Leviathan", and they see this occurring through a constitution that could be unambiguously welfare-enhancing, or a social contract that both legitimises and limits the activities of government.

There are those who criticise public choice economics on the grounds that it does not allow a society's existing resource endowments, which could be inequitably distributed, to be redistributed. In other words, it does not necessarily promote notions of social justice, especially not within South Africa where inequalities are profound. But that comes back to ideology rather than rational economics. Buchanan replies that you have to start somewhere, and that the choice of where to start is not always available.

The fact is that to reasonable men who understand the workings of an economy, the Coase Theorem and the public choice economics have a compelling logic, especially after recent events in Eastern Europe, Russia and China.

The leaders of the ANC cannot be unaware of this line of economic thinking and the persuasive logic behind it. Even if they be sceptical, they have to grant it some utility, for the evidence on which it is based is palpable enough. Why then does the ANC leadership continue to pursue its ambivalent attitude to state intervention and nationalisation?

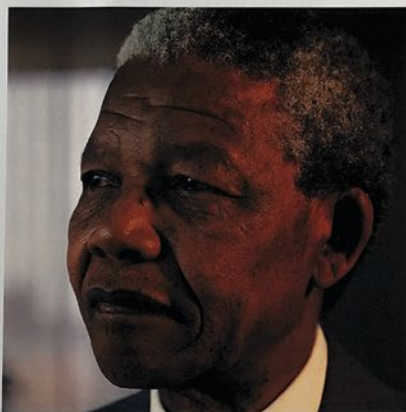
Why does President Nelson Mandela, who constantly says that he is personally not enamoured with nationalisation, still perpetually appeal to the business community to show him "another way"? And why does he do so when even the leftwing media are beginning to accept that business has put forward alternative plans, but that the problem really is that nationalisation is incapable of bringing about either the economic growth or the redistribution of resources that the ANC would like of it?

Is there a rational explanation for this irrational response? It is certainly not to be found in any ANC publication or utterance. The answer probably resides in the ANC leaders' realisation that when it is either the government, or playing an important role in government, it will not be able to transform instantly the depressed circumstances of most of its supporters.

In almost every other African country, the moment of liberation brought instant and material gratification. The typical heroic economic gesture almost always proved unsustainable, if not illusory. For these were based on collectivism and interventionist measures easily adopted soon after implementation to the benefit of a bureaucratic elite and very few others.

Often the instability of infamous economic regimes was masked by inflows of untied aid as the poor of the west sustained the rich of Africa. Eventually enlightenment has prevailed.

Zimbabwe's Robert Mugabe provides a convenient example that is close to home. On independence 12



(Above) ANC president Nelson Mandela... needs a heroic economic gesture



Leadership magazine had a close relationship with Nelson Mandela as he epitomised what the title represents. Four years before the Republic of South Africa became a democracy, *Leadership* featured Mandela on the cover, a bold move at the time, given the volatile situation in the country. Five more cover features followed during his lifetime.

When Mandela passed away, *Leadership* was appointed as the official magazine for his funeral and produced a special edition (Farewell, Madiba). A number of important individuals contributed to the programme and some of their words are captured below:

Nelson Mandela – the former President of the Republic of South Africa

“During my lifetime, I have dedicated myself to this struggle of the African people. I have fought against white domination, and I have fought against black domination. I have cherished the ideal of a democratic and free society in which all persons live together in harmony and with equal opportunities. It is an ideal which I hope to live for and to achieve. But if needs be, it is an ideal for which I am prepared to die.”

Lindi Zulu – Head: Communications Sub-Committee, ANC

“With the passing of our beloved former President Nelson Rolihlahla Mandela, we have lost more than a great political leader: the world has lost a man who served as its conscience, holding up a mirror to reflect injustice, the

struggle for global freedom and the rights of citizens to live in a just, equitable and democratic society. His burning passion for, and love of his country, ignited the hopes and dreams of not just South Africa but people around the world looking for a better future.”

Walter Sisulu – the ANC Deputy President

“As he rests in his eternal sleep, I am certain of one thing: that Madiba’s face is enveloped in a gentle, enduring smile.

No, not the broad, beaming smile we are accustomed to; not that one so full of warmth that one felt bathed in sunshine. Rather, the quiet smile, reflective, born out of looking over his life and times; a smile tinged with a hint of mischievousness for having beaten the odds, cheated the hangman and knowing he had helped make South Africa and the world a better place.”

Gwede Mantashe – Secretary-General, ANC

“Over the centuries, few global leaders have managed to leave a footprint of inspiration in which others could tread for decades after they have left the world, leaving a legacy that is a continual source of guidance. Nelson Mandela is one such rare leader whose legacy is assured.”

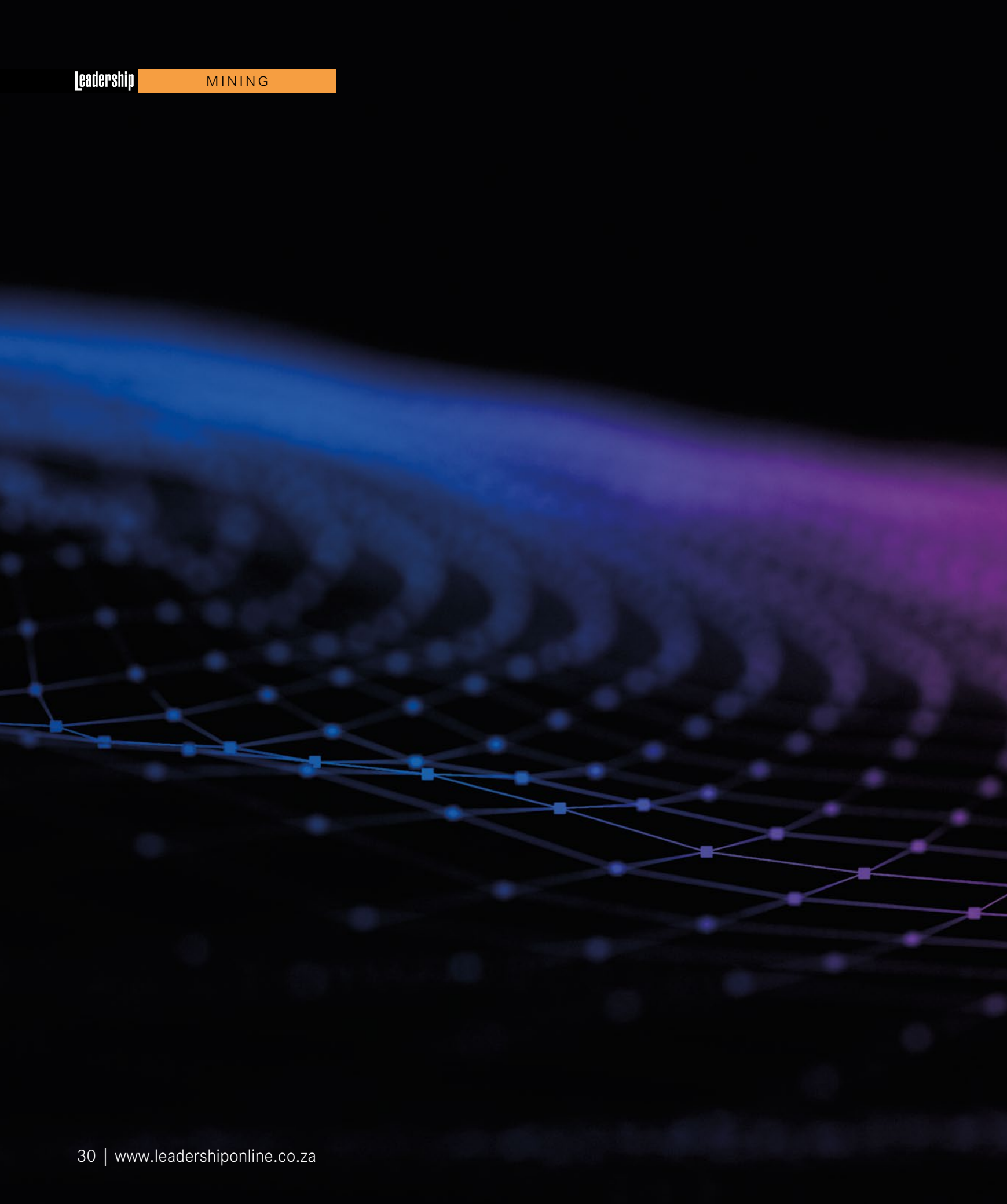


Kgalema Motlanthe – Deputy President, ANC

“A good head and a good heart are always a formidable combination.”

Thabo Mbeki – the former President of the Republic of South Africa

“Today I am privileged to bid a fond and painful farewell to a rare human being, who did everything he could to represent an eminent generation of freedom fighters without whose sacrifices we would not, today, rejoice in the reality that we have become the children of the sun. Farewell, dear son of the peoples of the world!”



Is Phakisa the answer?

Collaboration combined with innovation will provide sustainability, increased productivity and safety in the South African mining sector

Gross domestic product (GDP) from mining in South Africa decreased to R22 8080.48 million in the third quarter of 2018, from R23 3376.82 million in the second quarter of 2018. GDP From mining, South Africa averaged R23 3909.66 million from 1993 to 2018.

In 2017 mining contributed 8% of South Africa's GDP, the above statistics are a clear indication of the importance of mining to the country's socio-economic development and how, over the years, there has been a decline in the sector's contribution. Automation is the only way to revive growth in the sector. Innovation is the key to the survival of mining and companies are being challenged to assess and adjust their structures in a way that can make them compete on a global scale.

SiMINE's Director and mining expert, Gary Lane, gives his insight on the industry and how he believes innovation and technology will improve the sector. According to Lane, "The world is becoming more competitive and accelerating change and disruption."

He adds that "systems thinking is a critical organisational capability that will allow it to be agile to respond to this change". There are big opportunities to transform the mining industry if they focus on the right solutions to their specific problems. Systems thinking is critical because everything is an integral part of the system and timing is everything if the intention is to improve performance.

Optimising existing systems has been previously used to increase productivity in mining, however, innovation will lead to cheaper extraction, growth, security and increased production.

The first Industrial Revolution introduced the use of fossil fuels to power machines, stimulating steam-powered mechanical production. The second one, which was underway in the late 19th century, was seeded in breakthrough electricity distribution, communication systems and power generation, which led to accelerated trade and mass production. Which leads us to Industry 4.0 and the way it is going to affect safety and productivity in the future of mining, paying close attention to "Mining Operation Phakisa", a four-week operation that is intended to identify and resolve the challenges plaguing South Africa's mining sector crisis.

As new technological solutions become available to mining companies, tensions between job creation and industrial development intensify.

Operation Phakisa intends to identify concrete problems limiting the growth and developmental impact in South Africa's mining sector with the hope of formulating potential solutions.

The Mining Phakisa has resulted in the establishment of the Mandela Mining Precinct in Melville, Johannesburg, which has a large role to play. Lane explains that Industry 4.0 is about people with the technology being the enablers, which is why they created a programme called Operational Systems Capability at SiMINE. Working on the right things at the right time is the only way to maximise system performance—building agile systems with appropriate roles. SiMINE hosts networking and knowledge-sharing platforms and acts as a testbed for mining 4.0 technologies using digital twin simulation.

The National Development Plan (NDP) launched operation Phakisa in 2014. "Phakisa" means "hurry up". This multistakeholder process first got underway in August 2015 under the Department of Planning, Monitoring and Evaluation (DPME) to objectively facilitate and monitor government programmes. Mining Operation Phakisa has the potential to provide a coherent and comprehensive response to the wide range of issues impacting the sector.

Themes the initiative focuses on, such as improving upstream linkages between mines and the domestic capital-equipment sector, explore a winning solution to the beneficiation of both bulk resources and precious metals. Furthermore, enhancing research, development and innovation within the cluster and planning and implementing holistic mine modernisation will scratch the surface and aid an informative procedure intended to improve safety and production in the mining sector. Other companies that are transforming in accordance with Industry 4.0, such as Rio Tinto, are benefiting, attributing autonomous mining because it has increased efficiency, leading to increased productivity.

South Africa has a long history with mining and mining research but the pressure is on for it to adapt to the technological transformation that previous long-standing practices cannot keep up with. Post-mining Phakisa, the country's mining sector had no significant price movement, cost increases were greater than consumer price index, there was a decline in productivity, there were capital delays, high energy costs curtailing in life of mines and no step changes were taken to improve safety, shrinking the size and value

because of failing to manage assets with the developmental intention. Industry 4.0 will assist in reviving the growth of the sector and by automating, there will be access to enhanced drilling and rock breaking systems, integrated real-time data, savings on energy costs and a safer environment for workers.

Phakisa produced concrete plans and a strategy that all depends on collaborative efforts and inputs from key stakeholders that are clustered around mining. The operation determined that the solution to all those problems was the modernisation of mining through optimisation and innovation. Doing this would ensure an inclusive process that rebuilds the mining sector, paying attention to technological transformation, social inclusion and job creation. It is imperative for the sector to have remotely operated mechanisms and to be industrialised. Phakisa first steps towards achieving that goal are, firstly, developing the technologies that would incorporate sustainability, safety and export—this would also support the local manufacturing sector.

Phakisa elements will revive mining in South Africa in the interest of the government, mining companies and equipment companies by advancing research and development (R&D) pertaining to fuel cell development to reduce reliance on coal and diesel, and leveraging off the country's abundant platinum costs.

Furthermore, the development of new systems for mining narrow tabular seams will be done by mechanising and automating the drawing on new developments that interconnect the autonomous process. Moreover, it will place an increased emphasis on the local manufacture of capital equipment and local ownership of manufacturing companies. New technology will be able to address the environmental impacts of mining and repurposing of mining land to new ends, such as energy and clean water production, biomass production and agriculture and mining waste. Lastly, there's the targeted beneficiation of specific minerals such as iron ore, platinum, manganese and titanium. All these elements will assist in local skills and business development in mining technology, not just locally but on a global scale.

There are numerous tasks that are going to be addressed by Operation Phakisa. In order for that to happen, research institutions, mining companies and industrial manufacturers in the country have to collaborate. The Council for Industrial and Scientific Research (CSIR)

was tasked with identifying and initiating a mechanised solution for South African mines that supports local manufacturing and solves problems relating to cutting hard rock. New technology would help the mining industry by installing and testing sensor systems for environmental monitoring in mines, developing a framework that supports real-time monitoring technology to assist personnel-machine interactions, machine rock interactions and machine-to-machine interaction.

Evidently, there is an urgent need for mechanisation as automation will assist the process of revisiting the extraction process in order to facilitate better understanding systems, conditions and equipment.

Presently, CSIR has already introduced three new technologies, namely the 'Monster', a robot that can identify and assess risk in underground mines to avoid endangering human workers, the 'Rock Pulse', which serves as an early warning and monitoring device that constantly observes rock masses for small

seismic activity. And the glass rock a prototype glass device tailored to allow miners to see through rock faces where reefs are located. It features a pedestrian detection system to avoid underground collisions. CSIR has invested in laboratories to provide human resources for providing services to the sector.

Phakisa hopes to eliminate all mining fatalities by 2020, bearing in mind that mining is a vital sector for the government and one of the strongest employment sectors.

The poor safety record is one of the main contributions of stagnant or poor production results. CSIR, being able to visualise potentially hazardous geological structures, will assist in managing health as it will monitor and quantify underground hazards. These new technologies have escalated that process, but there are other factors that need to be addressed such as the dysfunctional relationship between the state and mining sector and this can only be achieved by plans conceived collaboratively, such as Phakisa.

Phakisa has opened many doors for the private sector, particularly for manufacturing companies. The whole idea behind it is to foster a collaborative platform that enables growth and safety across the mining sector.

According to Lane, mining is the heart of the South African economy and a significant opportunity exists to increase productivity and extend the life of existing mines—this can be achieved through technology.

This operation is a platform for a coordinated technical innovation structure that is designed to spearhead Industry 4.0, creating a safe, sustainable environment across industries and assisting with the growth of productivity in the mining sector while promoting public-private partnerships.

New technologies equal mining further and mining further means extracting more value and better standing when competing in the international market. ▲

Tavonga Jacqueline Manyonga



Personal Finances: Brave New World; Old School Principles



The disruptive technology of the Fourth Industrial Revolution in finance and insurance only necessitates an increase in transparency, definition and affordable common sense

The worlds of medical and life insurance, pension plans and retirement annuities have long been associated with reams of paper and fine print.

Complex conditions and prerequisites, esoteric legal terminology and insider jargon—such discourse has often meant the consumer has had to abjure personal responsibility and knowledge to brokers already initiated into the hieratic rites of underwriting, opaque pricing structures and actuarial formulations.

This edifice has cracked in recent decades. In recent years, investment managers have shown greater agility in product design and radical reduction in commission costs.

But, as Independent Financial Planner, Pierre Taljaard of Cape Town, explains, the revolution in transparency and personalised attention is by no means complete.

“The traditional practice saw insurance firms wrapping investment and life insurance into one product. In the last few decades, the dominance of life insurance businesses has been challenged as asset management businesses have entered both the retail and pensions investment market.

“These managers demonstrated the ability to change the pricing structure previously used to fund the commissions paid to sales teams—insurance has typically been sold, not bought.

“A similar transparency has worked its way into the insurance world but not quickly enough for some, including regulators. The Retail Distribution Review, currently being developed and implemented by the Financial Services Board, will hopefully continue the trend of placing the client at the centre of all product development and distribution.

“As it is, the insurance landscape still largely thrives on complexity and lack of transparency,” Taljaard says.

One thinks here of the often unadvertised Prescribed Minimum Benefits of all South African medical aid schemes, or the recurring confusion concerning pre-existing conditions and other types of exclusions.

“Reams of fine print, differences in claim event definitions, different premium pattern options and bonuses to disincentivise clients from cancelling policies all add further layers of complexity,” he adds.

For Taljaard, true disruption in the market is not simply more bonus and loyalty systems, or even apps or online portals.



"I believe the landscape is slowly being personalised, where the needs of the client are assessed independently and where these needs are met by products that are easy to understand, fairly priced, and can be trusted to do what they say they will do," he says.

But technology will obviously still drive competitive practice on the supply side.

A digital transformation

Forbes recently listed the top five digital transformations within both the insurance and healthcare industries.

Self-service dashboards, digital claims systems, instant price comparisons and the insurance of items when in use, have all shaken up the offerings of industry players.

Thokozile Mahlangu, the Chief Executive Officer of the Insurance Institute of South Africa (IISA), writes of an oncoming digitisation of the insurance industry, in which artificial intelligence (AI), big data, the Internet of Things (IoT), and blockchain all form a dynamic nexus, which must still be utilised with the customer and the market front and centre.

Mahlangu notes that AI and big data could be used to reduce the time and energy spent on detecting fraudulent claims, and to analyse

patterns, trends and behaviour in a bid to formulate specific and targeted policies.

Along with Forbes, Mahlangu notes that IoT may provide a truly futuristic digitalisation of service in which wearables and 'smart' homes become sources of data and treatment in real-time.

She is, however, perhaps most enthused by the cryptographic record-keeping that the blockchain may provide all insurers:

"The blockchain is probably the one element that will have the biggest impact on the industry. A much bigger use of blockchain is in the development of 'smart contracts', which embeds immutable contracts in a blockchain that can then automatically execute when the conditions of the contract are met. It is defined as a decentralised digital ledger in which cryptocurrency

transactions are recorded chronologically, unchangeably and publicly.

"For the insurance industry, this has profound repercussions in averting a number of issues, while it also helps establish authenticated, reliable and accessible transactions," she says.

However, Mahlangu warns that none of these digital boons are game-changing unless they are driven to serve the consumer.

"The industry also has to ask itself what their consumers struggle with most. After all, insurance is about assessing risk, developing policies, getting premiums and paying out legitimate claims. Digital solutions need to address these fundamentals.

"Most industries have started their trek into the digital space. One thing is certain, those who survive this space have to either be pioneers or

"I believe the world is moving towards more of a professional trusted advisor system where the needs of the client are assessed independently,



have something special that sets them apart. The digitisation of the insurance industry locally will surely make a meaningful impact if and only if it uses digital elements to better understand the needs, behaviours and wants of local consumers. The trends are already out there—how we collect, dissect and use the data is what will set industry players apart,” she insists.

The cyber threat

Naturally, the digital revolution, like any opportunity, comes with risks and threats. Cybercrime and data theft, as well as information security, have now become a key aspect of the underlying

health of financial service providers and individuals alike.

An Internet of Things creates a hackable network of personal information. In this regard, as institutions compete in the digital sphere, they will also need to collaborate as a kind of guild in order to educate consumers and assist law enforcement and each other in preventing or prosecuting criminal networks.

Already industry players are beginning to offer insurance against this threat—as data is not traditionally an asset and as such, does not automatically fall under existing policies. AIG, to use one example, now offers insurance against

data breaches, data liability, cyber extortion and interruption of business networks.

Again, such service needs to be directed, and re-directed again, toward the person and their needs if it is to remain profitable in a world of mass information.

The ever-prevailing human factor

The recent Momentum affair demonstrated the above principle vividly.

The insurer initially refused the R2.4-million life insurance claim of the widow whose husband had been killed in a hijacking, saying the deceased had neglected to disclose his raised blood sugar levels.

The ombudsman would find in Momentum’s favour but after public outcry, the insurer returned the premiums paid and finally decided to pay out the policy in full.

Reputation trumped fine print, in other words.

This is a risk for the industry of personal finance and insurance, as well as an opportunity.

At the end of the day, people require the five basics of financial health. Medical insurance, retirement saving, life cover, disability cover and some other form of saving.

Companies that can harness the potential of technology, pooled risks and savings, and the effects of compound interest, can meet these customers’ needs—but only if they truly focus on these needs and the people they serve.

The world has grown too small to be a distant financial institution any longer.

Jack Bogle, the recently deceased founder of the Vanguard Group, perhaps pioneered this approach in the personal investment industry.

He was the father of index funds and, thus, the now financial truism that it is better to own the market rather than to try to beat the market by using highly paid fund managers. Despite managing assets of more than US\$5 trillion, he never became a billionaire—because his relentless focus was on keeping costs down for his clients and building wealth for them. His legacy lives on.

Come what may in the world of insurance and financial planning—be it the technological leaps forward, the Fourth Industrial Revolution or the imminent government intervention in private healthcare via the National Health Insurance—the human concern will remain the ultimate factor in the true success of the life of any institution or person. ▲

Chris Waldburger



Yes HAGGAI YOUTH EMPLOYMENT SUCCESS



Strategic Learner Absorption Partnership

Haggai has partnered with the Young Africa Business Development Agency to assist Learners who were previously unemployed with progression into careers. Those with Entrepreneurial flair are supported to start their own enterprises creating further Opportunities.

Learnership Offering

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Effective Learnership processing enabling 94% of the initial spend back through various rebates.

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EE training
EE analysis
EE Committee support
EE reporting

Youth

Employment

Success

The premier leadership organisation

YPO (formerly Young Presidents' Organization) is a global network of young chief executives, which empowers more than 27 000 members in more than 130 countries, diversified among industries and various types of businesses

YPO is the global platform for chief executives to engage, learn and grow. YPO members harness the knowledge, influence and trust of the world's most influential and innovative business leaders to make a difference in the world through business, personal, family and community impact. Altogether, YPO member-run companies generate US\$9 trillion in annual revenues and employ 22 million people.

YPO will be hosting its YPO Edge event in Cape Town on the 6 and 7 March 2019—only the second time the annual event has been hosted in the mother city. Leadership magazine sat with two members of YPO who have just been inducted onto the YPO Board—Hasit Patel, COO of the Ramco Group of Companies and Emery Rubagenga, the CEO of ROKA.

Hasit Patel, COO

The Ramco Group of Companies operates in Kenya, Uganda, Tanzania and Rwanda. The group of 47 companies can be broadly divided into six key sectors—printing and packaging, hardware and building supplies, office supplies and stationery, manufacturing services and real estate.

A leader who is passionate about business transformation and disruption, Patel is in search of the perfect balancing point where the nimbleness of a family-run business meets the systems



and structures of the corporate world—a point he believes can enable business to sharply accelerate in growth and purpose.

His passion lies in technology, systems and processes. Outside of the Ramco Group of Companies, Patel sits on the board of a local school and mentors several young entrepreneurs.

He joined YPO in 2005 and has served in various leadership roles in the Nairobi Chapter and on the African Regional Board,

and is currently on the International Learning Committee. He has also day chaired several local and international events.

How has your background prepared you for the position you now occupy with the Young Presidents' Organization?

My current role in our group of companies is to lead and develop the strategy in the group, whether this is by the vertical or individual organisation. The expectation of this role is to also hold leaders accountable for delivering on their strategic goals and provide guidance and resources when goals are not being met. This is the role of a YPO board member.

How do you aim to make an impact in your new role?

I bring a lot of experience in technology, strategy development and change management. I, therefore, hope that these skills will bring a new angle to the board in terms of using technology to develop and manage strategic goals, whether this is at a global or chapter level.

What are your thoughts on collaboration and innovation?

Innovations are often required when something is failing. Failure often surfaces when teams communicate well and believe they are in a safe space during the communication process, collaboration is the only way to create strong

communication and create that safety—thus, innovation without collaboration isn't possible.

Who do you consider as someone making a great impact in the business world at present and why?

Satya Nadella—in such a short time, he has given Microsoft a new purpose and driven them to innovate and turn around their teams.

What can we expect from YPO as we move into the future?

YPO will cater more to the diversities of business leaders, it will focus on learning what is becoming more important to the modern leader and generate opportunities for leaders to improve their leadership skills in order to excel as a modern leader.

How will your involvement in YPO create change in your specific organisations?

YPO has already had a huge impact on our businesses. In this role, I am hoping to learn how YPO is changing in order to better suit its customers and this knowledge and understanding is what I hope to bring back to my organisations.

What are your thoughts on the upcoming event, the organisation's second event in South Africa?

Actually, I attended the first event in Cape Town soon after becoming a member of my chapter ExCo—it has always been one of my favourite GLCs—so I am really looking forward to attending again, this time in my new role, and enjoying it as much as I did the first time.

Emery Rubagenga, CEO

Rubagenga is a Rwandan businessman who is passionate about Africa's development in all aspects and driven by a sincere desire and commitment to make a difference in Africa's quest for self-sufficiency in this generation.

He is the CEO of ROKA, one of the largest mining companies in Rwanda, and has mentored several young Rwandans to become successful entrepreneurs through his work as the first Vice President of the Private Sector Federation – Rwanda's Chamber of Young Entrepreneurs of the.

Before joining hands with partners and creating ROKA, Rubagenga served as the Rwanda representative for the Microsoft Corporation in Rwanda, bringing a wealth of networks and



synergies that have been enabled by a conducive environment in a country that has successfully positioned itself as an emerging technology hub for the region. For several years, he worked for one of the largest manufacturing companies in Rwanda and conducted several consultancies in the areas of strategic management, investment promotion as well as marketing in the East African region.

Rubagenga has received the highest Junior Chamber International (JCI) honour as the only JCI Senator (a unique tribute paid to an individual for dedication and outstanding service on a national level). Rubagenga has spearheaded various international events promoting foreign investments in East Africa and has facilitated the region's visibility in Dubai, London, Hong Kong, Toronto and Washington, D.C. to mention but a few.

Rubagenga serves on several boards in Rwanda's private sector as well as international corporations ranging from technology companies and breweries to energy and education. He is the local representative of PUM Netherlands (a Netherlands management cooperation programme), an organisation that aims to empower the private sector through connecting entrepreneurs in developing countries and emerging markets with senior experts from the Netherlands who devote their knowledge to mentoring and coaching.

Rubagenga is well-recognised as a great entrepreneurship development supporter

for the youth in Rwanda and has been called upon to serve on the advisory boards of Skol Breweries and the Innovation Prize for Africa (a non-governmental organisation empowering young graduates to become entrepreneurs).

Rubagenga is also the Chairperson of the YPO Rwanda Chapter.

How has your background prepared you for the position you now occupy with the Young Presidents' Organization?

I have been extremely lucky to have gotten involved in the leadership of business organisations at an early stage in my professional career in Rwanda. I assume important roles, both at the Private Sector Federation and Junior Chamber International. I have developed such a strong passion for entrepreneurship-related matters, which I will be very excited to share with fellow board members while learning from everyone's experience.

How do you aim to make an impact in your new role?

I keep my mind on an extremely high-alert mode when it comes to unpacking how business leaders can contribute to improving the world we live in. One of my recommendations would be to find innovative technological tools and plug them into the YPO App in order for members to exchange the best practices amongst themselves while learning from each other's experience on impact investing.

My emphasis will also be focusing on:

- Driving membership growth, especially in emerging markets aiming to create a powerful network of agents of change for a faster and more inclusive socio-economic development of the world.
- Creating member awareness of the impactful potential YPO has as the premier leadership organisation of chief executives in the world and, therefore, the responsibility that comes with it.

What are your thoughts on collaboration and innovation?

YPO has been a wonderful organisation for many of us, I have personally learnt a lot and made lifelong friends from all over the world.

This geographic diversity of business leaders and a worldwide presence can give YPO a very unique competitive edge in terms of forming strong partnerships with other platforms, such as the United Nations, World Bank,

World Economic Forum et al., and not only for attending each other's events but also for the development of practical joint programmes.

Who do you consider as someone making a great impact in the business world at present and why?

Though philanthropists like Bill Gates, Warren Buffett, George Soros, Jack Ma and many others are magnificent examples of generosity and impact; I would like to highlight a particular initiative called B The Change that has developed a certified programme, which has enabled more than 2 500 companies to tackle the hard work to make measurable, positive impact improvement.

Each of the more than 2 500 Certified B Corporations declares, upon certification, to be committed to continuous impact improvement. Most notably though, in my context as a Rwandan and also as a global citizen, there is no doubt in my mind that someone who has made the greatest impact, not only in the business world but also in social and economic development, is Paul Kagame, the President of Rwanda. For someone who inherited a country

on the verge of extinction, him turning its ashes to beauty in only 25 years is nothing short of a miracle.

Through his system of inclusive governance and thoughtful leadership, Rwanda has, in the last few years, been ranked respectively: sevent most efficient government globally (Global Competitive), the third fastest-growing economy in the world (World Economic Forum), the most improved country globally in human development since 1990 (Human Development Report), the second-best place to do business in Africa and 29th in the world (The World Bank's Doing Business report).

I can only imagine the ultimate worldwide transformative impact on the business and investment world if the same type of business-oriented thinking and pragmatic business reforms were to be applied everywhere else across the globe.

What can we expect from YPO as we move into the future?

To remain that marvellous lifetime learning experience provider, while adding a more purposefully driven agenda.

How will your involvement in YPO create change in your specific organisations?

YPO has tremendously empowered me as a leader.

I'm extremely thankful for it and as a giving-back response, alongside a great friend and fellow YPO-er, Steve Shallenberger, a best-selling Leadership Author, we decided to build a leadership and entrepreneurship Centre to empower Africa's youth.

What are your thoughts on the upcoming event, the organisation's second event in South Africa?

I'm very much looking forward to attending the GLC and Edge event in Cape Town in a few weeks time. It will be a wonderful opportunity to further emphasise the impactful YPO 3.0 strategy.

There is no better place than Africa to kick-start and endorse this transformative and visionary, forward-thinking mindset and find ways of practically implementing the learnings in our daily business lives. ▲

Evans Manyonga

You Need Courage to be a Great CEO



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A platform for job creation?

The effects of the Fourth Industrial Revolution
on the industrial and manufacturing sectors





When the steam engine was invented in 1698, some people assumed the world would soon eradicate manual labour, but the opposite happened and the steam engine created a vast majority of jobs, such as machine operators, engineers and maintenance workers

The 18th century Industrial Revolution was a huge catalyst for the industrial manufacturing industry, but it's no secret that previous innovation led to the reduction of human labour to produce product. There has been much debate in terms of artificial intelligence (AI) and the new innovation era leading to the loss of jobs without actually looking at it as a platform for creating jobs. What does Industry 4.0 mean for the industrial and manufacturing sectors? The focus and critical question here is will jobs be created by Industry 4.0 and if so, how will jobs be created?

It is an indisputable fact that previous industrial revolutions facilitated the age of mass production and introduced digital capabilities to billions of people. But Industry 4.0, also referred to as the move to "smart manufacturing", is a new and distinct revolution, which is fundamentally different. This system offers a fully integrated, collaborative manufacturing supply network, that responds in real time to meet customers changing demands and conditions.

Its characteristics such as cyber and cloud manufacturing, cybersecurity, big data analytics are inevitably going to improve the industrial and manufacturing sectors. Industry 4.0 is going to bridge the gap through connectivity, turning the human-operated machine into an intelligent entity. 'Human operated' refers to automated systems that will be able to monitor and record faults or discrepancies, therefore, improving workers' skills because human employees will be monitoring those machines. Industry 4.0 will alter the way we live, work, relate and the way we are governed, but does this impact have to be looked at as a ticking time bomb for human employment within the industrial and manufacturing sectors when these technologies will have to be run and managed by skilled people?

This brings us to how Industry 4.0 will impact industry and manufacturing positively by aiding more employment opportunities. The above mentioned characteristics are going to transform the modes of production by improving productivity, which will be attributed to the

engaging relationships between the elements of production processes.

When there is a complete flow of communication during all stages of the production chain, production becomes flexible and largely customised. Improving production efficiency will heighten competition, therefore, creating space for new opportunities on the world market.

In addition, when profits become higher because of smart manufacturing, companies will have more capital to finance improvements and expansions, which will be rewarding to humans because this would require them to hire more workers.

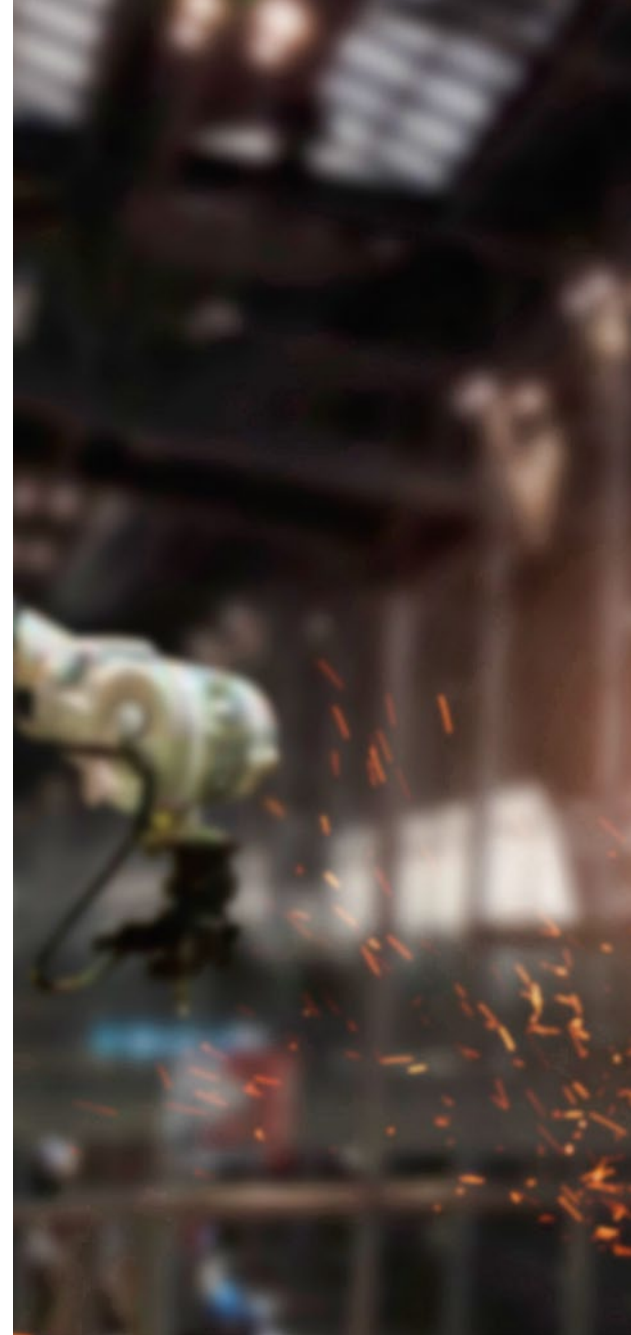
A good example is the Toyota case. Toyota's General Manager, John Peterson, said, "Because we have increased our productivity in terms of yields and throughput, we have been able to bring in a fourth transmission where previously, we were only able to build three products at any given time."

He further explained how workers with expertise in fields, such as electronics, engineering and IT are needed, thus doubling his team in the past year. On a global scale, according to estimates from Forrester Research, close to 15 million new jobs will be created in the United States because of Industry 4.0. Interestingly, some jobs that humans formerly performed, that are now being performed by robots, tend to be the dangerous, mundane ones that humans did not necessarily like in the first place.

A proactive system ensures employees and systems can anticipate and act before a challenge arises, rather than simply reacting to it after it occurs, because prevention is cheaper than cure in industry and manufacturing.

Enabling more informed decisions will help these sectors to predict and adjust to the changes in the facility or network, which will better position them in the competitive marketplace. The stiffer the competition, the more drastic the increase in jobs because, previously, few or no elements of IT were incorporated across industry, but this will change immensely.

Furthermore, monitoring the shifting consumer demands and creating tailored responses will increase demand and when demand is high, previously displaced employees will be taken and retrained in order to take on more challenging tasks within the smart factory environment. Demand will create a sharing economy and these new technologies will lead to the indirect creation of jobs in the



industries that can supply support and service smart manufacturing.

Global competition has led to manufacturing companies increasing their productivity, becoming more competitive than ever before and fostering the need to innovate in order to offer higher-quality products. We will see more technological change in the next 10 to 20 years than we have ever seen before. McKinsey & Company estimates that the economic impact of the Internet of Things (IoT) on factories by 2025 will be US\$1.2-trillion to US\$3.7-trillion per year.

New technologies present us with extraordinary opportunities—the most in-demand occupations did not exist five or 10 years ago. We will benefit from more employment opportunities, better income and a refined standard



New technologies present us with extraordinary opportunities

of living. GE Reports predicts that by 2030, the Internet of Things will add more to the world economy than every major country. These new technologies will increase safety levels for human workers and engineers by developing smart wearables to help protect employees in high-risk industries like industry and manufacturing. NASA created new space suits for astronauts that are lighter, more flexible and the helmet and visor are incorporated into the suit instead of being detachable. These suits not only keep the astronauts alive but some of the other interesting features make them more comfortable than the earlier versions.

This should serve as a constant reminder that Industry 4.0 is driven by humans using creativity to solve problems and produce improvements.

Instead of fearing for our jobs, we should be focused on expanding our skill sets. While it may seem as though new technology is destroying manual jobs, it is, in fact, creating the demand for high-skilled jobs. The Internet of Things will create more industrial-level jobs than it will take away because it will transform entire companies, not just IT experts.

The Fourth Industrial Revolution will force us to reevaluate our culture and it will force our mindset to adapt to this change. Companies and organisations need to start investing in the necessary technology and education in order to adopt and adapt to smart manufacturing practices. The job requirements will gradually change and become more tailored to suit existing technology, it is expected that more than 65% of children entering primary

school today will work in completely different jobs that currently don't exist. Repetitive and predictable jobs that can be replicated through machine learning and algorithms are under the biggest threat, but otherwise, robots will still require skilled workers who can operate and manage these robotic solutions.

Jobs might be redefined, not eradicated, so it's important to start upskilling. Stakeholders in the sector cannot afford to ignore the fact that current job skill sets in the industrial and manufacturing sectors will need to upgrade in order to avoid facing a complete overhaul. Your outlook on Industry 4.0 will affect your ability to remain effective and competitive in the global market. ▲

Tavonga Jacqueline Manyonga

A large, modern resort building with a swimming pool and lounge area. The building features a tiled roof, arched windows, and a courtyard with lounge chairs and umbrellas. The pool is in the foreground, reflecting the sky and the building.

A priceless retreat

Santé has the technology for complete wellness

I recently had the pleasure of staying at Santé Wellness Retreat & Spa, which is situated in the Franschhoek/Paarl Winelands region. The new owners, Ingrid and Graham Hindle and Keith Macmillan have transformed this gem completely and turned it into a destination with a unique offering.

They have not only upgraded and improved all the facilities—the spa and the 17 therapy rooms, the wellness retreat, the business centre, all the décor and the grounds—but, importantly, they have also introduced an overall approach that ensures guests are given the time, attention and holistic solutions to aid their recovery towards complete wellness.

What distinguishes Santé is its Health Optimizing Royal Retreat, which is the only one in the world, where leading-edge health optimising technologies are offered.

These modern therapies and technologies are interwoven with the range of what's on offer, from delicious, nourishing food menus, natural products and a bioenergy centre to a carefully considered suite of packages and treatments.

As the only African premium member of the Healing Hotels of the World group, Santé is founded on combining expert scientific and holistic technologies with dynamic, organic and nutritious food and a fully comprehensive range of treatments. Ingrid Hindle explains: "While the upgrade was essential, what was

even more important was how we could offer a completely holistic solution to our guests. We believe in the magical and dynamic power of food and we know that our health-optimising technologies are incredibly effective. We also recognise that you cannot isolate an issue, nor can you ignore the triggers and causes of any disease because it all needs to be assessed and understood so that the right wellness packages may then be recommended in order to promote future health."

Health optimising

Hi-tech medical technologies (many are the first in Africa), including some within the fields of quantum and energy medicine, are directed by HealthTech Sciences in Norway. By



understanding all-encompassing medical assessments where cellular, tissue and organ imbalances and dysfunction occur, and what the underlying trigger and causative factors are, health-optimising non-invasive treatments are then tailored for each client at Santé in order to correct imbalances and achieve effective results.

Thomas Aksnes, who founded Health Optimizing, has opened 209 health-optimising clinics around the world and he is particularly proud of this first Health Optimizing Royal Retreat at Santé: "What I like about the Santé offering is that guests and patients are given conducive surroundings to really focus on their health. By staying at Santé, they are given an even greater opportunity to find their path to full wellness," says Aksnes.



Food and nutrition

Believing that nutritious food is the foundation of health, Santé offers nourishment through exquisite cuisine. Menus are designed by the Executive Chef, Terrence Ford, and feature fresh ingredients from the Santé kitchen garden, local bio-dynamic farmers and suppliers. Only real and unrefined foods are used, i.e. no sugar, dairy, gluten, preservatives, colourants or additives are used at all. This integrity spreads to the range of organic wines and spirits available at Santé.

In addition to health optimising and its food and menus, there is even more available at Sante.

The day spa

The facilities include steam rooms, hydrotherapy and vinotherapy baths, saunas, an indoor heated pool and Jacuzzi, a magical labyrinth and a fitness centre. There is an extensive spa menu, which includes four speciality packages: healthy ageing, detox, rejuvenate and relax.

Bioenergy

Drawing upon ancient philosophies, this combines the attributes and properties of magnetic fields, colour, light and crystals with modern science. Healing takes place through the intervention of using electromagnetic waveforms to stimulate the body's natural healing.

Accommodation

Accommodation includes 10 retreat suites, 20 spa suites and a deluxe retreat suite. Uncomplicated and serene luxury, generous hospitality and friendly service combine with delicious and honestly healthy cuisine.

Wellness packages

The Santé team and experts have designed a range of packages that help with stress, detoxing, rejuvenation and longevity.

Exercise and fitness

A variety of activities are offered including daily yoga classes, both group and personal, the use

of a fully-equipped gym, early morning guided walks, including the Santé labyrinth walk, and mountain biking.

Business forum

This can accommodate up to 120 guests with four well-appointed breakaway meeting rooms of varying sizes. The business forum is fully equipped and also offers a private restaurant and bar, plus indoor and outdoor seating areas. As well as the delicious and healthy menu options available at Santé, business guests may participate in yoga, utilise the fitness centre and all that's on offer at the day spa.

Santé is the ultimate sanctuary for anyone wanting to 'discover extraordinary' and find a path to true wellbeing, healing and rejuvenation. Santé will please people who are seeking simple rest and relaxation as well as those needing a more defined, dynamic and effective route to complete healing, health and wellness.

While everything at Santé may be new, what remains the same is the name itself. "We decided to retain the name 'Santé', as this is the cornerstone of what we offer—health," concludes Ingrid Hindle. ▲

Staff writer



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Petroleum Agency SA encourages investment in the oil and gas sector by assessing South Africa's oil and gas resources, and presenting these opportunities for exploration to oil and gas exploration and production companies.

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Renewable energy is the means to a future-focused industry

Despite being critiqued for its heavy reliance on coal-fired power in the past, South Africa has developed what is arguably one of the most successful IPP-driven renewable energy programmes globally. It has hosted the fastest-growing clean energy market over the past five years and is now one of the world's most attractive RE investment destinations.



By the end of 2015, South Africa was included on the shortlist of leading emerging markets with significant investment potential. And then the groundbreaking national Independent Power Procurement Programme came to an abrupt halt. For the next two years, the national vertically integrated monopoly utility refused to sign further power purchase agreements. With national procurement law prohibiting the purchase of utility-scale power by any other buyer, IPPs had no choice but to wait for the government as the procurer to get the programme moving again.

Fast-forward to March 2018, with a new national President and Minister of Energy at the helm, the impasse was broken within weeks, allowing the flow of over R56 billion in renewable power investment into the economy, the creation of over 15 000 jobs and for the work to begin on achieving much-needed rural economic development.

For many, the signing of power purchase agreements (PPAs) with renewable energy producers by Minister Jeff Radebe signals the reawakening of South Africa's successful public-private partnership through the Renewable Energy Independent Power Producer Procurement (REIPPPP) programme. The 27 projects, located mainly in rural parts, would amount to R55.92-billion in new direct investment in the energy sector and create much-needed jobs.

The REIP4P has been lauded as one of the most ambitious South African public-private partnerships (PPPs) to date. This is largely due to its competitive bidding process, the benefits of which include an increased competition to drive reduced pricing to allow South Africa to meet its climate

change commitments whilst producing and supplying much needed cost-effective capacity to the grid.

In addition to compliance with competitive bid requirements, which carry a 70% weighting on pricing, IPPs must include plans for achieving socio-economic development and enterprise development to communities in a 50km radius of IPP sites as part of their bid. This additional component carries a 30% weighting (Eberhard, Kolker, & Leigland, 2014).

The combination of a competitive bidding procurement approach, along with a heavily weighted socio-economic development component, makes South Africa's REI4P a uniquely ambitious PPP.

According to information released by the Independent Power Producer Procurement Programme to Parliament last March, together, SA's renewable energy projects contribute 3 773 MW, compared to the 43 485MW currently delivered by fossil fuels, with the existing investment in South Africa's sustainable energy projects totalling R142 billion.

The contracts signed by the government last year, worth an additional R56 billion, are expected to add 2 300MW of electricity to the national grid over the next five years, with 27 independent renewable energy power producers. The average time for construction to completion of renewable energy projects is 1.9 years.

Brenda Martin, the CEO of the South African Wind Energy Association provides insights on the REI4P and its role of moving towards increasing renewable energy in the country's energy mix.

"REI4P is a competitive tender process that, as part of the national policy to diversify the power mix, was designed to attract private sector investment into utility-scale renewable energy (RE) generation in South Africa. As has been found globally, renewable tariffs have fallen sharply since the programme was launched in 2011, and the most recently-awarded projects were amongst the lowest priced grid-connected renewable projects in the world.

"South Africa has long had a coal-dominated economy with coal-fired power stations providing 92% of SA's electricity. The REI4P has enabled the addition of just under 5% of the total generation from independent renewable power. This still falls short of the IRP2010 objective of adding a 9% share of renewables by 2030, along with a decline of coal to 65%," says Martin.

Since its initiation, the programme has been instrumental in attracting both foreign and domestic investment. Of the approximate

R201.8-billion investment attracted to date, 25% of this is made up of foreign direct investment (FDI). The balance is made up of domestic investments. The REI4P has been successful due to its pioneering social and environmental requirements. The programme recognises and seeks to contribute to achieving the national developmental objectives by ensuring benefits to local communities, service providers and employees.

"By the end of Round 3.5, the programme had distributed R472.6-million to socio-economic and enterprise development initiatives in rural areas. To date, over 26 000 jobs have been created during the construction phase and over 3 000 jobs have been created in power plant operations (DoE, 2016). The recently-signed Round 4 projects have an investment value of R58 billion and will release over 15 000 jobs. It is worth noting that REIPPs have generally

"South Africa has long had a coal-dominated economy with coal-fired power stations providing 92% of SA's electricity"

exceeded their job creation commitments by 27% (IPPO, 2016). The REI4P has therefore ensured diversity of South Africa's power mix, grown foreign and domestic investment, created jobs and benefited rural communities surrounding wind farms," says Martin.

South Africa's utility-scale renewable power market has already procured over 6 000MW since 2015. Within this, wind power produces over 50% of the total RE power while accounting for 30% of the total cost. Approximately 900 wind turbines now generate renewable electricity into the national grid. As a significant FDI contributor, a driver of local socio-economic growth and providing the major share of South Africa's RE power, wind power is a direct contributor to South Africa's social and economic growth.

"The country has plentiful wind and solar power resources to diversify and strengthen its

power mix, along with clear evidence that the cost of wind power is now significantly cheaper than new coal-fired power. South Africa is also behind on achieving its climate change commitments and it is in the midst of a major water crisis in several provinces. The country is at a key stage of the national energy transition: tensions are emerging as it is increasingly understood what the transition away from coal will mean for people and planet," she says.

The South African Wind Energy Association (SAWEA) has called for the release of an updated Integrated Resource Plan (IRP) as the clear technology investment roadmap that the IRP provides is essential to investor and market certainty over a multi-decade time horizon. Such certainty is particularly important for attracting investment into and growing job-creating prospects in South Africa's renewable manufacturing sector.

"As we have seen over the past two years in particular, where the lack of an updated IRP has been cited as one of the reasons for stalling renewable power procurement, job loss effects have been felt most directly in South Africa's renewable manufacturing sector. In addition to existing job losses, the job creation opportunities foregone as investors have opted to wait for policy certainty has illustrated the importance of an up to date IRP," explains Martin.

She says that the wind industry is committed to working with the government, civil society and labour to ensure that REI4P continues to positively contribute to job creation, advancing the transformation agenda and attracting new foreign direct investment, much of which will be in the manufacturing sector where the greatest job creation potential exists.

"The industry meets regularly with these groups to discuss issues of concern and to consider how these objectives can be addressed in the achievement of the energy transition justly and with due consideration of the effects on future generations.

"Renewables and the wind power industry, in particular, have a demonstrated alignment with President Cyril Ramaphosa's national agenda of economic growth, particularly in the case of job-creating manufacturing, construction sector growth and rural development. The South African wind Industry is well-placed to provide opportunities for both investors and young professionals seeking to enter a future-focused industry with high prospects for growth," explains Martin.

South Africa's five largest renewable energy projects, measured in terms of investment, are all multi-billion rand wind farms that contribute

a collective 645.71MW to the grid. Leading the pack as the largest of the renewable projects is the R2.4-billion Cookhouse Wind Farm.

Owned by Old Mutual, the African Infrastructure Investment Managers (AIIM) and the Local Community Trust, the wind farm comprises 66 Suzlon S88 wind turbine generators with a capacity of 135.8MW. The wind farm is located just outside of Cookhouse, in the Blue Crane Route Municipality in the Eastern Cape, and spans 2 600 hectares of pastoral land leased from a local farmer.

The wind farm first supplied electricity to the grid in March 2014. Suzlon Wind Energy South Africa constructed the wind farm and is currently responsible for its operation and maintenance.

The other four projects are:

- The Gouda Wind Project—135.5MW, Western Cape (R2.7-billion). Located in the Drakenstein Municipality, it has 46 AW3000 turbines mounted on 100 metre-high concrete towers.
- Jeffreys Bay—135.11MW, Eastern Cape (R2.9-billion). The wind farm comprises of 60 turbines, which weigh 424 tonnes each on a 3 700-hectare farm just outside of the popular surfing town, Jeffreys Bay.
- The Amakhala Emoyeni Wind Farm—131.05MW, Eastern Cape (R3.94-billion). The wind farm, Amakhala Emoyeni, which mean 'aloes in the wind' in isiXhosa, forms part of 13 000 hectares of leased agricultural farms near Bedford, a small town in the Eastern Cape. The wind farm comprises 56 Nordex N117/2 400 turbines with a capacity of 2.4MW each.
- Enel's Gibson Bay Wind Farm—108.25MW, Eastern Cape (R2 billion). Owned by the Italian energy giant, Enel Green Power, this 108.25MW farm covers 4 300 hectares of land in the Kouga Municipality in the Eastern Cape. Along with 37 Nordex 3.0MW N117 turbines, they brought in free Wi-Fi to schools in the area for 1 000 students and built 40km of road.

In May 2018, the Global Wind Energy Council (GWEC) released its annual market update. The report reflected on the growth of the global wind market over the past 38 years. While the US, Germany and Spain had initially led this growth, the introduction of Chinese renewable energy law in 2005 was a game-changing moment for the industry.

Today, China is the world market leader on wind power, double the size of the second largest market—the United States. Commercial wind operations now exist in 90 countries



around the world and wind is making a rapid transition from a technology reliant on policy support in most open markets to one where it is able to stand on its own. Wind power is leading the charge in the transition away from fossil fuels and continues to outperform its competition on price, performance and reliability.

In addition to wind, investment in solar energy remains strong in southern Africa—more notably the Northern Cape Province in South Africa and Namibia—which is considered one of the best places globally to develop solar projects.

One such project is the highly-anticipated Kathu Solar Park in the Northern Cape, which is set to launch this year. The R12-billion South African solar farm has successfully completed its first synchronisation of power to the national grid. In November 2018, electric power was generated and transferred on the national grid, complying with all the expected parameters to ensure the supply of power starts and end-users can consume reliable energy once the plant is operational.

The solar plant, which covers 4.5 square kilometres, uses patented parabolic trough technology, with curved solar panels tracking the sun's movement, storing the energy in a molten salt storage system that will allow the plant to keep producing electricity steadily for 4.5 hours in absence of solar radiation.

The Kathu project secured R12 billion in financing when construction began in May 2016, with the build expected to be completed early this year. During this phase, around 1 200 jobs were created. It is estimated that the Kathu Solar Park will save six million tonnes of CO₂ over 20 years.

Once operational, the plant will provide clean energy to the local community of the John Taolo District Municipality, the Northern Cape Province and South Africa as a whole. The park is expected to operate for 30 years, with a 100MW capacity delivering a projected 390GWh per year—enough to run almost 180 000 households. ▲

Shannon Manuel

Is off-grid the key to rural development?





As we focus on renewable energy, the question arises of whether we have the correct energy infrastructure in place to ensure rural electrification and equal access to sustainable energy

Renewable energy (RE) is being championed as a potentially significant new source of jobs and rural growth in many countries, and a means of addressing environmental and energy security concerns. In most countries, governments have invested large amounts of public money to support RE development and are requiring significant quantities of it to be sold by energy providers. But what are the economic impacts of these policies and investments and can RE really help to develop rural economies?

While RE indeed represents an opportunity for stimulating economic growth in hosting communities, it also requires a complex and flexible policy framework and a long-term strategy. RE is not going to create many jobs, rather, it will create some additional employment opportunities in rural areas. Making a positive connection between RE development and local economic growth will require more coherent strategies, the right set of local conditions, and a place-based approach to deployment.

So, what does RE offer rural areas? The global deployment of RE has been expanding rapidly. Rural areas attract a large part of investment related to renewable energy deployment, tending to be sparsely populated but with abundant sources of RE. RE deployment can provide hosting communities with some benefits, including:

- New revenue sources. RE increases the tax base for improving service provision in rural communities. It can also generate extra income for landowners and land-based activities. For example, farmers and forest owners who are integrating renewable energy production into their activities have diversified, increased and stabilised their income sources.
- New job and business opportunities, especially when a large number of people is involved and when the RE activity is embedded in the local economy. Although RE tends to have a limited impact on the local labour markets, it can create some valuable job opportunities for people in regions where there are otherwise limited employment opportunities. RE can create direct jobs, such as operating and maintaining equipment. However, most long-term jobs are indirect, arising along the renewable energy supply-chain (manufacturing, specialised services), and by adapting existing expertise to the needs of renewable energy.



- Innovations in products, practices and policies in rural areas. In hosting RE, rural areas are the places where new technologies are tested, challenges first appear and new policy approaches are trialled. Some form of innovation related to renewable energy has been observed in all the case studies. The presence of a large number of actors in the RE industry enriches the “learning fabric” of the region. Small and medium-sized enterprises are active in finding business niches as well as clients and valuable suppliers. Even when the basic technology is imported from outside the region, the locals involved often adapt it to local needs and potentials.
- Capacity building and community empowerment. As those involved become more specialised and accumulate skills in the new industry, their capacity to learn and innovate is enhanced. Several rural regions have developed specific institutions, organisations and authorities to deal with RE deployment in reaction to large investments and top-down national policies. This dynamic has been observed both in regions where local communities fully support RE and in regions where the population is against potentially harmful developments.
- Affordable energy. RE provides remote rural regions with the opportunity to produce



Rural areas attract a large part of investment related to renewable energy deployment, tending to be sparsely populated but with abundant sources of RE

their own energy (electricity and heat in particular), rather than importing conventional energy from outside. Being able to generate reliable and cheap energy can trigger economic development.

The renewable energy policy is expected to deliver in three areas: energy security, climate change mitigation and economic development (job creation). However, this is not always the case and there can be significant trade-offs among them.

For instance, large biomass heat and power plants can generate new employment opportunities in rural communities, but may

have a negative CO₂ balance due to land-use change and the transportation of feedstock over relatively long distances. Similarly, RE is, in most instances, a capital-intensive activity and energy as a whole represents a small share of employment in regional economies. Small-scale installations typically source labour and equipment from international suppliers, so the impact at the community level in terms of job creation is rather limited.

Putting renewable energy to work in rural areas

A well-designed framework for the regional policy could offer a real opportunity to reconcile

policy trade-offs and identify potential complementarities among the three objectives of energy security, climate change mitigation, and job creation. These findings underline the need for a shift in the approach to the rural development policy in many countries away from a model that emphasises sectoral policy and subsidies, to one that is place-based and grounded in local conditions and opportunities and that focuses on the competitiveness of rural areas.

Specific factors to bear in mind include embedding energy strategies in the local economic development strategy so that it reflects local potentials and needs; integrating RE within

larger supply-chains within rural economies, such as agriculture, forestry, traditional manufacturing and green tourism; limiting subsidies in both scope and duration, only using them to induce RE projects that are close to being viable in the market; and avoiding imposing types of RE on areas that are not suited to them. The successful implementation of RE in rural electrification includes:

- A focus on relatively mature technologies such as heat from biomass, small-scale hydro and wind energy. These proven technologies are not likely to experience big jumps in technology that can make recently completed plants instantly obsolete.
- Creating an integrated energy system based on small grids able to support manufacturing activities. The policy should take into account the backstop technologies for intermittent power sources. In several regions, the capacity to deploy RE is constrained by grid limitations; however, there are no incentives to improve transmission infrastructure.
- The recognition that RE competes with other sectors for inputs, particularly land. Poor

siting can adversely affect local residents and disrupt tourism, which is typically a much larger source of income and employment.

- Assessing potential projects using investment criteria, and not on the basis of short-term subsidy levels.
- Ensuring local social acceptance by assuring clear benefits to local communities and engaging them in the process: this is crucial, as local opposition can slow construction and may increase the difficulty of subsequent efforts to introduce RE projects.

Integrating off-grid solutions into SA's electrification programme

There are a number of barriers to mini-grids in South Africa, which have slowed its development to date. These barriers include capacity gaps in public energy institutions in a number of key areas, namely; a lack of understanding about which electrification strategy is best deployed for unserved communities in the long term; too few successful mini-grid precedent projects from which to learn; a lack of practical tailored guidance for the local government,

municipalities, project developers and communities in South Africa on how mini-grids can easily be adapted to suit different locations, and the best ownership models and financial models to use.

Additionally, there remains a centralised utility thinking concentrated historically on grid extension for electrification, including the policy environment and national funding streams; an internal skills gap and/or an inability to mobilise funding and manage project developers and the supply chain; inexperience in accessing international funding for clean energy projects and feasibility studies; and perceived threats to the public sector revenue model, whereby the introduction of new models, especially those moving away from local government ownership could threaten much-needed revenues.

In terms of energy access, South Africa is atypical for sub-Saharan Africa (SSA), with a unique set of challenges and opportunities. South Africa is an energy-intensive, growing middle-income economy, with an average per capita consumption reported at 4,326kWh and 84% of its total emissions from energy. Only 9%



In terms of energy access, South Africa is atypical for sub-Saharan Africa (SSA), with a unique set of challenges and opportunities

of South Africa's 45GW of generating capacity is renewable (86% coal). Therefore, there is a big potential for renewable energy to drive the move to a more sustainable energy system. Rural electrification rates are atypically high, at 77% nationally compared to an average of 17% for SSA. Expectations of grid connection and the quality of service are, therefore, high. However, the South African National Energy Development Institute (SANEDI) estimates that this leaves in excess of three million people without electricity in rural areas.

Grid congestion and increasing grid connection costs are major challenges for South Africa. Eskom, the national utility, operates South Africa's ageing transmission grid infrastructure. There are serious capacity constraints on the network, with around 50% of the feeders in thermal overload. Eskom has been unable to secure a sufficiently high settlement with the National Energy Regulator (NERSA) to make the necessary grid upgrades to relieve all grid congestion in the country. Therefore, many potential generators and consumers are not able to connect to the grid. This includes

independent power producers and key industries such as those found in South Africa's industrial development zones.

Grid-tied mini-grids can be used to ease grid congestion by reducing the demand loads at key points of constraint, and providing services (such as frequency response) back to the grid. Grid-tied mini-grids, also called interconnected mini-grids, utilise a small electrical connection to the national electricity system. Grid-tied mini-grids provide a number of additional benefits over other connection options, including the flexibility to address the local needs, the use of local renewable energy resources and labour, and providing the lowest cost option in many unserved areas. Grid-tied mini-grids are cheaper per connection than both isolated systems, as the grid connection can replace some of the expensive storage needed to balance supply and demand, and main-grid connection.

Mini-grids offer a number of additional community benefits over other off-grid electrification solutions. The electrification of previously unserved communities significantly affects socio-economic development, especially among

lower-income households. Electric lighting often replaces the use of kerosene and paraffin, which is used daily by over 17-20 million households in South Africa, and which can cause severe respiratory complications while exhausting a significant proportion of household income. Mini-grids can provide a much higher household energy consumption than solar home systems, however, enabling income generation opportunities through the operation of appliances such as refrigerators and battery charging stations. Mini-grids can also power water pumps, eliminating the need to walk for miles every day to collect water.

Municipalities have a strong business case for developing mini-grids. Municipalities in South Africa have a mandate for service delivery including energy provision and electrification for populations between 75 000 and 5 million people. Mini-grids ease budgetary strain for municipalities by enabling the development of local industries, creating jobs, alleviating poverty and promoting sociological development. Where and when a mini-grid is ultimately connected to the grid, it will be the



primary provider of electricity locally. This will reduce the local demand for grid electricity and decrease the budgetary pressure on municipalities to subsidise low-income households beyond 50kWh/household/month. This will also reduce the amount of grid infrastructure that the municipality must build to connect new customers.

Pilot projects will be required to unlock mini-grids as a mainstream energy technology in

energy solutions. Cost reductions, business model innovations and novel technologies are making mini-grids and other decentralised energy systems cost-effective electricity solutions. Mini-grids are able to address the energy challenges of middle-income and developing countries, with isolated systems serving remote, lower-consumption communities and grid-tied systems easing the national grid constraints and providing near grid-level service. Public

not have access to electricity in sub-Saharan Africa by the end of the next decade.

One of the organisations seeking to improve power supply on the continent is the African Development Bank (AfDB), which has set an ambitious target of adding 160 gigawatts of new generating capacity to achieve universal electricity access by 2025. The AfDB estimates that reaching this goal would require an additional 130 million households to be linked to national power grids as well as 75 million new off-grid connections.

Off-grid power is loosely defined as electricity not associated with a state utility and not part of a national power distribution network. These stand-alone systems typically generate electricity from renewable sources such as wind, solar and micro-hydro. According to the AfDB, off-grid solutions are essential to speed up the electrification of the continent.

The off-grid industry is already gaining traction, particularly the pay-as-you-go solar kits offered by companies such as M-KOPA Solar, Mobisol, Lumos Global and Off Grid Electric. Over the past few years, these operators have provided electricity to hundreds of thousands of households in East and West Africa. Although there are slight differences in their respective offerings, the packages generally comprise a solar panel and battery, with accompanying appliances such as light bulbs, a torch, a mobile phone charger and a radio—some even include a digital television. These companies typically also allow their customers to pay for their solar systems in instalments, often through mobile money.

But off-grid solutions are not only relevant for small-scale or residential users. In African countries that regularly experience power blackouts or load shedding, commercial users are increasingly seeking energy security through the installation of their own electricity generation systems.

Making reliable and affordable energy widely available is critical to the development of a region that accounts for 14% of the world's population, but only 4% of its energy demand. Since 2000, sub-Saharan Africa has seen rapid economic growth and energy use has risen by 45%. Many governments are now intensifying their efforts to tackle the numerous regulatory and political barriers that are holding back investments in domestic energy supply. However, inadequate energy infrastructure risks putting a brake on urgently needed improvements to living standards.▲

Shannon Manuel



South Africa. The lack of successful business models and precedents in South Africa means that key stakeholders, including investors, perceive mini-grids as high risk. There is a need to demonstrate key technical, business case and contractual aspects of mini-grid models for South Africa. Successful pilots can then unlock public financing that is currently available for other modes of electrification.

A public-private partnership business model is recommended, with municipalities driving the pilot projects and the private sector subsequently taking a more active role. Municipalities and the South African Local Government Association (SALGA) should be the driver of this model, identifying the local opportunity for mini-grid development (via integrated development plans), bringing together the relevant stakeholders and leading early-stage community engagement and fundraising. The private sector would conduct resource assessments, feasibility studies and deliver the pilot projects under a purchasing power parity (PPP).

South Africa is far from alone on this journey; nearly all countries globally are looking at local

and private-sector stakeholders worldwide have acknowledged this opportunity, and are acting to integrate mini-grids into national and regional energy frameworks.

Off-grid rural electrification: a brief look at Africa

Access to electricity has grown at 75% per year in sub-Saharan Africa since 2010, which is not rapid enough to significantly overcome the current population growth of 2.8% per year in a short period. Consequently, sub-Saharan Africa encompasses the largest number of people without access to electricity: 590 million people. Nigeria, the Democratic Republic of Congo and Ethiopia concentrate one-third of the population currently living without electricity in sub-Saharan Africa, totalling 200 million people.

The International Energy Agency (IEA) projects that investments of around US\$49.4-billion per year until 2030 would be needed to achieve electricity access for all in sub-Saharan Africa. If nothing is done and investments in power generation and transmission lines are not ramped up, more than 670 million people will

There are no jobs on a dead planet

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A renewed drive in the bioenergy industry

Biofuels have the potential to extend and diversify South Africa's energy supply, thus reducing the dependence on imported fuels and pollution levels

Several developed and developing countries have adopted mandatory biofuel policies and set biofuels targets to enhance energy security and contribute to climate change mitigation and rural agricultural development. Mandates and incentives for blending biofuels with fossil fuels contribute significantly to the ongoing growth in biofuels production and use.

Over the years, South Africa has also established several biofuels policies and mandates, such as the Biofuels Industrial Strategy (BIS) of South Africa, which aims to promote the production and use of biomass fuels, attract investment into rural agricultural development, and create additional employment.

The biofuels industry is driven by the BIS, which was developed by the Department of Energy. The original document favoured sugar cane and sugar beet to produce bioethanol and sunflower, canola and soybeans for purpose of producing biodiesel. The draft Position Paper on the South African Biofuels Regulatory Framework, published in January 2014, recommended that, in view of the need to expedite the first phase of the implementation of the BIS, grain sorghum and soybeans should be the only feedstocks used for the manufacture of bioethanol and biodiesel respectively.

In recent years, several African nations have gone ahead with the decision to produce biofuel crops to slash fuel import volumes and bills. However, in South Africa, biofuels development has stalled in a legislative process and biofuel is yet to be commercially produced on a large scale. The challenges hindering biofuel development in South Africa may include security to economic and social concerns, such as the



impacts on food security, commodity prices, biodiversity and environmental degradation due to land use changes.

The sustainable development and commercialisation of the biofuels industry depends on several factors, including government policy, targets and mandates, and issues relating to energy security, the environment and social and economic impacts.

However, South Africa is looking to kickstart its biofuels industry as the government plans to finalise and approve its biofuels blending regulatory framework before the end of March 2019.

It was recently reported that the government would introduce certainty about biofuels as a means to decrease greenhouse gas emissions.

According to reports, the Department of Energy's (DoE) Chief Director of Energy Planning, Thabang Audat, has stated that the country's biofuels policy is aimed at reducing carbon emissions from fossil fuel resources like crude oil, anticipating that the use of biofuels will result in less greenhouse gas emissions and other pollutants common within conventional fossil fuels.

The DoE wants oil companies to allow local farmers to farm biofuel products to blend into fuel in order to make it cleaner, he said, adding that the government was targeting 2% of the country's fuel consumption needs.

The South African Energy Minister, Jeff Radebe, has noted that the regulatory

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framework has three pillars; the first being the mandatory purchase of biofuels by petroleum manufacturers in accordance with the Mandatory Blending Regulation of Biofuels with Petrol and Diesel, which came into effect in October 2015.

The second pillar is the Biofuels Feedstock Protocol, which will regulate and approve biofuels feedstock plans and that prioritises rain-fed crop production. The third pillar will publish standards for biofuels in transport fuel, as well as fuel specifications for blended fuel.

The discussion around biofuels has been steadily gaining momentum, and we've seen the integration of exciting resources, such as the 2017 launch of South Africa's first Bioenergy Atlas by the Department of Science and Technology, which has been welcomed by stakeholders as a critical resource in terms of moving the country towards a low-carbon economy.

Aimed at assisting the government in its efforts to increase national energy resources, the Bioenergy Atlas indicates the potential of biomass as sources of alternative energy in the country, their geographical spread, and proximity to infrastructure and potential end users. The atlas guides biomass availability in the country, such as feedstock, organic waste, a mix of agricultural and forestry residue, and how this can be turned into alternative energy in the

country. Biomass power is carbon-neutral electricity generated from renewable organic waste that would otherwise be dumped in landfills, openly burnt or left as fodder for forest fires.

Certain areas in the country are better for this kind of energy generation and the atlas points this out. In provinces like the Eastern Cape, KwaZulu-Natal and Limpopo, thousands of people can benefit from job creation opportunities in the cultivation or harvesting sectors.

The atlas was developed as a result of extensive research by the South African Environmental Observation Network (SAEON), which is funded by the Department of Science and Technology (DST). The Bioenergy Atlas indicated that the country's potential in bioenergy was higher than initially thought.

The Minister of Science and Technology, Naledi Pandor, said that the lack of capacity and limited access to data within different spheres of the government contributed to the delayed uptake of bioenergy in South Africa.

The atlas and the portal provide policymakers with a way to address this and facilitates the local and provincial government's plans to exploit bioenergy resource opportunities. The web-based tool, supplemented by online and printed reports, will also help to attract potential investors into the emerging bioenergy sector.

Thomas Garner, the CEO of the independent power producer, Cennergi, hailed the Bioenergy Atlas as the next step in South Africa's transformation to a low carbon, renewable energy future, together with the Wind Atlas, the Carbon Sinks Atlas and the Renewable Energy Toolkit to guide project development.

A sweet alternative

Initial expectations for the biofuels industry in South Africa were based heavily on specific

crops as feedstock but the main contenders, maize and jatropha, have been removed from the sector.

Maize is banned as an energy source as it is a staple food. Jatropha, which was once a leading contender, is also banned because it leaves behind a toxic seedcake. Poisoning from jatropha has been reported in several countries. As soybean production has declined over the years, grain sorghum is the major sorghum crop grown in many countries, including South Africa.

Sweet sorghum, a variant, has been recognised globally as a potential biofuel crop for ethanol production, and has been promoted heavily as the answer to sustainable biofuel creation.

Unlike other bioenergy feedstocks, sweet sorghum produces food products and other valuable by-products (from its grain, stalks and leaves), thus eliminating the "food vs. fuel" issue, which is often raised by biofuel critics. Sweet sorghum can be used for food, fuel, fodder, fibre and fertiliser production. Sweet sorghum grows under the same conditions as grain sorghum and the substitution of crops or expansion of lands currently used for grain sorghum, to sweet sorghum, for ethanol production should be possible, enabling the goals of the strategy to be met.

The BIS aims to develop a modest biofuels sector targeting under-used land in former homelands and should have a minimal impact on both food security and prices. According to reports, currently, 14% of arable land is under-utilised and is in areas, which lack the market access that biofuel plants can provide, and infrastructure, which agricultural and infrastructural support programmes should provide. ▲

Shannon Manuel

An up-and-coming innovation

The South African recycling company, Verda Waste, is set to build a plant that will process coffee waste into biofuels. The plant will be located in Johannesburg and is expected to be built in 2019.

The company intends to lead the industrialising process of converting waste coffee grounds into biofuels. It proposes to do so by recycling 17million kilograms/year of spent coffee grounds into 1.8-million litres/year of biodiesel as well as 4.5-million kilograms/year of biomass fire logs and pellets.

Verda Waste reports that the demand for coffee is so high, large amounts of residue are created in the industry that is toxic and could cause severe environmental problems.

The plant is set to recycle around 70 000 tonnes of coffee waste that if not used, and which would have ended up in South African landfills over the next five years. This would lead to a saving of 476 000 tonnes in carbon emissions. The CEO of Verda Waste, Fischer Khambule, has said that not only will the plant be good for the environment, but it will also provide jobs for the youth and more than 100 small business opportunities will be created.

The power struggle

Clearing up SA's electricity miasma will take a national mindset change

The South African electricity industry has shifted from relative anonymity to high-profile notoriety. The main cause of this change was the sudden introduction of load shedding by Eskom in 2008, and the continued threat of more, helped along by other positive and negative factors.

On the positive side, there was a world-class process of procurement of renewable generating capacity, even though some came with exorbitant tariffs. On the negative side, there was the plunder and wreckage of Eskom by those associated with the so-called 'state capture', among other factors, including unreliable supply and steeply rising electricity prices.

Electricity supply is rapidly becoming less and less of the 'natural monopoly' that it used to be. This new reality means that the very

conceptual underpinnings of our strategic and regulatory considerations are changing substantially.

Because market forces are stifled by inappropriate regulation in the electricity sector, market signals are not swiftly or properly communicated to suppliers and customers. Instead, the industry has to wait for policy change and then regulatory change, notoriously slow processes. And, in the meantime, customers are voting with their feet. Herein lies perhaps the single largest threat to the South African electricity industry—the political and regulatory lag in accommodating change fast enough to avoid a significant disruption.

South Africa has an electricity market structure for a previous era. Changing to a new one without significant disruption requires an entirely new mindset. More space

will have to be created in order for market signals to operate.

What is to be done? The government, business and civil society need to move fast. The first objective is consensus on the basic principles underpinning the New Deal electricity market structure.

This will be the easier part. The more difficult part will be massaging the consequential raft of policy and statutory changes through the political system. There will be significant opposition, especially in this election year. It will only be possible with constant reminders of how close we are to the abyss and by occasionally getting all the stakeholders to peer over the edge. ▲

*Professor Rod Crompton
Director Energy Leadership Centre*

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NKOSANA MAKATE hits out at Vodacom for portraying him as greedy and unreasonable in the battle for compensation from Vodacom for his 'Please Call Me' idea. In April 2016, the Constitutional Court ruled that Vodacom must determine a reasonable payout amount to compensate Makate, who has subsequently refused Vodacom's undisclosed offer describing it as insulting:

"The CEO'S determination considers me as a charity case and ignores the fact that I have a binding commercial agreement with Vodacom as found by the High Court and upheld by the Constitutional Court."

FORMER PRESIDENT JACOB ZUMA responds to President Cyril Ramaphosa's comments about South Africa having to emerge from '9 wasted years' in Davos, saying:

"I remain proud of much of what we and the country achieved over the past decade. Could we have done more? Yes. Could it have been better? Yes. Was it a wasted decade? No."

DAKOTA LEGOETE, an ANC national spokesperson, accuses Julius Malema and the EFF of hypocrisy, adding that the new National Director of Public Prosecutions (NDPP), Shamila Batohi's appointment was above board:

"The attack on the new NDPP by the EFF is very unfortunate and must be dismissed. Batohi was appointed after a selection process, which was public and open to the media for all to see and the EFF welcomed her appointment. We do not know why they have a problem with her now."



GEORGE CHARAMBA, Zimbabwe Government national spokesperson, responds to DA leader Mmusi Maimane's comments of his intent to visit Zimbabwe and intervene in the ongoing Zimbabwe crisis and the violent response towards Zimbabweans protesting in the country:

"If Mmusi Maimane tries to come here, he will be thrown out and will not be allowed to come into the country. We are a sovereign state and not a banana republic."

THE PIC BOARD in a letter tendering its resignation to the Finance Minister, Tito Mboweni. Allegations of corruption have been levelled against a number of board members sparked by an e-mail from a purported whistleblower under the name of James Noko:

"There is clearly a concerted effort to discredit the Board of Directors to the extent that there cannot be any credibility to the work that is executed in fulfilling its fiduciary responsibilities."

MARTIN KINGSTON, Business Unity South Africa's Vice President, warns of the catastrophic consequences for the country's economy if Eskom's proposed tariff increase is approved:

"We, as boosters of the economy, believe that we'll not be able to tolerate tariff increases in excessive inflation [but] that doesn't mean that we're proposing that there should be at an inflationary level."

USAIN BOLT, recently retired Jamaican sprinter, predicts Wayde van Niekerk could obliterate his long-standing 200m record.

"I tell people that, if anyone can break the world record it's going to be in the 200m. I was watching Van Niekerk because he was looking good over 200m and we have always had this conversation that he could do it. He's shown and proved to be not only strong but fast. For me, the possibility is there."

DAKOTA LEGOETE, Acting ANC national spokesperson, reacts to Tito Mboweni's comments directly criticising former President Jacob Zuma for nine wasted years:

"We are prepared to learn from our hard lessons and we are in the process of self-correction. As part of the renewal, bad things that were done before must not be repeated. We are clear that we are going to intensify our fight against corruption and mediocrity."

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Mining a successful future

When Nathan Williams enrolled in a Chemical Engineering degree at UCT in 1991, he was unaware of the 28-year mining journey he would embark on



Williams took over as the Managing Director of Basil Read (BR) Mining in May 2018. His expedition to the top was not without incident in an industry

that is undergoing tough times but, today, he is the Executive Officer.

Mining comes with a contested legacy. The 21st-century version of mining is far more responsible than its earlier iterations. It has to be responsible, not just for the company and its shareholders but also for the environment and communities it operates in.

What are your three key priorities for 2019 and why they are paramount?

Our key priorities for 2019 are quite simple: retaining our edge as a safe and highly efficient mining operator, introducing more technology into our operations and continuing to demonstrate integrous caring for all our stakeholders.

We believe in being a responsible partner and in contributing value to our clients, staff and our suppliers. It is the only way to be sustainable and to enhance the legacy of the mining industry in an African context, which helps us stay true to our mantra of building legacies at Basil Read.

What are the steps your company is taking to embrace Industry 4.0?

Having autonomous equipment removes our staff from front-line danger and with the advancements in the Internet of Things (IoT), there is greater opportunity to integrate operations and realise higher operational efficiencies. At BR Mining, we have partnered with a service provider of integrated systems and

we are already using intelligent operational guidance systems on our drilling machines, which has enabled safer, more efficient operations. We believe the evolution will improve our expertise towards more effective service delivery to our clients.

Is there enough industry transformation in terms of the previously disadvantaged having equal opportunities, as well as gender equality?

The short answer is “no” on both counts. We have intentionally targeted training women as mining and civil engineers and have sponsored tertiary education for them. They have been selected from the neighbouring communities on the mines where we operate. We have also increased our procurement of goods and services to designated and emerging black enterprises to 60%. Our senior management team is transformed and we fully embrace diversity because we believe that in diversity, there is strength. ▲

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The future is digital, Industry 4.0

Building the 3D printing/additive manufacturing dream

From creating technical business solutions to developing engineering products, to producing medical implants and devices, and to manufacturing just about any object under the sun, 3D printing has taken the world by storm. In fact, additive manufacturing (3D printing) is a disruptive manufacturing tool that changes the way we design, create, build and manufacture parts.

Now, just imagine how, with the democratisation of the production of goods, industrial 3D printing will revolutionise the future of human development ...

A leader in this revolutionary industry is the national production and industrial 3D printing specialist, Rapid 3D, an innovative company that has carved out its place in the growing 3D printing industry in South Africa.

Rapid 3D's co-founder, Mechanical Engineer Dave Bullock, passionately speaks about how this exciting industry has advanced since the first 3D printer was introduced on local shores in the early 1990s—and about the role, future and importance of the 3D printing business in South Africa.

"South Africans are innovative in many ways. We are at the forefront of embracing and using new technologies. In the academic field, a number of pioneers managed to set up access to some of the technologies very early on in the game," says Bullock.

Proof that South Africa is on par with the rest of the world, is that the Rapid Prototyping Centre at the Central University of Technology (CUT) celebrated 21 years of existence last year.

"A number of professionals at the university have done pioneering work utilising 3D printing in the medical field and a number of companies have embraced the technology and are using it effectively," Bullock explains.

While technology in the 3D environment was initially focussed on prototyping and helping

product developments, there is currently a strong trend towards manufacturing.

"Over the last few years, we have seen a tipping point. Companies are taking notice—and there is top-down pressure from the executive level, asking; 'What are we doing about additive manufacturing (AM), what are we doing about 3D printing, how does it affect us and what are we going to do to make it work in our business?'"

Bullock sees the current technology space, specifically 3D printing, as a very empowering one as it means that individuals, smaller companies and especially people with an entrepreneurial drive, can compete on a global stage far easier than they were able to do prior to this kind of technology. This new technology, Bullock enthusiastically confirms, allows small business to make big plays.

"With a very small investment, one can design and create products, literally working from one's garage or even from a coffee shop. This is really powerful! 3D printing and AM technology, the Internet of Things (IoT) and cyber technologies all contribute to making this possible. It is incredibly empowering and it is an important enabler, which is helping to create these opportunities," says Bullock.

In recent years, technology has, globally, intimidated many people. However, it does, and will continue to affect Third World countries more since there is a greater reliance on more traditional jobs.

According to Bullock, the powers that be should be taken to task sooner rather than later in terms of the education system. In many aspects, the education system still feeds the 'traditional' job market, while work in those areas will continue to be taken over by artificial intelligence (AI). The job market's demand and the education system have, for many years, not been on the same page.

Bullock believes that children need to be taught about entrepreneurship from an early age because that is what the future will demand.

Children need to be up to date with technology and need to learn how to make it work for themselves. He says there are still those who are fighting technology, but while they are fighting a battle they will lose, they are inhibiting progress and the adoption of technology and Industry 4.0.

"The future of many traditional jobs is threatened by automation, so people have to learn new skills to use the new technology. We have to learn to take advantage of the different platforms that technology provides and we have to shift our focus. As a business owner, it concerns me that our education system is not addressing that.

"There is this huge opportunity and there are immense possibilities for people to be empowered by technology, but a culture of education, self-education and of wanting to use the technology needs to be created in order to take full advantage of these possibilities. This needs to be done right from grassroots level," he says.

Bullock explains that in relation to the limitations of 3D printing, education plays an important role, as many of the limitations have to do with the adoption and utilisation of the available technology. He believes that, for the successful implementation and utilisation of 3D printing technology, a mindset change and embracing the expansion of traditional business practices are required.

"There are good examples of great applications where technology has been used and exploited very well. In almost all of these cases, the people and businesses that implemented them have changed the way they think and the way they design products to leverage the technology.

"The way of thinking has to change and that will take time. The term 'design for additive manufacturing (DfAM)' comes to mind, meaning that we have to look at products and solutions to common problems differently because we now have this technology that can offer very high levels of geometric complexity. Previously, with conventional manufacturing

techniques, we could not achieve this. Furthermore, this technology will have an effect on supply chain logistics," he says.

Bullock explains that, at many exhibitions, the focus is now on material development and optimising processes to achieve increased production speed. He says that 3D printing has been very slow and that it has been a concern, but this is rapidly changing and soon it will no longer be an issue. "It is going to change, as equipment manufacturers are focussing on implementing production speeds that can compete with injection moulding. Manufacturers are also focussing on providing materials that can address most of the material requirements," he says.

The biggest hurdle to overcome is the misinformation about 3D printing technology and the biggest problem is that the technology is hyped-up. Due to this, many companies supplying equipment subscribe to this hyped-up model where people are selling, new, better and faster printers, among others, which do not necessarily work as advertised.

"With the over-saturation of information, you have to sift through and find clarity on which technology and which applications are going to work in a proper business case, as opposed to novelty technology. So, we spend a lot of time and money on educating people about viable business applications," says Bullock.

While the manufacturing industry has evolved, some segments are still lagging. Bullock explains that in the case of AM, there are many obstacles to overcome in order to get it into mainstream manufacturing. "In South Africa, the key catalyst in terms of building the AM industry is producing strong service providers. This will grow the adoption of the technology. It has been proven globally, in Europe and in the US.

"Our primary focus is to build on the current platform and to grow the production of locally produced parts in SA. As part of that, we need to stay up to date and make sure that we provide our customers with access to the latest AM technologies and materials, and then provide the best ways for companies to learn about the technology and leverage it for a competitive advantage," Bullock concludes. ▲



About Rapid 3D

- The dream of 3D printing became a reality when, in 2004, the engineering family-run business imported its first 3D printer—a ZPrinter 3 10. This has now grown into the largest commercial 3D printing service bureau in Southern Africa, running a fleet of 3D printers and providing parts off approximately seven mainstream AM technologies.
- Fifteen years later, Rapid 3D is thriving. The company, which has empowered several businesses to make good on the sometimes unpredictable promise of 3D printing, has a strong focus on technical solutions.
- Rapid 3D has strong partnerships with Global OEMs such as EOS and Markforged, among others.

Contact: David Bullock 0823744109

www.rapid3d.co.za

Dave Bullock, founder

A big dose of innovation for pharmaceuticals in SA

The role that pharmaceutical companies play in improving the health and welfare of the general population is one that is often overlooked. Not only do their medicines save lives, improve health, and prolong and enhance the quality of life, but medicines also have the potential to reduce overall healthcare costs by speeding up recovery times, as well as the need for surgery and hospitalisation.

While researching and developing new medicines form a large part of their operation, pharmaceutical companies are also working to improve medicines, ensuring better adherence and compliance due to simpler dosage regimens, improved delivery systems and fewer side-effects.

The Innovative Pharmaceutical Association South Africa (IPASA) was established in April 2013 to represent and provide support to these companies, creating a respected association uniquely positioned to engage with stakeholders in both the private and public sectors. IPASA currently represents almost half of the big pharmaceutical companies operating in South Africa, and it aims to build a sustainable environment for these companies while ensuring better access to innovative research-based healthcare.

"In April 2013, Innovative Medicines South Africa (IMSA) and the Pharmaceutical Industry Association of South Africa (PIASA) integrated to form IPASA. It was a necessary move as they were essentially two associations serving the same industry. Both organisations covered the same interests and issues; from intellectual property protection to regulatory delays of products' registrations. Historically, the industry association was called the Pharmaceutical Manufacturers Association (PMA), and it was a difference of opinion over taking legal action against the Department of Health that split the pharmaceutical companies into these two groups. Over the years, there was a growing need to form a united body, one that represented

the interests of all stakeholders," explains Dr Konji Sebati, IPASA's CEO.

"As a voluntary association, our primary aim is to promote the research and development of innovative pharmaceuticals, contribute positively to a patient-centred health system and bring the benefits of these breakthrough treatments to patients across South Africa," she adds.

Spanning the entire pharmaceutical value chain—from research and development, safety and pharmacovigilance, continuing medical education to manufacturing and distribution—IPASA also supports initiatives in both the public and private healthcare sectors to help develop practical solutions to address the country's most pressing healthcare challenges. IPASA's philosophy is one of collaboration with other role players in the healthcare sector to achieve maximum benefit from the latest discoveries and technologies in the field of pharmaceuticals.

"By promoting significant investment in research and development, advancing ethical conduct and setting the bar for excellence in the pharmaceutical industry, we believe we are improving patients' access to more effective, convenient and safer drug therapies. These research-based organisations spend billions annually trying to discover new medicines for unmet medical needs, and all that research is done worldwide, including South Africa. SA offers some of the best medical facilities in the world, and we boast a highly respected scientific community; and some researches are internationally recognised and respected. We have a few world players.

I think it's important for our local scientists to have the opportunity to be a part of international research. These companies also provide educational opportunities for young scientists and help us to continue to shape the environment in SA as one of excellence in research and development. I think we are already a force to be reckoned with but we are still growing and there is still a lot that is being done to improve this," she says.

IPASA currently has 26 members, including well-known names like Pfizer Pharmaceuticals, Bayer, GlaxoSmithKline (GSK), Merck, Roche and Lilly and Novartis, where each one has their own unique focus on a specific disease area. While many of these companies are considered competitors, their research and results are still invaluable in assessing patients' responses and ensuring the best outcome.

"They are also expected to abide by our code of ethics. And while we are not a regulatory body, there are still ethical standards to ensure self-regulation. This speaks to everything from their marketing and advertising to their sales reps' behaviour, as well as their social responsibility to each other, the environment and the community around them. We promote the spirit of Ubuntu and expect our members to behave accordingly.

"I think it's also important to grow this industry locally and build on our expertise here; we can't always depend on research from abroad as there are certain biological, environmental and even genetic nuances that need to be considered for the final product. We are also, as a country, able to put more emphasis on research for disease areas that affect us most,



Dr Konji Sebati, CEO

like multi-drug resistant tuberculosis (MDR-TB) and HIV,” adds Dr Sebati.

Finding the right medicine

Although much progress has been made in developing new medicines in the last few decades, innovation remains an essential component of the global healthcare industry. Unmet medical needs, the emergence of new infectious diseases and the so-called superbugs that are due to increasing resistance to existing treatments; this brings new challenges to the world of research.

“We believe that it is critical to continually gather the commitment and support of all our

pharmaceutical stakeholders and to establish effective networks and partnerships that will continue to boost innovation, improve treatment and save lives.

“We are a member of the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA), which allows us the benefits of being part of the international pharmaceutical world—new trends, new research, new ideas etc. Our biggest and most important objective is to continue to strengthen and build on our relationship with the Department of Health, a relationship not only based on solving problems, but on trust and transparency,” says Dr Sebati.

South Africa’s pharmaceutical industry does more than provide health-promoting medicines to South Africans. It also makes a substantial contribution to the region by investing in local healthcare and ensuring the continued access to new medicines. In addition, pharmaceutical companies stimulate the local economy through employment, taxes, skills development and technology transfer.

“It’s also important to remember that, should these research-based pharmaceutical companies fade away; this would prove disastrous for the generic companies who would no longer be able to continue to exist without the innovative companies and the research they carry out.

IPASA also understands that as an industry, we also have to do our part, acting as partners in healthcare. While we do acknowledge that some of the newer medicines are prohibitively expensive, an environment of collaboration and partnership can ensure that these medicines are made available to most, even in the public sector,” she says.

According to Dr Sebati, as much as there is currently a lot of research being conducted worldwide on a wide range of diseases, including TB, HIV and malaria, it remains important to continue to invest in research and development for non-communicable diseases like diabetes, cancer, hypertension etc., and other neglected diseases, Neglected Tropical diseases, which we fortunately do not have a problem with in South Africa.

“Vaccines are also a strong focus in R&D because, if you can prevent disease completely, ultimately, it is less costly to a country. The HIV vaccine may still be evasive, but it’s something the pharmaceutical industry has been working on for many years. We are not there yet, but pharma is hellbent on finding a solution,” she says.

She also reiterates that it can take a lifetime for a research team to come up with just one treatment. It takes almost eight to 10 years to come up with a medicine that is safe and efficacious, with thousands of molecules falling by the wayside, and millions of dollars spent already.

Biotechnology has been identified as an area with great potential for the growth of the South African economy and the development of society in general

Sometimes, however, some of these medicines are discovered inadvertently—researched for something only to find out that some of the side effects are effective for something else, like the story of Viagra, a great example of a chemical that was initially being researched for a heart condition, only to find that one of its side effects was a possible cure for erectile dysfunction,” Dr Sebati says.

South Africa is not unique, but faces many of the same challenges other developing countries do, where we are faced with low-income areas and people are more vulnerable to certain diseases as a result.

“But we also see diseases of the First World, like obesity as well as lifestyle diseases that stem from the nature of our economy and education. What really makes us different is how these challenges are diagnosed and treated. We need to put efforts into educating our communities, increasing awareness and a better understanding of the implications of certain lifestyle choices. The response from the community itself is equally as important as the government’s,” she says.

Biotech—a new playground for pharma

With South Africa working to grow and develop their biotechnology industry, IPASA was proud to co-host the inaugural BIO Africa Convention—Africa’s Biotech Indaba—in August last year, a first of its kind in Africa, with the aim of supporting and boosting the bio-economy across the continent.

Under the theme “Africa: Open for Business –Together building the Bio-Economy”, the BIO Africa Convention provided a platform to network and unlock the potential from Africa’s unique microbial biodiversity, offering opportunities for the strategic and consistent investment in cutting-edge technologies to enable the discoveries for new, industrial and relevant bio-molecules.

Biotechnology has been identified as an area with great potential for the growth of the South African economy and the development of society

in general, and four bioprospecting and product development flagship projects have already been launched involving traditional medicines, cosmeceuticals, nutraceuticals and ceramics.

“We got involved because we wanted to encourage and build on health biotechnology and become more involved in the Department of Science and Technology, which has already developed a biotechnology economic strategy that looks at how biotechnology can contribute to the economy while highlighting the advances made in South Africa on biotech research. Overall, the convention was a great success, there was a lot of African interest, and we are

hoping to grow this convention in future. I, personally, was also surprised by how much research is already taking place at universities on this topic, so it may still be a small area, but it is definitely growing,” Dr Sebati enthuses.

A colourful career

The current CEO of IPASA, Dr Sebati has over 25 years’ experience in the public and private sectors. She started her career as a Medical Officer in paediatrics and child health for several years before managing 21 primary healthcare clinics in the peri-urban rural areas outside in Pretoria.

She then joined the private sector, working first with Roche as a Medical Advisor and then with Pfizer Laboratories as a Senior Executive in Medical and Corporate Affairs, in South Africa and at the Pfizer headquarters in New York.

In 2004, she was appointed as South Africa’s Ambassador to Switzerland, the Vatican and Liechtenstein, and in 2008, she was appointed as the Ambassador to France, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Organisation for Economic Co-operation and Development (OECD). She later became an International Civil Servant for a United Nations agency, the World Intellectual Property Organisation (WIPO), based in Geneva, as the Senior Director heading the Department of Traditional Knowledge and Global Challenges.

Dr Sebati holds a Bachelor of Science degree from the University of the North (now the University of Limpopo), an MBChB degree from the University of Nairobi, Kenya, a Diploma in Child Health from the College of Medicine, South Africa, a Diploma in Hospital Management and Health Planning from the Technion in Haifa, Israel, and a Diploma in Public Health Planning and Health Services Management from the University of the Witwatersrand.

“I really wanted to be a Paediatrician but I found it very depressing, even heart-wrenching to lose a baby in your hands, and so I decided to study hospital administration, public health administration and health planning instead. I found that very interesting and truly enjoyed public health as a core to any efficient health system. When I became frustrated working for the government, where a lot of those same challenges still exist today, I joined the pharmaceutical industry. I loved working for Pfizer and understanding first-hand the world of research and development, and the ideals that drive the pharmaceutical industry. Being transferred to New York was a highlight in my career.

"I was appointed as an Ambassador during Mbeki's presidency and, at that time, he wanted a mix of ambassadors from various professions. When my time came to leave WIPO and Geneva in 2014, I was recruited by IPASA, which had just been formed in 2013, as the CEO. It was interesting that I got this job because at that time I was thinking of running a consultancy for pharmaceutical companies. I recognised that the pharmaceutical companies and the government, especially the Ministry of Health, weren't working optimally, let alone with service providers, funders and patient groups. This job really just landed on me and in the end, it was exactly what I wanted to do," she recalls.

A big part of Dr Sebati's job is to build relations with various stakeholders, making an effort to depict the industry in a different light—as part of the healthcare value chain and not just a provider of medicines. And while she acknowledges that, at the end of the day, they are businesses that need to make money, what they deliver in return cannot be ignored.

"One of the things I am most passionate about is working with the government to provide our medicines to all South Africans—in the private sector and public sector, irrespective of the price of the medicine. Legislation plays a big role in this but because of the current policy, the public can't access a number of our lifesaving drugs. We need to begin to talk about this with the government, and I can assure you pharma is willing and ready.

"As regards public health activists; they play a very vital role in healthcare delivery in this and other countries, and it is important that they too regard us as healthcare partners than see us on the other side of the fence. I would much rather we work together to make medicine accessible. It's not a smooth road and there are still lots of hurdles for me, but until we are able to build a trusting relationship with the Department of Health, these problems will continue," she says.

Dr Sebati also believes that having such a global experience, and of the African continent, has given her a different perspective on life.

"I'm grateful to the different working environments I have been exposed to. I have been enabled to think very globally and very differently. I've also come to learn to appreciate the differences and nuances about people, countries, governance and leadership. This has really helped because I'm still working with different types of people culturally, as well as different personalities. My journey has opened the world up to me, and I can use and *do* apply what I've learnt as much as possible," she says.



According to her, the industry is still very male-dominated; the scientific world is still very male-dominated, but women have made great strides in the field and even in IPASA, we have a good representation of female CEOs/general managers.

"How I have survived and grown in my career over the decades has been because I am an amicable person, but with very strong views on some issues, while not being an aggressive or abrasive person.

"I always manage to find a way of putting my point across firmly and gently. I also give people a long rope at times, the benefit of the doubt; but when I detect arrogance, subtle racism or feminism, I respond differently and can be quite firm.

"As a leader, I like to see my colleagues progress and do well and I encourage them to improve their skills all the time, be confident,

be determined and be focussed, because this is how I have been throughout my life," she says.

Her passion comes from seeing improved health, one of the biggest reasons for her choosing a profession in the medical field. Besides that, her mother was a Nursing Sister at the then Baragwanath Hospital (now Chris Hani Hospital) and her father was a Fort Hare graduate with a Bachelor in Health Sciences. "If I could live in an ideal world with empty hospital beds, less disabilities and ailments, people not dying from preventable diseases, pharma that continues to pump money into finding cures and an environment that supports innovation, effective and efficient partnerships with the Ministry of Health and all its divisions, and trust and collaboration with healthcare providers and funders; it would be a pharmaceutical career well worth followed and etched in my heart," Dr Sebati concludes. ▲

Customised education delivers a significant impact on employee performance

To gain a strategic edge in a world where disruptive innovation is changing the way organisations compete, businesses need training interventions that deliver a significant and relevant impact on employee performance and to the bottom line—fast. And customised education is emerging as a powerful vehicle to do just that.



Rayner Canning, Director of Business Development – UCT GSB

From a business school perspective, customised education is all about customer solutions,” says Rayner Canning, the Director of Business Development at UCT’s Graduate School of Business (GSB).

“All businesses face different challenges and have different training needs. Customised education is a growing area of executive education that allows organisations to collaborate in the design and development of training and executive development that is aligned with their needs and goals and meets specific requirements in terms of content and delivery,” he says.

A vital bridge between academia and business

Canning believes that the role of today’s universities, and particularly of a business school, is to produce graduates who are able to take what they have learnt and apply this to their business context—and make a tangible impact or improvement. “Thus, the role of business development at the GSB is really to foster and develop effective working relationships with business, corporates and the government in South Africa, that build a bridge between the excellent academic and research work that we do and the practical needs of the fast-changing world of work,” Canning says.

He comments, “This requires us to approach things differently. Not only in what we teach and how we teach it, but through an emphasis on building partnerships with corporate clients and extending the school’s executive education footprint into Africa.”

Canning explains that successful customised education rests on the design approach—it must be a collaborative effort between the organisation and the educational institution that allows them to pinpoint what is needed and then to design a high-impact intervention to meet those needs. “This is really the crux of what we do—to take what is essentially a university knowledge bank and make it applicable and relevant to business needs. It’s about matching the university’s capabilities with business requirements to create shared value and to improve business outcomes for those organisations,” he says.

The UCT GSB has been setting the pace for management education in Africa for more than five decades and has earned international recognition for its customised programmes, now ranked 67th globally by the Financial Times. The school is also one of just three business schools in Africa and 89 in the world to have the prestigious triple-crown accreditation as it is endorsed by the three leading global accreditation bodies—EQUIS, AACSB and AMBA.

“The fact that businesses can structure what they want and draw on the knowledge

of an institution that has more than 50 years of business education experience, makes for an effective client-focused training solution,” says Canning. “Being able to offer employees an accredited qualification or even a full degree from the UCT GSB, and have it tailored to specific business or industry requirements is a major draw-card,” he adds. The UCT GSB’s customised programmes can be adapted from existing short courses, fully accredited academic programmes, or they can be designed from the ground up.

Programmes can be tailored around managerial skills, leadership development or specific business acumen depending on client requirements.

Radical flexibility that makes sense

According to Canning, any training intervention must be aligned with an organisation’s strategic goals if it is going to be effective. It also needs to take into account how much time the business can have employees away from work and be structured accordingly. To accommodate client’s needs, the UCT GSB can deliver customised programmes on-campus, or at the client’s premises—at any location globally. “The right degree of flexibility is a key ingredient of a successful intervention,” says Canning.

On-campus education takes place either at the GSB’s Waterfront campus in Cape Town or at the school’s executive training facility in Sandton, which was opened in 2017. Canning notes that the Sandton facility was an important step for the GSB to be more accessible for corporate clients, and thus far, it has brought “enormous value”.

All of the GSB’s customised programmes involve a five-stage design process to ensure that they meet the client’s learning and development needs. Canning explains, “In the first stage—discovery—the GSB business development team will meet the client face to face to gain a full understanding of the organisation’s business context and learning goals. This is the time to define deliverables and to discuss learning options.”

As part of this process clients are assigned a dedicated development team consisting of a business developer, the client’s main point of contact, whose role is to conduct a needs assessment and assemble an appropriate team

to design and deliver the programme; a course convenor responsible for design, development and facilitation; and a programme manager to oversee delivery and ensure a successful client and delegate experience.

In the second stage—diagnosis—the GSB team conducts further research, gathers stakeholder input and delves into the specific challenges the programme needs to address. “Here, we examine the business from a variety of perspectives and define key capability requirements,” says Canning.

In the design and development stage, the client and the GSB work closely to co-design the curriculum of the customised programme. “This rests on defining clear learning outcomes that are aligned to the business strategy and also on establishing a best-practice methodology to achieve these,” he explains.

Stage four is the delivery of the course. “We identify the most appropriate people to present the course content, drawing on the GSB’s world-class faculty as well as guest speakers and experienced practitioners from the GSB’s wide industry network,” says Canning. Course content is delivered through lectures, group discussion, case studies and assignments.

Made to measure

Canning believes that the final stage—evaluation—is critical to ensuring that clients receive a return on investment and that the programme meets the specified requirements and delivers the focused high-impact outcomes that were intended.

“Through evaluation, analysis and a return on investment report, we can identify strengths, potential refinements and opportunities for ongoing professional development,” he says. Programmes often run over many years, with successive cohorts completing the training.

He adds, “The GSB believes that the aim of any programme is to develop skilled, agile and resilient leaders who are empowered to generate positive business outcomes when they take those learnings back to work.”

The UCT GSB has delivered customised programmes to all types and sizes of organisations in a variety of sectors including corporates, the government and civil society organisations. For example, when Protea Toyota, an independent

car dealership in Cape Town, was looking to develop the skills of its existing managers and train new managers, the UCT GSB provided a customised version of an existing executive education short course.

The UCT GSB adapted The New Manager, a flagship management development short course, into a modular programme for Protea Toyota, which stretched over six months and was delivered at the client’s premises. A year after completion, Protea Toyota employees indicated that they were still seeing the benefits of the course, such as improved team interaction and more streamlined work processes.

The UCT GSB also designed and delivered a Postgraduate Diploma in Management Practice specialising in Professional Sales Management for Absa, which ran for five years, with several intakes over that time.

The programme was initially intended for staff who report to managers, but it proved so successful that it was widened to include managers.

A commitment to excellence and innovation

Canning lays much of the credit for successful programmes such as these at the feet of the “innovative and unconventional” lecturers and academics who are prepared to go the extra mile to ensure that delegates achieve their goals. He says, “The GSB has a reputation for being innovative in our teaching methods and for the ability to produce keen business minds.”

He adds, “I think it is a combination of ambition, tenacity, desire and our collective belief that, despite our relatively small size compared to top-tier international business schools, we tick the vital boxes and deliver quality products to our students and our executive clients, and we are willing to hold ourselves up to the scrutiny of international accrediting bodies.”

“The GSB has so much to offer in terms of access to talent, knowledge of the emerging market context and innovative teaching methodologies to help our clients to take the next step.

“To keep on exceeding, organisations have to invest in their talent and knowledge. Customised education is an important part of that,” Canning concludes. ▲

Serving up transformation as an investment for South African business

A key part of South African legislation, Broad-Based Black Economic Empowerment (B-BBEE) was implemented with the hopes of achieving increased economic participation and better wealth distribution in our country



Gideon Gerber, Director

With more than 20 years into a new democratic era, B-BBEE has evolved in terms of dimensions, diversity and requirements, and while an entity is not penalised for having a low BEE score or not embracing BEE, it is unlikely that these businesses would be awarded contracts by the government or even in the private sector.

Established in 2014, Serr Synergy focuses on compliance with the B-BBEE Codes of Good Practice; the new Companies Act, including the Consumer Protection Act, the National Credit Act, the Protection of Personal Information Act and the Electronic Communications Act; skills development and employment equity; and labour relations issues pertaining to both business and domestic employees.

“Our objective was to create something unique; where we’re not just a BEE consultancy but offer more sophisticated professional advice on things like ownership structures and taxes. With us, clients can find a complete solution under one roof. Therefore, it is very important to us that we remain innovative, researching innovative ways for clients to comply with the various BEE codes, which can be very broad, and clients more often than not need a solution that is tailor-made. For BEE to work in SA, businesses must be able to implement programmes adapted to their specific requirements, and that is where we see our role,” says Gideon Gerber, Serr Synergy’s Director.

“I think our model has been very successful; in our first four years, we have assisted over 7 000 clients from six offices across the country and we currently employ about 450 people. We have also rolled out almost 700 learnership programmes for black youth, a one-year training programme with work experience in the areas of manufacturing, retail, services industry, administration and management,” he adds.

Serr Synergy has also provided training for more than 15 000 employees with courses in occupational health



and safety, first aid, customer care and various ABET courses.

"We are also very proud to be the only company in South Africa to present development courses for less educated black people to ensure that they are also able to participate in the ownership of companies effectively. This course was implemented in April last year and entails basic financial management and accounting, management and certain legal compliance courses that are needed for running and managing a business. We are also the only company in the country to offer a retainer service to provide accredited training, and this helps businesses to plan properly for their own staff training," he says.

Gerber, who has been involved in the development of these policies since before the 1994 elections has always been invested in the BEE development objective, believing in its potential to create sustainable economic opportunities for the majority of South Africans.

"If you look at the majority of current activities, from politics to crime and investment, these are all things that affect our day to day lives, and they are very much intertwined with the poverty and inequality we are seeing here in South Africa. For me, it is quite a remarkable privilege in my occupation to contribute to a better future for all South Africans. The majority of businesses offer a product—ours just happens to be an investment in South Africa," he explains.

He also believes that not all government programmes have had the necessary positive impact and their outcomes have not been sufficient to address all the challenges facing South Africans today.

"We believe we have the necessary tools and experience to enhance the implementation of these programmes so that they really have an effect on people in the country. There must be real substance to what we do, so, for example, our learnership programmes have assisted almost 15% of the participants in receiving further tertiary education and today, they are employed.

"Our name—Serr—is a representation of our own approach to achieving success and that is strategy, execution, results and rewards. Every

activity we undertake with a client must be able to be positioned within the broader strategy of that company, and the strategy is executed on a strict timeline and budget, with a strong focus on the results and rewards emanating from those activities," he says.

Looking ahead, Gerber hopes to open more offices across the country and increase their reach, especially in rural areas where they have identified a significant lack of expertise in this field.

"We also expect that with BEE being so connected to political ideology, it will remain a central theme in up and coming election strategies, going forward. There is no political party today that would survive without taking a stand or developing their own policy on BEE, land reform and economic redress. I think that all parties recognise the importance of all three areas but they are battling to find solutions and they also all differ on their approach. So, we all agree that they need to be addressed but we can't agree how. What we need is strong leadership to bring all of these views together and to find common ground on how to best tackle those challenges," he says.

Gerber also believes that, over and above BEE compliance, companies need to start paying more attention to the areas of skills, enterprise and socio-economic development, despite the fact that many businesses still deem those costs as a type of a tax they pay to get more BEE points.

"We attempt to take that expense and turn it into an investment in the company. This includes upskilling their workers and training unemployed people who can then be employed by the business. There is also socio-economic development where we do branding for the company in the communities where they trade and do business," he explains.

An admitted Attorney who specialises in labour and corporate law, Gerber considers the time he served on the National Peace Committee in the run-up to the 1994 elections as a significant part of his career. During this time, he facilitated dispute negotiations with various groups and he was also part of the commission that gave input into the new Labour Relations Act of 1994 and 1995.

"Last year, I also completed my Master's in Law from the University of Pretoria (UP) where I was the first postgraduate to do extensive research on BEE fronting—which is essentially cheating to improve your BEE score.

"I was the first to do my qualification in that direction and I am now in the process of obtaining my doctorate—also with UP—on the interface between the constitution and BEE law. This involves some international research where I am looking specifically at countries with similar redress policies, like the USA, South Korea and India," Gerber says.

At the heart of Serr Synergy's product offering are the people, where they essentially sell people to businesses. "So, what we offer our clients is essentially our staff," he says.

"In order to build strong relationships, we must ensure that our own staff are properly trained, recruited and remunerated. Within our company, I believe it's important to foster a culture of mutual trust and create an environment conducive to innovation.

"Our training and development policy within the company and our broader HR policy is based on the principle that we must train our people well enough so that they can leave, but treat them well enough that they don't want to," he says.

Gerber, therefore, doesn't believe in micro-managing staff and prefers coaching rather than commanding people. Serr Synergy management receives training on how to develop their own units, how to work as a team and all the necessary techniques to effectively pick up on and resolve disputes and to pre-empt any behaviour that might jeopardise the team.

"We also believe that the staff learn more from their peers than from their managers, so we develop each staff member to become a leader, where each one feels empowered to change the environment around them.

"My personal philosophy is that you must make sure that you learn something new every day; never think you know enough, you should know enough to know how little you know. I also believe that when you lead with passion, the work no longer feels like a job but rather something you enjoy doing," Gerber concludes. ▲

Setting the bar high

Proudly innovative, proudly entrepreneurial, proudly South African

Mundipharma South Africa prides itself on not only being an innovative pharmaceutical company but on fostering an entrepreneurial spirit among all its employees and creating diversity within the different roles across the business.

This diversity was recognised in 2018 when Mundipharma South Africa won the Standard Bank Top Women Award in the health and pharmaceutical industry. The woman at the helm of the business in South Africa, Shannon te Roller, is proof of the diversity within the organisation.

Mundipharma established its operations in South Africa back in 2011. Te Roller joined the fledgeling company in 2012 with a handful of other employees. Now, in 2019, Mundipharma is recognised as one of the top 10 fastest-growing pharmaceutical companies in South Africa. Mundipharma South Africa is part of the Mundipharma network of independent associated companies, which has a global presence.

Mundipharma is focused on business transformation by leveraging global leadership in pain and, through a shared spirit of innovation, building a growing presence in antisepsis, ophthalmology, respiratory, oncology, consumer healthcare and other specialty areas. Their innovative medicines have transformed the way health practitioners go about treating pain.

The company boasts an impressive pain medication portfolio, including the world's first extended-release morphine tablet and seven-day analgesic patch. These innovative medicines have transformed the way health practitioners go about treating pain.

Additionally, Betadine®, which is in its line of antiseptic treatments, has a legacy of over 60 years and is well-known for its germ-killing properties.

"During the outbreak of Ebola, Mundipharma was committed to helping contain the outbreak and donated significant amounts of Betadine®



Shannon te Roller

for handwashing purposes to play its role in helping to prevent the outbreak spreading in West Africa," says Te Roller.

More recently, the company has expanded the ophthalmology side of the business, with glaucoma treatment being high on the agenda. "The opportunity to create ophthalmology as a new pillar of focus within our organisation has allowed us to increase our scope of expertise and product acquisitions into a disease area, which is very emotive and difficult to treat. Glaucoma, in particular, affects so many people globally and we are looking forward to exciting developments, including the launch of a new preservative-free option for the primary treatment of glaucoma in 2019.

"We will continue to build on our existing portfolio, which will allow patients to have an increased choice, especially when managing the side-effects of glaucoma, like ocular surface disease, which can become a real problem in some patients," says Te Roller.

Keeping up with the times

The company prides itself on being innovative in these dynamic times and with the Fourth

Industrial Revolution picking up speed, it is essential to keep an eye on the future for the next chapter of medical advancements.

"It's really about accessibility for your customers. In order to compete in the marketplace, one has to be innovative in terms of using digital platforms to bring awareness to brands, whether it is through social media, online editorials or educational programmes," Te Roller explains.

Mundipharma South Africa is a member of the Innovative Pharmaceutical Association of South Africa (IPASA), which represents pharmaceutical companies dedicated to bringing innovation and quality products to the South African pharmaceutical market.

"Our products are innovative, so they differentiate themselves in terms of the market value they provide to patients. However, the company is really geared towards an entrepreneurial spirit.

"This entrepreneurial spirit underlies the way we function and are able to be agile within the market dynamics. Change is constant so we need to have a growth mindset at the core of our culture's DNA.

"That entrepreneurial spirit and growth mindset really encapsulate what differentiates us in terms of how we operate, it makes us more agile. We have a number of core values that govern and empower our behaviour at Mundipharma, namely accountability, performance, leading self and alignment within our commercial operations," she says.

Shannon te Roller

Having originally started out as a town and regional planner, Te Roller always had a keen interest in medicine and when she made the move to the pharmaceutical industry, she had to start from the bottom up.

"I started as a medical representative before moving into management—I have been very blessed in terms of the many opportunities Mundipharma has provided me," concludes Te Roller.▲



www.mundipharma.co.za

Mundipharma, changing lives through innovative pharmaceuticals.



Mundipharma provides medicine and healthcare solutions that make a positive difference to patients' lives. We understand that living a life free from the discomfort of illness is crucial to enjoying those special moments. This is why we are committed to improving patients' quality of life and building sustainable partnerships with the healthcare providers who serve them. Mundipharma is a prime example of a company that consistently delivers high quality products while standing by the values that the represent the company. Our mission is to alleviate the suffering of patients and to substantially improve their quality of life.

Pain Management



TarginAct
SOVENOR
OxyNorm
MIXTURE
OxyNorm
MST Continus

Ophthalmology



Cosopt
TIMOPTOL
TRUSOPT

Over-the-counter



TEEJEL GEL
chlorine butyrate
BETADINE

Reviving South Africa's economy

Proudly South African was born out of the 1998 Presidential Jobs Summit, which was convened by the late former President Nelson Mandela. Local procurement was identified as a driver of economic growth and job creation, and so in 2001, the organisation was formed through Nedlac as an NPO and started its work, says Eustace Mashimbye, the CEO.

Please could you provide us with a history of your educational and career background?

I grew up in Mamelodi in the East of Pretoria. My dad was something of an entrepreneur and my mother was a teacher for more than 30 years. Through them, I learnt the importance of education and determination. I studied financial accounting and corporate law at what was then Technikon Northern Gauteng (now Tshwane University of Technology) and Technikon SA (now UNISA). I also studied towards my MBA, although I haven't yet completed it, with Management College of South Africa and am currently completing my studies towards a Corporate Governance qualification through Chartered Secretaries Southern Africa. I have served in both the public and private sectors, having worked at the dti, Edcon and Telkom before joining Proudly South African as the CFO. In August 2016, I was made the acting CEO and was appointed permanently in December of the same year.

As CEO, what are your short- and long-term goals for Proudly South African?

Our short-term goal is to keep on expanding and extending the scope of our work and reach into business, the public sector and into the mindset of each and every consumer in South Africa, to make buying local a default choice. Each year, we add to the number of programmes, exhibitions, conferences and forums, which we either organise or attend, to keep buying local top of mind.

In the long-term, we would like to make a significant contribution to unemployment through a strong membership base, through driving the demand for locally manufactured goods,



Eustace Mashimbye, CEO

which, in turn, will drive reindustrialisation. We also do this by encouraging more companies to implement local procurement practices—i.e. biased towards locally made products and services—which increases aggregate demand for everything that is locally grown, produced or manufactured.

Please tell us about the importance of buying locally manufactured goods—do you believe this could go a long way to alleviating poverty through job creation?

Making 'buy local' choices where there is one to be made is of critical importance. Every time we buy something imported, we export jobs and create them in the country of origin of the item we have chosen over a South African one. Only through local demand can we create more

jobs. Nowhere is this more evident than the two sides of the coin represented by the clothing and textiles sector and the poultry industry in South Africa. The latter has been decimated by the immoral dumping of cheap bone-in chicken pieces by unscrupulous importers who pass off bags of frozen, brined chicken labelled as having come from any one of multiple countries. If we had stuck to buying locally produced chicken, each and every bag of which can be traced back to a particular farm, we would not have lost the thousands of jobs we have over the last few years. Conversely, retailers including Mr Price, the Foschini Group and Edcon have all contributed to the re-emergence of a clothing and textile industry in this country, through increased localisation. Now, there are new jobs for shoemakers, cotton growers, spinners,



dyers, pattern cutters and designers—many jobs through the entire value chain because these companies have chosen to re-invest in locally made content for their shelves. Poverty can only be alleviated through a larger workforce, one that can invest in itself, its children and their education, and one that is economically active and contributing to the fiscus. With a larger tax base, the government has more to spend on facilities, which support the health, mobility and education standards of South Africans, and then we break the cycle of poverty.

Which industries are of the biggest concern when it comes to purchasing international goods?

There is almost no single domestic industry that hasn't felt the impact of foreign imported goods. Every sector is vulnerable to cheap imports or even to expensive imports. Our choices are by no means limited to the cheap end of the spectrum—many South Africans are happy to spend thousands of rands on Italian-imported leather goods and French clothing labels.

South Africa manufactures a vast range of items in all price categories, from grocery items, to fashion, to cars and white goods in the home—it is simply a matter of choice and checking the labels of origin for 'Made in South Africa'. However, due to their multiplier effect, we are focusing a lot of our efforts on certain labour-intensive industries such as the furniture sector, pharmaceuticals, the automotive industry and agro-processing.

You are a membership-based company, how do you go about increasing your membership and what benefits do people get from being a member? Can anyone be a member?

Since we revised our membership proposition and fee structure almost two years ago, we have increased our membership across industry sectors and across the provinces. We believe that we have the best value proposition we have ever had. Fees start at only R500 per annum for entrepreneurs, start-ups and SMMEs to R100 000 for large corporates.

First of all, the criteria for membership is quality local content. If the company is a service

provider, we consider all those employed by the company within the borders of South Africa and look at the company's local procurement habits. In the case of products, at least 50% of the final cost of production must have been incurred in South Africa, or if raw material has been imported, substantial transformation must have taken place in our country. We demand proof of quality by way of certification from an accredited verification body or industry association as well as proof of the company's adherence to the country's labour and environmental legislation. What is not important is the nationality or shareholding of the company. As long as they are creating jobs and manufacturing quality local items, they qualify for membership.

In return, we offer different access to market platforms to our members. From opening doors to potential buyers, free attendance at industry-specific exhibitions such as the Manufacturing Indaba, Tourism Indaba, Delicious International Food & Music Festival, home and décor events to participation in our own annual flagship Buy Local Summit and Expo, at which any member company that wishes can exhibit free of charge.

In addition, we offer many media and publicity platforms. We also have an in-house tender monitoring system whose benefits are two-fold. First, it allows us to monitor government adherence to local procurement legislation under the Preferential Procurement Policy Framework Act (PPPFA) but, secondly, it allows us to circulate tenders that are relevant to our members, directly into their email inboxes, alleviating the need for them to go through the government gazette and other newspaper sources.

In April, we will also be fully integrated with the Treasury's Central Supplier Database and any member who indicates that they wish to do business with the government will automatically be entered onto that list, given that we have vetted and audited them for compliance with all the terms that the government requires.

For those products targeted at individual consumers, we have launched an online shopping platform (www.rsamade.co.za) where it is free to Proudly SA member companies to list their products, giving them exposure and access to customers who are looking for high-quality, locally made items.

Do you place a great deal of emphasis on transformation?

There is a lot of emphasis on transformation in both the public and private sectors. For example, the local government has thresholds for procurement from township businesses and our database can help them identify these companies. What we need to guard against are operations that are based in the townships but who procure from overseas—that doesn't qualify as local procurement.

We have also worked with a number of companies and industry bodies, for example, the Franchise Association of South Africa, with whom we run workshops and pitching sessions where black-owned businesses that are members of Proudly South African are given a platform to potentially become suppliers to a diverse range of franchises.

As an organisation, you also run a few events. Can you tell us about one or two of them and when is the next one coming up?

Our biggest event is our annual flagship Proudly South African Buy Local Summit and Expo, taking place this year on 12 and 13 March at the Sandton Convention Centre. This year will be our 8th and biggest yet.

In 2017, we introduced an extra day just to focus on the needs of SMMEs, with presentations and workshops. The second day puts the spotlight on local procurement as a driver of job creation, and something that can be leveraged by business.

This year, on the back of October 2018's Presidential Jobs Summit and Investment Summit, the theme is 'Driving Localisation through Investment-Led ReIndustrialisation'. It's a bit of a mouthful, but that's what we need to focus on if we are to make a significant difference to unemployment.

On both 12 and 13 March, around 200 of our member companies will be exhibiting and networking, looking for new buyers and suppliers. Attendance to either/both the days and to the expo as part of the delegate registration or as a separate day visitor is free of charge, people just need to register on www.buylocalsummit.co.za, where they will find an outline of the programme and profiles of our speakers. ▲

A female force in the mining industry

Having grown up in a mining village, mining is what Nomvuyo Ketiso came to know and love throughout her life. So when she was approached in 2013 to become a Director at Dyrex, there was no hesitation in her emphatic yes.

Since her appointment as Director, she has not looked back and is now the sole Director of Dyrex after her partner left the company. Driven to succeed is one way of explaining Ketiso but it is her willingness and work to help others achieve that grabs the attention.

She explains that when she first arrived almost six years ago, after Dyrex got a contract with Exxaro in 2016, she felt the need to take on the HR responsibilities. "I believed that we needed to have this relationship with our own people so that we could build relationships with them

and then in terms of the law and the Act, we could have an outsider implement that," Ketiso explains.

Now that her partner has left the company, Ketiso has more responsibility but she still largely deals with most issues, including HR, herself.

However, it didn't simply fall into Ketiso's lap, she had to learn her trade. She understood the mining industry but management was new to her, as she explains, "I had to learn new things, such as the law and how to handle it. I handle the disciplinary matters and union negotiations, from wage to settlement negotiations. I'm also

the one who attends the CCMA case and who mainly communicates with the clients, I attend all the meetings and should any changes be required, I am the one who implements them. Essentially, my day is quite full from start to finish, and sometimes it finishes rather late."

Services

Dyrex offers their clients numerous mining services across the board, above and underground. According to Ketiso, they offer "whatever the mine needs" as they specialise in all mining activities.

- Coal mining (both underground and surface)





DYREX
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- Ventilation wells
- Belt sweeping
- Belt operation
- The building of underground structures
- The cleaning of the plant
- Stone dust barriers
- Bulk maintenance
- Women in mining
- General work (underground and surface)
- Labour services (skilled, artisans, miners and unskilled labour services)
- Underground reclaiming
- Concrete work (underground and surface)

One of the great global sticking points has been to ensure the rise of women within the private and public sectors. In general, South Africa has done reasonably well, especially within the public sector, but mining/construction has always been a male-dominated industry. Ketiso has managed to attain success while fighting against the odds.

“One of the things I’ve learnt in life is that if you want to change your environment or your world, you yourself don’t have to be a stereotype, you yourself don’t have to think like the stereotype. It’s so amazing when you come into a world where everything is green and you come yellow.

“People might take some time to get used to your yellowness, to absorb it, but eventually, if you stick to what you’re supposed to be the doing and stay focused, people will respect you.

“Mining is a tough industry, that I can promise you. Not because of male-domination but because it is a very complex industry. We do a lot of work and everything needs to be done in a specific way, according to regulations, so whoever thinks it is easy and anyone can do it, should think again.

“It was not easy in the beginning but also, I didn’t get negative vibes or energy from the people I was in contact with, everybody was very supportive, everybody was willing to assist, everybody opened the door and wanted me to make this work, which helped me a lot,” she says.

It is evident that Ketiso has all the knowledge and skills to be very successful at her job but what really sets her apart from many others is her mindset.

She explains, “My mindset was different, I never came into this position to prove anyone wrong or to prove a point. I’m there to achieve the vision that I have for my life and the company.”

She is also completely behind the empowerment of women. In fact, she says, in her opinion, the government could do with more women who are given bigger roles and more responsibility.

“I think, as women, we can make a massive difference in this country, we can help give it a brighter outlook—sometimes we could do with letting the egos slide,” claims Ketiso.

In general, employing women has a far bigger economic impact as they are often single mothers looking after numerous mouths so one employed person often affects up to six different people on an economic level.

But while she believes giving women jobs is good, Ketiso says that it is not enough to just do that.

“You must develop them, develop their skills, develop their intellect and empower them further in life—that is just the beginning. We want to go further. I believe that South Africa can be a better place if more women are advanced, not only black women but women of all races. We can all contribute to our country and society,” she says.

On the political front, things are looking up, according to Ketiso. Corruption has held this country in a stranglehold for years but in more recent times, it has come to the fore and it is being dealt with by President Ramaphosa.

“When the new president came in and said he was going to clean out corruption, that made us as business people happy, it gave us confidence.

“Although at the time, it was just a promise, he has acted since and what we see going on now gives us more hope. If it continues in this way, we are looking at a brighter future, our business confidence will continue to grow,” she explains.

Leadership

In terms of leadership, Ketiso believes in giving people the power, giving her workforce the power to do things their way, despite her love of being involved in everything. “I like to give people freedom. I’ve discovered that people are very unique and have very unique ways of doing the same thing, and they all achieve the

same goal but they just have a unique way of achieving it. Thus, I taught myself to let people be, to give them space and the choice in order to allow that uniqueness in them to manifest and to let them lead as well.

“There are times when, as a leader, you are required to step in. Sometimes a person faces a challenge and then I will step in and say, ‘let’s sit down and see what we can do’, and then I lead from that front, but I always allow the individual to make a decision that they are comfortable with.

“I have over 100 employees with six teams, each with its own supervisor as well as site managers and so forth.

“I find it far more effective to ask how they are going to lead their team and then we can sit down and discuss how they are going to save time, control safety, avoid incidents and save money—I find that easier than telling them how they should do it and it also empowers them,” she says.

According to Ketiso, people are the most valuable investment. After all, the employees are the ones who produce the work that gets the turnover to where it needs to be.

“Sacrifices must be made in business. You must be patient with your employees and you must encourage them. These are the three fundamentals of my business. Sometimes, it is worth taking a touch less profit if it means your employees are happy,” Ketiso says.

It is safe to say that Dyrex is in safe hands as they continue their growth over the next few years. Possible expansion into southern Africa is on the horizon for Ketiso and Dyrex—if there were any doubts about her ability as a Director five years ago, those have surely dissipated. Ketiso is grateful to both Anglo American and Exxaro for their empowerment and faith in her and the company.

In closing, she says, “I have learnt that it’s not about money—business is not about money. Money is the prize at the end for accomplishing your goals and the vision you had, money is the reward for that.

“In order to build a successful business, one must build oneself up too. If I fall apart, so will my business, so I invest in myself and in positive things, and I surround myself with good energy.” ▲

Inside the brand Gautengers love to hate

Electronic tolling has been the topic of much debate and controversy since the gantries arose along Gauteng's skylines eight years ago

During that time, there were many people who were unsure about its implications and were shocked when they realised it's another contender for their hard-earned money, engineered by the government they already didn't trust.

And when the Gauteng Freeway Improvement Project (GFIP) became a stark reality in 2012, most South Africans argued they'd been left in the dark with no voice.

To be at the helm of Electronic Toll Collection (ETC), the face of this controversial project, and on the receiving end of much hate and debate, is a momentous task.

But Coenie Vermaak, the CEO of ETC is a conscientious and consistent leader, determined to inform public opinion in favour of the dreaded e-tolls. He hopes with transparency, honesty, resilience, open communication and conversation, the benefits of this project will be better understood.

Among much contention and negative public opinion, on the eve of South Africa's next election, Vermaak puts it into context, "The main reason for the e-toll existence was purely economic and by no means meant to mislead the public."

The GFIP was conceptualised in 1996 by the South African National Roads Agency Limited (SANRAL) to improve much-needed infrastructure and attract more investment to Gauteng.

The province generates nearly 40% of South Africa's total economic activity and because development has grown significantly, it resulted in exponential traffic growth, thereby overloading the road and freeway capacity.

The government constantly struggles to balance the need for investments in infrastructure with the pressing demand for better social services countrywide. An economic viability study of the GFIP found the user-pay principle could be a solution, where motorists would help



Coenie Vermaak, CEO

pay for the infrastructure as those benefiting most from expanded lanes, smoother traffic flow, less congestion, reduced travel time and less time spent in carbon pollution.

High traffic volumes made conventional toll impractical, so the best way to monitor and control payment was by means of electronic toll technology. At the time, it was the biggest implementation of its kind in the world.

Australia and Chile also provided clear case studies for the success of urban open road tolling, and the project was passed into law by Parliament. The government did not know, however, with how much dissatisfaction the project would be met.

In late 2009, in competition with several other large international consortiums, ETC was successfully awarded the contract to design, build, operate and manage the Gauteng Open Road Tolling (GORT) Phase 1. The contract was extended in April 2017 to run until December 2019.

ETC is currently owned by Kapsch, an international road telematics, information technology and telecommunications company, dedicated to transforming road congestion in South Africa by providing cutting-edge e-tolling collection services and cashless, electronic toll points. Contracted to SANRAL, ETC employs 1 200 people.

One big argument against the project was that tolling revenue would end up in the coffers of a foreign company. "Which is totally inaccurate," says Vermaak.

"To date, Kapsch has not made any profit on the project. Toll revenue is allocated to maintenance and future improvements, and the repayment of the debt incurred for the construction," he says.

The Opposition to Urban Tolling Alliance (OUTA) launched initiatives to hinder e-tolling's implementation and said the public was never consulted. However, the Constitutional and High Courts ruled there was public participation.

"But maybe not enough. In 2009, people were not nearly as engaged as they are today, and probably did not pay attention. If the communication process was better, people may have felt more respected and acknowledged," Vermaak says.

Many argued that the project could have been funded through other tax-based revenues such as the fuel levy. But this is limited and part of the countrywide fiscus pool.

National Treasury already funds around 84% of a non-tolled portfolio and allocates funds to other social needs in education, health, social grants and housing. The government thus considered it to be unfair to use nationally raised taxes to build one road in one province.

In the first six months since the e-tolls opened in 2011/2, the overdue toll fees already accrued to R1 billion. Vermaak was initially against e-tolls but ETC revised his opinion and gained his full support on the project. At first it was out of necessity but he quickly realised it's a remarkable system.

“Developed and engineered with the assistance of NASA engineers, the road system provides South Africa with one of the most advanced technological urban transportation infrastructures with the largest single-instance Oracle database in the world,” he says.

The e-toll issue has become a resounding drum, giving rhythm to political campaigns wanting to scrap it completely and serving as a whip in the hand of the public rebelling against government corruption.

Vermaak warns, “The problem is multidimensional and merely scrapping e-tolls could impact South Africa very negatively as the government would have to settle a very large bill.

“There would be no income, which will breach certain governances within SANRAL’s agreements with the lenders and the R22.5-billion, which subsequently became R40 billion, will become payable immediately.”

“There’s no way out. The only way is to consider alternatives and figure out better

solutions, one of which may be privatisation. We have to understand that as South Africans, we have to collectively invest in infrastructure to remain competitive on a global scale and attract investment,” he explains.

Besides the building along the N1 close to Samrand off-ramp in Centurion, ETC has a wide provincial footprint with 37 satellite centres and kiosks in shopping centres geared towards customer services, dealing with complaints and assisting the public to become compliant.

In addition, ETC has staff maintaining gantries, working in workshop yards and policing vehicles monitoring the freeways. Of the entire workforce, 68% are women. Skills development is constant, as the business needs to stay on track with the latest technology paramount to its operations. “So far, we’ve spent more than R30 million in training and development,” Vermaak says.

It takes courage, energy and stamina to show leadership in an environment where negative public sentiment against the system is a daily

encounter. “It’s even more difficult to inform a biased public of the deeper lying ethical principles and why e-toll compliance is important for future generations,” he adds.

Disappointments are plentiful but Vermaak says, “Resilience is the key to our success and helps us stay on course in line with our strategic alignment Map, called the Gameplan.”

The Gameplan is a clear, ambitious strategy in which 96% of the company participated in developing. This buy-in ensures alignment as “teams need to be coherent, cohesive and function as one operating unit—one collective genius”.

“When teams share the same values, behaviours and beliefs, there’s very little that can stop you. When negative news breaks or political sentiment swings, or when we’re confronted during family gatherings around the fire, we remain focused on this plan,” he says.

Vermaak is a Civil Engineer who started his career at Basil Read in 1996, then moved to Murray & Roberts. He was in charge of the



Chile showed e-tolls can work

Despite the scepticism of many observers, Chile's open toll road system exceeded all expectations and today operates with a 99.6% compliance rate.

Given the notorious failure of road concession programmes in some other countries, what specifically accounts for Chile's success?

According to IDB representative, Julio Ángel, a big part of the answer lies in the legal and regulatory environment that the government put in place at the inception of its concession programme, which is duly enforced.

The institutions that manage the concession programme were widely viewed as stable, technically competent, responsibly managed, it carefully considers financial risks and is immune to political meddling or clientelism, which have helped to attract hundreds of investors.

Medupi Power Plant negotiations team at Eskom and once the tender was secured, he helped to build it.

He later joined ETC with no knowledge of IT, but he clearly understood SANRAL's culture and thinking, having worked with them for many years. Vermaak goes to work every day with a solid step in the Gameplan strategy—entering the offices at 5:30am and only leaving it around 7:00pm—motivated by the thought that over 1 200 families depend on him for their livelihood and survival.

“Which means, I have a constant internal battle on having to do what's right. I'm on a crusade to tell the story right,” he says.

Constant communication, building relationships and fostering trust are the biggest components to creating win-win solutions, says Vermaak. He wants to give the public another, more positive perspective than the negative one OUTA shares.

“People need to be trusted with the truth. They respond amazingly well when you demonstrate trust and when you communicate truthfully and honestly,” says Vermaak.

And the truth is, “SANRAL had raised the money to expand the Gauteng freeway network, and this money has to be paid back.”

Vermaak is not afraid to challenge poor behaviour and will, respectfully, while considering all approaches to historical depth and payment options, take firm steps to enforce the law as “currently, only 30% of motorists are paying e-tolls”.

In any other country, electronic tolling is a legal requirement and any delinquency in this regard is met with consequences. Discussions between SANRAL and the Ministers of Finance and Transport led by Cyril Ramaphosa is advancing, and a number of options are under consideration. This information may also be shared with vehicle dealers, finance houses and auto companies.

“But this is a negative approach in getting people to comply. We rather want people to take responsibility and come on board with a changed mindset and of their own free will.

“Granted, historically, the GFIP was very poorly communicated and the taxpayer was not being respected. If we could turn back the clock, the e-tolls issue would have been tackled with far greater public engagement.

“But since its inception, the public became fully aware, and we are constantly driving educational campaigns, costing ETC thousands. And yet, still no feasible or workable suggestions are being communicated to us, apart from backlashing and revolting against the government. If anyone has a better solution to e-tolls, please bring it.

“Even if we shut down the system, even if we starve it, we will end up paying for it. If not, we will dump a very serious problem upon future generations, adversely affecting our own children's welfare and prosperity,” Vermaak explains.

With logical reasoning, anyone would realise motorists already derived much benefit from the open toll roads during the past eight years. But this cannot continue without paying for the privilege.

Statistics show that Gauteng faces large-scale urbanisation pressure, as around 547 new people arrive in the province every day.

Around 133 000 vehicles enter and leave the GORT network each hour during peak periods. With an average of 1.2 people per vehicle, the network carries almost two-million-person trips a day.

SANRAL noted in online media that the GORT system is close to capacity with the traffic demand and travel time predicted to continue to increase. Since 2014, annually, the traffic volume roughly increases by 4.7%.

Of course, nobody likes to pay tolls. But roads provide access to economic opportunities, which, in turn, leads to sustainable economic growth. There's no other way but to keep on investing in road infrastructure.

“Our intent is pure. If we can align thoughts, I truly believe we can crack the code on this and constructively work together for a better future,” concludes Vermaak.

Bravery means learning to graze on your own, then later leading the herd. Coenie Vermaak allowed himself to understand e-tolls—a system he was previously passive about. Now, he forges ahead with a clear game plan. If he is not trying to find solutions, he is building a winning team or trying to sway public opinion. He's a stalwart whose fearless leadership skills aid him in the office or when facing intricate surveillance and public scrutiny. ▲



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Making innovation real

SAP Africa, the African cluster of SAP SE, is helping companies to transform and grow through digital technologies that are easy to consume and are able to drive real business value

“As SAP, we believe that the intelligent enterprise is a powerful concept that can truly help transform the business of our customers, so they can serve their customers better. Our ambition is to provide our customers with a fully integrated suite of business applications, infused with intelligent technologies everywhere, and powered by our unrivalled data platform.

“We will double-down on our longstanding advantage in deep industry and line-of-business expertise. Seventy-six per cent of the world’s transaction revenue touches an SAP system, and industry-leading customers all rely on SAP to help them optimise their business of today in addition to re-imagining their business of tomorrow,” explains Rudeon Snell, SAP’s Leonardo Leader for Africa.

Their partner ecosystem is world class, with thousands of partners who can assist in bringing intelligent solutions to their customers that help them move their business forward.

Then, there’s their global reach, with over 350 000 customers in 180 different countries.

“We see how things work across different countries; they work differently in Japan versus the US versus China versus Brazil versus South Africa. Those differences matter, that experience we bring to our customers, matters.

“Every day, we hear from customers that the intelligent enterprise is most relevant for them in a context that is specific and true to their unique aspirations, their key strategic goals and objectives and their particular challenges across both industry and line-of-business dimensions. As such, we will bring the intelligent enterprise to life by building solutions that bring together the best of SAP and providing those solutions to our customers, to help them achieve more,” he says.

SAP Leonardo

Inspired by arguably the greatest thinker of our time, Leonardo Da Vinci, at its heart, SAP



Rudeon Snell, SAP’s Leonardo Leader for Africa



Leonardo centres around how SAP makes innovation real.

“When you think about design thinking as a means of eliciting business outcomes or envisaging the art of what is possible, and you consider how you use exponential technologies such as artificial intelligence, the Internet of things, big data, advanced analytics and blockchain to realise those outcomes, all powered by the cloud; that’s the essence of SAP Leonardo.

“It allows organisations to innovate faster with less risk, accelerating the delivery of business value and providing a frame of reference for organisations wanting to get started with exponential technologies, but are not sure how to,” Snell says.

The Fourth Industrial Revolution and artificial intelligence (AI)

We are in the midst of the Fourth Industrial Revolution and there are great fears that robotics and AI will take away many jobs, especially within developing economies.

Snell says that job displacement in the short term, as a result of technological advancement, is inevitable.

“History has clearly showcased this, whether it’s the displacement of farmers when the tractor was invented or the displacement of telephone switchboard operators to name but a few. More recently, we are seeing toll collectors, cashiers and train-ticket sellers and long haul truck drivers all coming under threat from technology. This is just the beginning,” he says.

He adds that if this situation is not proactively addressed, we will see an increase in the gap between the haves and have nots and quite possibly one of the biggest socio-economic disasters ever created, especially in developing countries where 70% – 80% of the economy is still predominantly supported by blue-collar jobs.

“The government and industry must get together to address this through structured programmes and individuals need to rethink their own value proposition, skills and expertise to ensure their value-add and marketability in an AI-first world. This is where SAP took the lead by becoming the first European tech company to create an ethics advisory panel for AI. This panel would allow SAP to ensure the creation of ethical AI, which serves humanity and benefits society,” says Snell.

Considering the AI influence, Snell believes that the children and students of today require

a different education in order to keep up with the times. “Our current education system is broken and is simply not equipped nor prepared for the coming wave of technological change. It was primarily designed and geared for developing skills that are relevant in the industrial age. Skills that are still focused on today as a result of this system aims to improve primarily on reading, writing and arithmetic, which were all critical in the Industrial Age, but which are being more easily replaced by AI today,” he explains.

Snell believes the quality of education is simply not evolving at the same pace as technology is. As such, there is a deep need to revamp and re-imagine our current educational system, otherwise we quite possibly run the risk of creating a permanent underclass with irrelevant educational skills—something that, it could be argued, is already happening to a certain degree, given the inequalities of public and private education funding in developing countries.

“Educational institutions will need to focus on teaching students more relevant, dated skills to improve employability, especially skills related to working with robotics, AI, the Internet of Things (IoT) and other exponential technologies.

“Today, those who have conquered computers have given themselves a much greater chance of employability. Tomorrow, the same can very well be true as it pertains to exponential technologies,” he explains.

With AI coming in at some speed, necessity will force employees to adapt.

“One thing we are good at as a species is adapting to change. It will require a reinvention of people and their value-add in the age of AI. Employees will have to reconsider their skills, expertise and value proposition in order to remain relevant and dated,” Snell says.

With regard to the biggest digital enhancements, he says they are very excited about those we are seeing in terms of the exponential technologies synergising in industries, such as healthcare, retail and consumer goods, transportation, manufacturing, financial services and agriculture, which are completely transforming business models and accelerating business value creation.

“Companies that are able to leverage the convergence of these exponential technologies successfully will be the ones that are ideally positioned to carve out new markets and new

spaces of value as they reinvent themselves. By reimagining customer experiences, transforming products and services, optimising their operations and redefining employee productivity, these companies are the ones that will have the power to shape and change the world,” he says.

The Leonardo Leader

Originally from Cape Town, Rudeon Snell made a career move to Johannesburg in 2010. He planned on staying, for only two years—that was nine years ago.

“I love the cosmopolitan nature of Johannesburg, the cultural diversity, the energy and the pace. Jozi really has become home for us as a family,” he says.

Snell holds a Master’s degree in IT as well as an MBA specialising in strategy and is currently completing a doctorate specialising in AI.

“I’ve always had a love and passion for technology and the way it can act as a resource-liberating mechanism, especially for developing countries. I believe technology is the key vehicle for driving positive, transformational change, equipping us with the necessary tools to tackle humanity’s grand challenges,” he says.

Snell says that some of the most crucial leadership lessons he has learnt during the course of his career are that authenticity matters, it’s important to be clear and consistent, learning beats knowing, always put people before money and hunt as a pack.

In terms of leadership, Snell believes it is not about rank or power, nor is it about being in charge. “Having authority doesn’t make you a leader. There are people with no authority who are exceptional leaders.

“Leadership is ultimately about taking care of those in your charge. Great leaders create circles of safety for their teams so that they are inspired to come to work every morning, do deeply meaningful work that matters and leave the office feeling fulfilled as they go home to their families.

“As a leader, your focus should be on ensuring crystal clarity on the direction you have set, allowing your teams to figure out how to get there, generating the energy that inspires optimism, creativity, and growth and delivering success that leaves the organisation stronger tomorrow than today,” he concludes.

Learn more at AskSAP.co.za/Leonardo ▲

A leader in the mining industry

Palabora Mining Company (PMC) is one of Limpopo Province's most significant investors and has been mining, concentrating, smelting and refining copper and other by-products in the eastern part of Limpopo Province since 1956

Two feasibility studies in 2013 and 2014 underpinned the decision to extend the life-of-mine for a further two decades. PMC's investment into mining infrastructure brings with it major investments in the communities in which it operates and in people, who live near the mine, and the staff who work for the company.

PMC is the major mining project occurring in Phalaborwa and is integral to the survival of the Phalaborwa community. It is a key contributor to the local employment, directly and indirectly. The population of Phalaborwa is roughly 160 000 people and the PMC mine employs more than 4 990 (direct and indirect employees) of which 80% are from the Ba-Phalaborwa Municipal area.

Chinese Investment in PMC

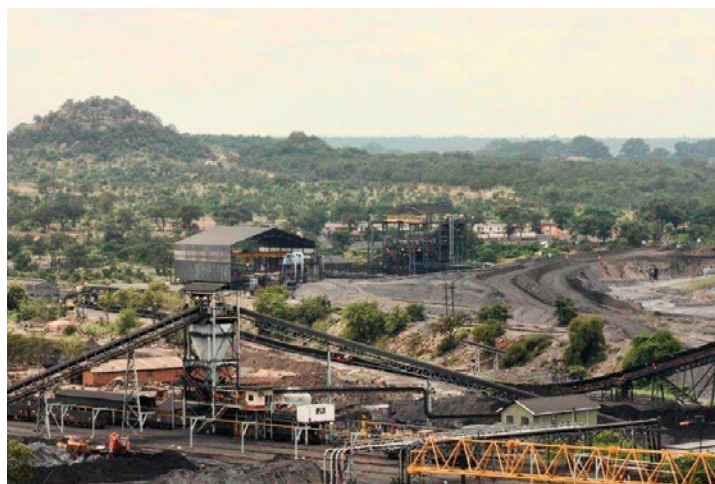
A Chinese consortium acquired the mining operation in 2013 when there was a possibility that the life of the mine would be culminated and the smelter closed because it was outdated. Both of these scenarios would have led to many job losses. Soon after the sale transaction, the new owners fostered partnerships between Palabora Copper (PC), the operating subsidiary of PMC, and Chinese companies in various areas such as economic development, trade, skills and technology transfers to extend the life-of-mine, refurbish the smelter and build a new floatation



plant. To this end, the consortium approved R10.4-billion to extend the life-of-mine, R878 million to refurbish the smelter to ensure that PC continues to produce copper rod, and R261 million to construct the floatation plant to improve copper recoveries, operational efficiencies and lower operational costs. The smelter refurbishment project and construction of the floatation plant are implemented in partnership with China's Beijing General Research Institute of Mining and Metallurgy (BGRIMM). In addition to a technology transfer, BGRIMM has contractually committed to employ 90% of unskilled labour and 80% of the semi-skilled labour from the Phalaborwa area and transfer new skills to PC employees who work at the smelter to empower them to operate and maintain the refurbished smelter once completed. Before commissioning and construction of the floatation plant, PMC's executive managers and senior managers travelled to China for fact-finding and comparative-analysis missions on floatation plants built by BGRIMM. As part of the resource sharing, skills and technology transfer, BGRIMM has subcontracted work to various South African companies.

Investing in communities

The decision to extend the life-of-mine has had an impact on surrounding communities and small businesses in the area. Through PMC's enterprise development and supply chain programmes, local small business owners have been able to open or expand their operations. Over the years, PMC has invested more than R186 million in developing communities through the Palabora Foundation, PMC's community project execution partner.



Community projects include road rehabilitation and construction, and the hosting of sporting events. A 24-hour emergency health centre, MarulaMed, was inaugurated in April 2018. The centre caters to the Phalaborwa community, which does not have a private clinic.

BRICS' involvement

PMC is a member of the BRICS (Brazil, Russia, India, China, South Africa) Business Council Manufacturing Working Group as it wishes to contribute to a favourable environment for growth and technology exchanges, and to assist South Africa in building international cooperation platforms that embody the spirit and ethos of BRICS. PMC's success story is one that shows that amid cultural differences within BRICS countries, challenges and growing global economic uncertainties, cooperation by companies from BRICS countries can create a favourable environment for growth.

Investing in mining

Once the decision was made to extend the mine's operations, large amounts of capital were committed to mining operations (R10.4-billion), to construct an improved floatation plant (R261 million) and to the refurbishment of the smelter (R878 million). The project to extend the mine's life is known as Lift II and it will take mining at PMC to 2033. The project aims to make use of a large historical stockpile to create further revenue.

Investing in energy

PMC runs an energy management programme that has resulted in significant savings at the mining operation. In the five years to 2017, the company saved R232 million through avoided energy costs with respect to electricity, coal and liquid fuels, and water usage. The company's investment in energy saving through 31 projects that were successfully implemented, was rewarded with the 2017 Limpopo Productivity Award by Productivity SA.

Going green

The company is a certified ISO 14001 business that subscribes to world-leading practices. Located directly adjacent to the world-renowned



eco-tourism attraction, the Kruger National Park, PMC coordinates several onsite wildlife management and cultural heritage programmes as part of its ongoing sustainability drive. Over the past years, PMC has retained a record of being one of the safest mines in South Africa and Africa. This is particularly due to its stringent SHEQ regulations and procedures in place, and the effective management of contractors on site.

Their products

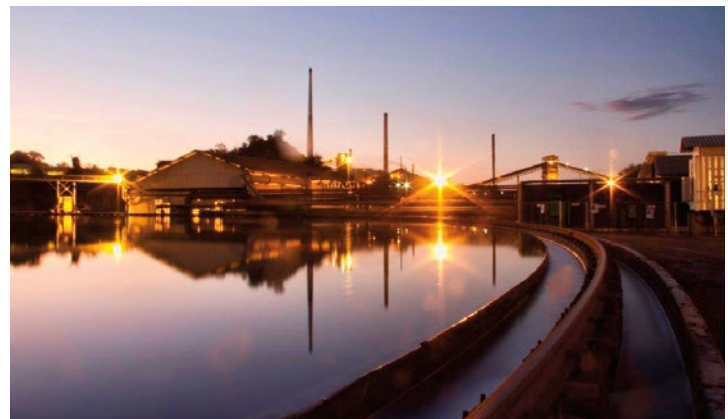
PMC owns a refinery that produces cast copper rod for the domestic market and cathodes for export. Useful by-product metals and minerals include zirconium chemicals, magnetite and nickel sulphate, as well as small quantities of gold, silver and platinum. Palabora also owns a nearby vermiculite deposit, which is mined and processed for sale worldwide. Vermiculite is a versatile industrial mineral with hundreds of uses.

The future

PMC is undertaking a life-of-mine extension project known as Lift II. The project aims to extend the life of the business up to 2033. The project includes the magnetite reclamation and beneficiation study aimed at creating additional revenue from the legacy stockpile. Approximately R11.79-billion is expected to be spent on the finalisation of the project, which includes the smelter expansion and the floatation plant. ▲



For more information, please visit: www.palabora.com





“Breathe, laugh and learn in quite a unique, vibrant environment. Find new or enhance existing skills to transform your life and those around you.”

My name is Jacques Marais and I created eCALA Life Village on the island of Pátmos, Greece. I hope you find this article useful to your life.

“EDUCATION IS THE MOST POWERFUL WEAPON WHICH YOU CAN USE TO CHANGE THE WORLD.”

NELSON MANDELA



A ‘metamorphosis’ is the best way to describe the experience of living and learning at eCALA Life Village. The term refers to a transformation of a being from one state into another, the example we all know is a caterpillar becoming a butterfly.

Our village is designed and dedicated to you, individually, and your time here. Our goal is for you, our guest, to learn new or enhance existing skills that will enable you to change your life positively and the lives of those around you.

How we teach at eCALA is different and it is very important to emphasise that our teachers come from a very specific discipline of ‘Socratic teaching’—never once imposing their personal view or opinion.

Our method is to teach you the subject content and underlying frameworks, as if you were to become a teacher of the subject. Essentially you leave trained to teach the subject to others, if you choose to do so.

Our programmes span a broad range of subjects: becoming a yoga teacher; teaching leadership, change, or just enjoying our foundation programme to help you find a meaning to life.

All programmes are two to four weeks of residential learning. Each has dedicated learning hours spanning from 72 hours (two weeks) to 200 hours (four weeks).

In 2020 & 2021, we will introduce a new set of Planet-oriented training programmes developing project managers for forestry, food, water, energy, waste and habitation management.

My belief is if sufficient people learn systemic thinking and deep competence in their chosen skill, then they can help others to do the same. Perhaps then we will make the Planet a better place for our grandchildren’s grandchildren.

In this introduction, my wonderful team will explain how eCALA runs and show you the 2019 programmes.

Finally, a few words from our students:

“I have never found myself so interested in discovering what matters to me most. Then with your training, I learned how to build the journey I wanted to make. I became a boat-builder and a navigator.”

“I was taught to think in a different way, not just to see the same thing differently. I learned systems thinking. Your teachers gave me the tools and showed me how to use them perfectly and I became the author of my future.”

“I admit to discovering I was lazy and wanted to be given the answer, only then to discover the answer was meaningless to my problem or need. I learned that the key was to ask the right questions and not obsess about the answer, because the answer can only come from the right question.”



metamorphosis





MEET THE HEAD OF HOSPITALITY - OLGA



Hi, I'm Olga and I am delighted to be welcoming you to stay in your 'dome away from home' and taking care of your every need, from transfers to departure.

I have had a bit of practise at this, 15+ years in five* resorts and I found eCALA myself, maybe even a little like you did? I stumbled across it while looking for a new direction that matched my values and passion.

I'll never forget arriving unannounced and realising, "This is where I need to be!" Then contacting Jacques, the crazy founder, and telling him that he needed me. He laughed when he saw my packed car and said, "So you are staying then?" and that was that. I haven't left since arriving in 2017.

My passion is your experience, my team and I excel at making it 'just right' without being intrusive. Because we here at eCALA also live the ethos of the village, 'acquiring knowledge, finding or reaffirming ones' purpose and the transformation through experiences' we want to ensure we play our part in your metamorphosis.

Yes, of course it is about good food and healthy living, but it is so much more than just that. It is the beautiful 'garden of Eden' set a breath away from the wonderful beach of Meloi Bay. It is the tranquillity of a Greek island where only boats arrive, a place of reflection and pilgrims who come to where the book of Revelations was written. It's a place of peace and people, good people who have helped Pátmos become voted as Europe's most idyllic place to live. (Forbes magazine)

Your accommodation was especially chosen for this village—the geodesic domes—and it certainly adds to the uniqueness of your living experience. The immense height, wide space and light pouring through the pen-

tagonal skylight of the domes give a true sense of being on a different planet, while showering under the blue sky in the external bathroom, gives the feeling of being a part of nature.

In the centre, our amphitheatre, the "Agora", is the heart of the village where individuals can relax and groups can meet, and making all of this come to life is the people who stay here, you.

In our beautiful and private learning village, we also have a first-class taverna, open to you as well as a discerning public. The vibe of the taverna is delicately 'tempered' to the needs of the village so no loud music, screeching voices or loud parties occur at eCALA without your full participation. All is described later in this introduction by our amazing Chef, Lollie.

My team will host you splendidly and ensure that all is experienced effortlessly and individually. If all inner and outer treasures are thoroughly discovered and that eCALA Life is lived to its fullest by you, then we have succeeded.

Welcome all who choose this amazing path of metamorphosis, welcome to eCALA Life! Your Life! Your Home!





MEET THE YOGA TEACHER - THERESA

Hi, I'm Theresa and I am so excited to be leading the upcoming 200-hr Intensive Yoga Teacher Training Courses at eCALA Life in 2019.

Regardless of how experienced or advanced you may be, I just want to begin by saying 'Shoshin!'

Shoshin is a word from Zen Buddhism, which, translated from Japanese, means "beginners" mind. It refers to engaging with an attitude of openness, enthusiasm and a lack of expectations when studying a subject.

At eCALA, we know the most transformative learning happens from a place of humility, respect and by practising the art of letting go.

My role during the four weeks you spend with us at eCALA is to

- To ensure you leave with a solid platform of knowledge and skills to lead and teach yoga.
- To encourage you to practise Shoshin and open yourself up to other ways of thinking and developing the narrative which guides you. For how else will you teach others if not by first teaching them to release themselves into learning?

The philosophy at eCALA is 'enabling self-discovery' and to provide you with ways of researching, exploring, learning and discovering meaning for yourself. I will take you on an adventure of self-discovery in a cocoon of learning and development, which is safe but allows you to fail and not fear as you spread your wings.

During the course, you will have the opportunity to fully immerse yourself, mind, body and spirit in a completely new lifestyle. It won't always be comfortable or familiar, however, the environment will always be supportive and non-intrusive.

You will be led through daily physical practices that combine asanas (physical postures), chanting, pranayama (breath control) and Yoga Nidra. All are interlaced to complement your theoretical learning.

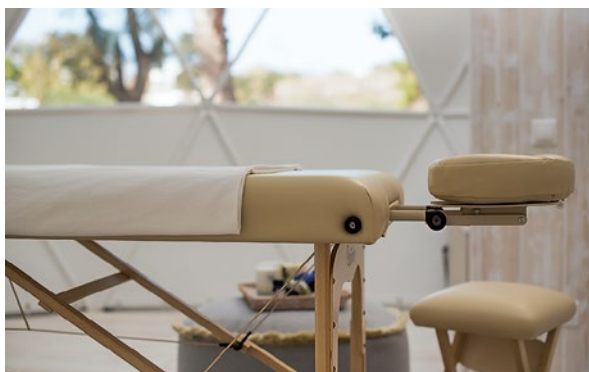


Being connected to all the elements with huge skies above, nature all around us and the ocean right on your doorstep, my intention is that every moment will be explored with a refreshing sense of curiosity and mindfulness.

After all, this is the authentic art of a yogic lifestyle.

The Shoshin (beginners) mind is a beautiful thing. Especially when we are able to embrace the concept that we truly don't know anything. All are equal—teacher and students—like the open lotus flower.

Shoshin!



MEET THE HEAD CHEF OF EUGENE'S KITCHEN - LOLLIE



Hi, I am Lollie and I absolutely love what I do—cooking for you! I met Jacques a few years ago and we really wanted to collaborate, and now we are!

I absolutely love everything Greek and eCALA Life Village, its ethos embodies everything that really matters to me as a human being. I adore my work and love people, especially those open to possibilities, change and a willingness to learn and try new paths!

I cook really well because I know what is good for me. At the heart of the kitchen is plant-based eating,

which benefits every single one of us.

"Plant-based cooking is a harvest festival of goodness." We add everything else that personally tickles your taste buds, from fish to fungus.

We all know about the head brain but fewer of us know about the gut brain, which is vital to your health—physically, mentally and spiritually. The gut brain is incredibly well-documented and it absolutely craves good food.

Good food is medicine; good food is fuel; good food determines how well you feel, look, think, focus and sleep; good food, it extends to a healthy life.

Good food brings joy to life and strengthens us for the changes we all face, because life has many crossroads, we all have choices and while things might seem scary, being healthy and happy are huge allies to successful change.

I have huge confidence in my abilities to bring pure joy to sitting down and sharing good food with friends.

Finally, every recipe we serve is available to you, as a digital recipe, to take home, so that you may continue to eat good food.



A little bit about Lollie's background:

Gail's Bakery - heading up 'plant-based food' product development and production.

Tom Conran - including all the menus at his deli on Westbourne Grove, Cow Dining Rooms and others.

Alistair Little - Head Chef of Soho and Notting Hill restaurants.



"WHERE HEALTHY MEETS DELICIOUS!"



2019 PROGRAMMES

Things in common on all programmes

Any programmes have a maximum capacity of 24 people. eCALA Life village has a maximum occupancy of 48 people. Each programme has its own geodesic dome or learning space.

Includes:

- Shared or single occupancy dome - see costs
- All lectures and training manuals
- Breakfast at the eCALA taverna

Excludes:

- Visas and transport to the island
- Lunch and dinner, which you can enjoy at Eugene's Kitchen @ eCALA, or anywhere on Patmos
- Reading list and textbooks
- Yoga mat, two yoga blocks, yoga strap

Accommodation costs

We have 24 geodesic domes for accommodation and sharing is standard unless there are empty places on all programmes.

All geodesic domes are enormous and divided extremely privately and effectively.

Accommodation is the same cost per night for every programme.

€75 per person per night, shared occupancy.

€150 per dome per night, single occupancy.

Course costs

All programmes cost €350 per person per week.

Programmes vary in duration, see the table on the next page.

Food costs

Breakfast is included at our taverna, Eugene's Kitchen.

Lunch and evening meals can be taken anywhere on the island at the student's expense.

A student menu is provided by our taverna at special costs.

Eugene's Kitchen is a first-class restaurant, which means with prior notification, it can cater for any diet.

MEET THE MASTER TRAINER - DI



Hi, I am Di and I will be facilitating many of the leadership and people development courses on offer at eCALA Life. I met Jacques 12+ years ago and absolutely loved the tangibility of the programmes and how incredibly practical they are for students to learn and see an immediate benefit from the revolution we as a team have gone through. Developing and innovating tools, methods and programmes is nothing less than incredible. Higher quality, better precision and in a fraction of the time.

My passion is helping you to reach your maximum potential. That great "aha" moment of discovery, learning and application is what drives me to keep doing what I do. It is all about your journey, where you are at and how I can assist you to learn how to harness your own passion, develop and hone your skills and then apply them with excellence.

One unique quality I bring is how deeply I connect with each student, their needs and purpose and their individual journey. It is called 'caring' and it is something I bring right out on the table as a group of strangers start a learning journey together.

'Show you care, show you are there, be present for others in your group every moment.'

Multiply this by all the students on a programme and we have an amazing network of one-to-one relationships fostered through simply caring enough to be present for one another as we all learn new tools, methods and processes. I want you to win and leave my training a better person, being able to successfully pursue your dreams in the world of whatever you choose to do next.

metamorphosis





2019 TEACHER TRAINING PROGRAMMES

It's impossible to describe each teacher training programme in this introduction, so please just email us and ask to be sent the programme description. You will find an enquiry code below each programme, put it in the subject line and email: ask@ecalalife.com

PROGRAMME 1: YOGA Intensive Yoga Teacher

DATES AND DURATION

200 hrs of teacher training
over 4 weeks, in

JUNE 2 - 29
JULY 7 - 3 AUG
AUGUST 11 - 7 SEP
SEPTEMBER 15 - 12 OCT

PRICE: €3,500 per person
sharing a dome, or €5,600 per
dome alone (only if available).

SUBJECT LINE: Yoga TTC

PROGRAMME 2: TEACHING A MEANING TO LIFE

DATES AND DURATION

72 hrs of teacher training
over 2 weeks, in

JULY 21 - 03 AUG
SEPTEMBER 15 - 28

PRICE: €1,750 per person
sharing a dome, or €2,800 per
dome alone (only if available).

SUBJECT LINE: MML

PROGRAMME 3: TEACHING SERVANT LEADERSHIP

DATES AND DURATION

72 hrs of teacher training
over 2 weeks, in

JULY 7 - 20
AUGUST 18 - 31

PRICE: €1,750 per person
sharing a dome, or €2,800 per
dome alone (only if available).

SUBJECT LINE: SERVL

PROGRAMME 4: TEACHING CHANGE with the iCHING

DATES AND DURATION

72 hrs of teacher training over
2 weeks, in

SEPTEMBER 29 - 12 OCT
OCTOBER 13 - 26

PRICE: €1,750 per person
sharing a dome, or €2,800 per
dome alone (only if available).
SUBJECT LINE: iCHING

PROGRAMME 5: BECOMING A SPRINT SALES TRAINER

DATES AND DURATION

72 hrs of teacher training
over 2 weeks, in

JUNE 23 - 6 JUL
SEPTEMBER 1 - 14

PRICE: €1,750 per person
sharing a dome, or €2,800 per
dome alone (only if available).

SUBJECT LINE: SPRINT

PROGRAMME 6: TEACHING SYSTEMS THINKING

DATES AND DURATION

72 hrs of teacher training
over 2 weeks, in

JULY 7 - 20
AUGUST 4 - 17

PRICE: €1,750 per person
sharing a dome, or €2,800 per
dome alone (only if available).

SUBJECT LINE: SYSTEMS



"WE WON'T HAVE A
SOCIETY IF WE DESTROY
THE ENVIRONMENT.
WE HAVE NOWHERE ELSE
TO GO...
THIS IS ALL WE HAVE."

MARGARET MEAD



A response to problem gambling

Since its establishment, the South African Responsible Gambling Foundation (SARGF) has acted as a comprehensive industry response to the challenges posed by problem gambling in the country



Sibongile Simelane-Quntana, Executive Director

“SARG operated as a trust in the period before 2009, with the main focus being to implement National Responsible Gambling Programme (NRGP), which was launched as a comprehensive industry response to the challenges posed by problem gambling in a developing nation such as South Africa, after the legalisation of gambling in mid-1996,” explains Sibongile Simelane-Quntana, the Executive Director.

“At its inception, it took the form of a national programme with a set of activities that integrated treatment and counselling, public awareness, education, training and research; and it remains globally recognised as the first national initiative to integrate these various components coherently, with the understanding that it is maximally cost effective to have a single, national programme covering all forms of gambling,” she adds.

The mission and vision

Simelane-Quntana says the foundation’s vision is to create a responsible gambling environment through accessible programmes that manage and minimise the potentially harmful effects of gambling in the country.

Their mission is to grow awareness of responsible gambling and to ensure that the potential negative and harmful effects of gambling are managed and minimised, through an integrated and well-managed programme of:

- Research, advocacy and stakeholder mobilisation;
- Comprehensive treatment and counselling; and
- Problem gambling prevention.

Simelane-Quntana explains that responsible gambling is when the gambling activity is a harmless and recreational, which does not take more time or money on gambling than one can comfortably afford.



“A responsible gambler is one who typically determines beforehand what they consider to be acceptable losses. By and large, their gambling activities cause little harm to themselves or their loved ones and their behaviour is associated with minimal guilt.

“They simply require information and education on gambling behaviour to enable them to make sensible decisions and remain harm free,” she elaborates.

Problem gambling can have severe consequences and not only does it have a negative effect on the gambler, but also on the family, significant others and on the workplace.

“These are some of the effects of problem gambling on a punter: depression, suicidal thoughts, anger and anxiety, financial and emotional depletion, and so forth,” she explains.

The National Responsible Gambling Programme

The SARGF’s flagship programme, NRGP, which was launched in June 2000, has successfully treated 18 500 patients to date.

The NRGP has various programmes—The Support and Mentoring Programme/Industry Support Programme, Prevention Programmes and Treatment Programmes—each with their own set of objectives and target audiences.

The Support and Mentoring Programme, also known as the Industry Support Programme, is offered to industry employees, mainly the operators. It comprises of individuals and group sessions facilitated by the foundation’s social worker. This programme differs from the training programme in that it focuses on the emotional skills and capacity of employees. It is aimed at creating awareness of problem gambling in the workplace. This programme helps employees to be aware of the triggers of gambling. By placing emphasis on personal choice, employees are capacitated to better understand their role within the workplace including stress triggers. The sessions are facilitated on an open basis in groups. The foundation also has a dedicated crises line of support to call in case of an emergency.

Prevention Programmes comprise of the national schools’ programme, public awareness

campaigns, public sector workshops, private sector employee wellness programmes and the senior older age citizens’ workshops, which are all dedicated to managing and minimising the potentially harmful effects of problem gambling. These programmes also educate the public about the dangers and consequences of illegal gambling, how to stay in control and gamble within your means. The foundation works closely with the National Gambling Board, the Provincial Gambling Board’s gambling industry operators as well as other key sector stakeholders to roll out the prevention programme.

Treatment Programmes—all the foundation’s Treatment and Counselling Programmes are free of charge and available 24 hours a day. These services include an outpatient and inpatient treatment programme as well as the provision of telephone counselling by trained and qualified professionals. The outpatient programme comprises of face-to-face counselling and is aligned with the practices regulated by the Health Professions Council of South Africa (HPCSA) and other recognised international best practices. Patients in this programme undergo a minimum of eight to 10 face-to-face counselling sessions, depending on the recovery and progress of the individual. The inpatient treatment targets individuals who are suffering from severe or chronic problem gambling disorders. Patients admitted to this programme are provided with 28 sessions within a hospital or clinic environment. Highly qualified psychologists, psychiatrists and clinicians are dedicated to each individual case to ensure the patients are constantly evaluated and monitored.

The leader at the helm

Sibongile Simelane-Quntana’s experience and background lie in institutional development and administration. She holds a postgraduate degree from the University of the Witwatersrand in Public Administration and Management and, prior to joining SARGF, she worked in the public sector in various management positions.

“I joined the SARGF because I wanted to make a difference and educate people about problem gambling. In addition, like most South Africans, my family is affected by an addicted person and

this has been going on for years now since I was in high school,” she explains.

Simelane-Quntana’s role is to ensure that SARGF delivers on its mandate to minimise the potentially harmful effects of problem gambling.

“Having worked in the public sector in various management positions equipped with experience on how to run an institution—this, coupled with my educational qualifications, has allowed me to provide the necessary leadership in terms of reconfiguring SARGF’s programmes,” she says.

Simelane-Quntana has enjoyed a long, prosperous career, which has been punctuated by numerous professional triumphs as well as some challenges along the way.

She describes the biggest achievement in her career thus far as the National Responsible Gambling Month, which she conceptualised in 2016 and each year, it is growing.

In terms of the biggest challenge, she says, “My biggest challenge, which I am overcoming every day, is managing people and dealing with people dynamics daily. Managing people in my view, it’s like playing the game of chess. It is very difficult to anticipate the person’s next move and you are always kept on your toes in terms of your reaction to their next move.

“As a leader, your next move should not be about checkmate but about ensuring that when checkmate time comes, the other person is aware of how it got to that end.

“I have a personal motto that my next move has the potential to either make or break any situation. I always try to achieve the former by setting ground rules for engagement,” she explains.

A remarkable leader, Simelane-Quntana’s leadership style is best described as being a combination, as she does not believe that the rigidity of subscribing to one specific style will allow you to achieve what you’ve set out to achieve.

“Therefore, I am very flexible in my leadership, I allow myself to be a strategic and transformational leader most times. Leadership comes naturally, you need to have a passion to work with people and not be scared to make the difficult decisions as and when it is required of you,” she concludes. ▲

Securing the road to digital payments

As we navigate through a new digital age, a secure digital identity is essential to ensure complete transparency and trust in a connected world, where billions of people are constantly connecting with machines and devices

“Securing the digital world adds a lot of complexity, and there are more layers and potential attack vectors that need to be considered when it comes to securing a connected car or a digital, tokenised payment card inside a smartphone,” says Jerusha Rooplall, the Managing Director of Giesecke and Devrient Mobile Security Southern Africa (G+D Mobile Security) in sub-Saharan Africa.

“Without trust in the legitimacy of an identity or transaction, or even the protection and integrity

of data, a business cannot be sustainable. People need to know that their identities, connections, transactions, data integrity and privacy is optimally managed at all times,” she adds.

The G+D Group was founded in Leipzig in 1852 by Hermann Giesecke and Alphonse Devrient as a company that specialised in printing banknotes. After their property in Leipzig was expropriated in 1948, and following the firm’s subsequent re-establishment in Munich, Siegfried Otto developed the company into a global technology group.

Operating within the group, G+D Mobile Security has built its success in business

through payment cards and connectivity since 1968, when they first patented the basic technology for smart chip cards. The company also developed the first pluggable SIM cards and today, they manage over 2.9-billion SIM cards and more than 1 billion mobile devices worldwide.

“We have issued billions of payment, authentication and transit cards, and we are one of the leading global suppliers of payment and SIM cards. We have been part of the evolution from the very beginning, and we are now also a technology and market leader in mobile payment and eSIM management,” she says.



Jerusha Rooplall, Managing Director of Giesecke and Devrient Mobile Security Southern Africa (G+D Mobile Security) in sub-Saharan Africa



G+D Mobile Security

Rooplall believes that while physical cards—the carrier of a digital identity—will remain an important market for the foreseeable future, they will evolve and be increasingly complemented by a purely digital, embedded version such as eSIMs or tokenised payment cards when it comes to mobile payment scenarios.

“G+D Mobile Security Southern Africa has some exciting challenges in the foreseeable future. We see the digital space evolving rapidly, and we are already seeing the convergence between both the payments and telecommunications industries.

“With the launch of connected devices hitting our shores, we are in the perfect position to help our customers achieve a seamless transition from the traditional way of doing business,” she says.

According to Rooplall, connected wearables will be the way of the future and with added functionality, such as mobile payments, access and remote health checks, they are a fast-emerging trend destined to transform the consumer journey.

“We also see huge growth potential in Africa as many of these technologies have not yet been explored in most countries across the continent. As MD, my main goal is to increase market size in our payment and connectivity sectors by bringing digitisation and the next wave of payments to the continent,” Rooplall says.

The concept of digital identity and the transparent digital journey applies to their entire product and solutions portfolio.

“If we use the example of digital payments, a person would normally have a unique identity with their bank as the owner of a bank or credit card account. To enable mobile digital payment, this identity needs to be tokenised and secured in a mobile payment app.

“Our systems manage this digital identity token from its creation on your device throughout your usage, by either adding new services or watching out for fraudulent activities up until the end of the service, when this digital identity is securely removed,” she explains.

Most German and European banks are already relying on the solutions provided by G+D Mobile Security to provide mobile payment solutions to their customers. The company is also in discussion with watchmakers to enable wristwatches for payment functionality.

“Our eSIM technology has been part of the Samsung smartwatch for the past four device generations, and we are also working with other well-known US-based smartwatch manufacturers.

“Traditionally, we have been instrumental in developing and contributing to the security ecosystem for decades, this is still a big part of our business, and we also work with big retail banks and mobile network operators (MNO) around the world,” she says.

While their card-based business remains at a high level globally, Rooplall still sees a lot of growth potential in their core business.

“We are, however, seeing an increasing uptake of digital business models around the world. A good example of this is the eSIM for consumer devices, which, until recently, was limited to a few smartwatch and tablet devices. With Apple’s latest iPhone launch in September, the eSIM is now a part of their entire new device generation, finally making this technology available to millions of users,” she says.

It is expected that other smartphone manufacturers will soon follow suit, also adopting eSIM technology for their devices while more and more MNOs offer their customers access to these services.

“Of course, eSIM technology has already been a common feature in machine-to-machine communication for several years and just one example of this would be the automotive industry. This and the fast-growing Internet of things offer huge growth potential for business. G+D Mobile Security’s primary focus is to grow with this market, especially as our products and solutions serve a fundamental purpose in the digital age,” Rooplall explains.

A global organisation, G+D Mobile Security has a strong presence in America, India, the Middle East, Africa, East and South Asia, Southeast Asia and Oceania. In mobile security alone, they have over 5 700 employees, with the group employing 11 600 people worldwide and boasting an annual revenue of over 800 million euros.

“G+D Mobile Security sub-Saharan Africa works across the continent. In this region, we work with numerous banks and mobile network operators, and there are some exciting developments for the coming year that will increase our presence in the market,” she says.

Rooplall, originally from Pietermaritzburg, moved to Johannesburg after completing school to pursue her studies in business management. She worked and studied at the same time and boasts 17 years of experience in her industry.

“My career in the ICT sector started 17 years ago when I started working for a partner of G+D as a Key Account Manager. My own experience comes mainly from the telecommunications industry where I was working with MNOs across the continent. I have been with G+D Mobile Security since 2012, where I started out as an Account Manager before being promoted to the Head of Sales and, subsequently, the Managing Director for Mobile Security SA, responsible for the sub-Saharan region.

“Having worked in the areas of key account management and customer service, I have had a lot of interaction with the business on an operational level. I have been involved with and have great experience with customers, building relationships, which I think prepared me for my new role as the Head of Sales. In that, I also then had a team to manage and a reporting function to the then MD. It was here that I developed more in both a reporting and operational role, so it was quite easy transitioning into my role as Managing Director, where I now oversee everything,” she says.

Rooplall also believes it is important to keep herself informed of the changes related to the payment sector and connectivity, while also holding a much broader view of the subsidiary, the challenges it faces and how they can overcome these challenges while setting out a strategy and making sure it ties in to the group’s overall strategy.

With over 160 years of experience, G+D is actively helping to shape one of the most important trends of the future; she believes that the company’s long-established technology for global payment transactions, modern communication, digital identities and data security sets them ahead of their competition.

“Our slogan is ‘Creating Confidence’, and I think that we do that through our many innovative products and solutions, as well as our long history and unrivalled experience in this particular field. We offer our customers total peace of mind when it comes to their digital security—an invaluable commodity in today’s fast-paced digital space,” she concludes. ▲

Are plastic alternatives a blessing or a curse?

Never before has the issue of plastic pollution and, specifically, plastics in our oceans received so much attention on a global scale. Consumers are encouraged to “choose to refuse” single-use plastics

Calls for action such as these make it clear that consumers around the world are tired of visible litter. By responding on social media platforms with a zealous passion, they demand to see an end to plastic packagings such as carrier bags, drinking straws and cotton ear buds. Anton Hanekom, the Executive Director at Plastics|SA discusses the matter.

Alternatives included paper bags and piloting a compostable bag made from starches, cellulose, vegetable oils and combinations as an “environmentally-friendly alternative to plastic bags” to replace all plastic carrier bags, barrier bags and fruit and vegetable bags. Is this the solution?

To the uninformed, this might seem to be an excellent and practical solution to solve an

irritating problem. The reality, unfortunately, is far from the truth. Many of the so-called “plastic alternatives” that are now flooding the market have not been properly evaluated.

Offering a compostable carrier bag to consumers sounds good in theory; however, further scrutiny reveals that these bags and other biodegradable plastic products will only degrade

Recognising an opportunity to gain significant marketing and PR mileage, some retailers and brand owners were quick to respond to these public outcries by introducing alternatives.



in a properly managed composting facility and definitely not in the normal suburban compost heap. If not kept under ideal conditions, these bags will not biodegrade and are most likely to end up in one of the country's landfills (also not an ideal composting environment) or worse, in the recycling stream where it will contaminate the entire stream and render more material unrecyclable.

Is recycling the answer?

South Africa has a robust and well-developed plastics recycling industry that provided jobs to more than 52 000 collectors who collect waste that is mechanically recycled into new raw materials (more than 313 700 tonnes of plastic material) in 2017 alone. Thanks to their dedicated efforts and the South Africans committed to recycling, 214 220 tonnes of CO₂ and enough landfill space to fill 714 Olympicsized swimming pools were saved in one year—this is the equivalent weight of 560 Airbus A380 aeroplanes, saving enough fuel to keep 178 000 cars on the road for one year.

Unfortunately, the same cannot be said of these replacement materials. All of these products will eventually reach the end of life and will need to be discarded. A non-woven plastic re-usable plastic bag, for example, is not currently recycled in South Africa owing to the fact that the stitching and webbing used in the manufacture of the bag are made of different materials to the bulk of the bag.

Likewise, drinking straws made from alternate materials such as glass or bamboo tubing are neither currently recycled in South Africa nor collected by waste pickers due to their low value and weight.

On the other hand, when combined with a responsible, well-managed waste management system, a recyclable product not only underwrites and supports a circular economy, but also ensures that precious resources are protected and reused for as long as possible. Rejecting a “fit for purpose” plastic packaging material with a low carbon footprint in favour of an alternative material that is imported, more expensive, with a higher carbon footprint and potentially uses scarce food resources as a raw material could be creating an even bigger problem, rather than solving this one.

Plastics don't litter—people do. Opting for biodegradable packaging is not going to change



Anton Hanekom, Executive Director

the human behaviour of littering. Consumers need to commit to protecting our environment and educating themselves on the facts around packaging alternatives, and the benefits of effective plastic recycling and the correct disposal of materials they no longer need. The marketing jargon promoting these replacement materials should be researched before boldly switching to alternative materials.

Similarly, it is of vital importance that legislators, the local government, consumers and the

plastics industry continue to work together on developing solutions that are sustainable, well researched and properly evaluated.

Only through this combined effort can we ensure that the resources are utilised and managed efficiently and cater to an increasing population seeking the unrivalled benefits offered by plastics packaging when it comes to preventing food waste, extending the shelf life of products and protection against breakage. ▲



REDSHIFT
[CYBER SECURITY]

Turning hacking into a business

In the most recent Verizon Data Breach Incident Report, the results show that 73% of cyber attacks are perpetrated by people outside the organisation. This figure is frightening when companies consider the amount of information on their systems, as well as the possible infringements of personal information regulations.

Cyber attacks are, of course, not limited to outsiders breaching a system, but in the same report, it is stated that 28% of breaches occur from the inside.

Sean Howell, the Managing Director of Redshift Cyber Security, following his completion of a BComm degree, began his career at one of South Africa's largest auditing firms as an IT analyst.

"Cybersecurity was on the increase, yet the solutions were largely unknown at the time. I saw this as an opportunity to learn and found that I have an aptitude for hacking, which I then turned into a business," he recalls.

When starting Redshift, Howell used his last pay cheque to buy a laptop. He then started Redshift from his bedroom and in a little over three years, he has built the business to 11 full-time members and four interns. "At the beginning, I had to reach out to any potential customer in my network. If I could go back and do it again, I would have tried to sell even harder! It's important for any entrepreneur to remember that for every 100 calls, you might get a conversion rate of 2 to 3%," he says.

Although there is no formal training available in South Africa as yet, Redshift trains their staff thoroughly. Howell explains: "We send all of our consultants for training, which lasts from six to eight months. Although this is a capital outlay as this time cannot be billed to clients, we believe that starting employees on a path of learning helps all parties involved."

Another element of this ongoing learning is Howell believes in buying technology, and then taking it apart—although this sounds like fun, it's more about learning each device from the inside out, which enables better protection for their client base.

Hacking South African companies?

Redshift Cyber Security is not the usual cyber protection company, in fact, they have hacked into many of the listed entities on the Johannesburg Stock Exchange. This may seem frightening at first, but they do this on behalf of the entities themselves. The best way to avoid a hack is to provide a clear path of vulnerable channels. For obvious reasons, Howell is unable to name the clients yet, through hacking, these customers are now acutely aware of any potential dangers, and can remediate based on an understanding of the actual attacks that are possible.

"We are essentially a group of hackers who consult to large companies," says Howell. In many instances, companies build security systems to protect their data, yet the more complex these systems become, the easier they are to hack. Redshift infiltrates the systems with the goal of attacking in order to create the best defence. Once the hack is complete, a full report and assessment are given to the client and then layered defenses can be implemented.

The Red team

The Red team is a highly skilled team that will fully simulate an advanced attack against a customer's people, processes and technology. The objective is less to highlight specific technical issues but more an assessment of the organisation's detection and response capabilities. A full report is then given to the higher echelons of the business and the defence is built from that. In fact, Redshift is so good at what they do, that employees won't even know they are being hacked, it is only the GSuite who is privy to that information.

A hack isn't something like we see on television, that can be accomplished with a few

keyboard strokes. In fact, in a lot of cases, the Red team can be on the network for about three months, with a normal penetration lasting anywhere from one to three weeks. Howell says that most hackers can be on the network for up to 200 days, during which they will map the system, learn how the organisation works and then they will strike with their attack.

The point of Redshift's retroactive approach is to act like hackers to prevent them from accessing personal or any other valuable information. For obvious reasons, watertight contracts are in place between Redshift and their clients, and any personal information gleaned from one of these simulations is destroyed immediately, therefore, no laws are being contravened. All simulations are handled in a controlled manner with the ultimate goal of building the correct defences.

What does the future hold?

Although cloud adoption is still on the rise in South Africa, there is already a shift where some banks are talking about 'microservices', which means offering just the top layer of the services required. This is a lot more secure, says Howell, as the simpler a system is, the more difficult it is to hack.

The concept of a company having a digital wall, says Howell, is very difficult to define. Where does your company stop and Google begin? An increase in third-party APIs, where they are all hooked into each other, makes it difficult to draw a solid divide between the entities.

According to Howell, the beauty of this industry is that it is completely mobile. "We can be working in Johannesburg but make it look like we are in China. The point is to hack as realistically as possible, which will guarantee the best outcome," he explains.

Leadership style

"I learnt a lot from my Dad, who said: You manage by walking around the office," says Howell. He explains that holding a personal relationship with each member of the team is critical to the success of that team. Knowing the people with whom you work is a key to success, this is one of the reasons that Redshift hasn't exploded in size.

In addition to the personal touch, a true focus on research and development, training and a clear strategy promise to send Redshift into the future and ahead of the curve.

"We use the money we make to drive research and development, where staff are constantly learning about new technologies such as the cloud, driverless vehicles, AI, etc., all with the objective of being at the cutting-edge of security. It's how we keep up with the evolving world of cyber security," he says.

Howell says that it is essential to make the pathway to learning accessible to staff members and taking a proactive approach to their development.

"Letting people break things may seem a bit odd but it has proved invaluable in our customer service.

"About two years ago, I became aware that I was suddenly the oldest cyber security expert in the room, at the ripe age of 29 at the time," says Howell. He goes on to explain that the average age for consulting legal hackers is about 26, making this a very young industry with lots of potential.

The market is shifting rapidly and although there are people with experience out there, it is imperative to find the right team members, who are passionate about what they do," he says.

Howell started this business in his bedroom from where he then rented a few desks, bought some laptops and he now has official office space.

Howell concludes. "When you want to start a business, you don't have to go get the moon and stars at the beginning, you need to figure out how to sell something to someone. Sell the idea first, then focus on putting the team together to deliver." ▲



Africa—the breadbasket of the world?

For the past three years, the African Agri Council (AAC) has been promoting the development of African agriculture across the value chain

As a private sector-led organisation, the Council has been working with various stakeholders to identify investment opportunities in agriculture as well as create platforms and programmes designed to bring high-level stakeholders together to discuss the business of agriculture.

We believed we had the formula for driving the development of the sector, however, we've come to quickly realise drastic actions need to be taken by both the public and private sector to truly see a meaningful impact.

I was recently asked at a meeting what keeps me up at night? Besides organising a surprise wedding anniversary for my wife with two days to go, it is the scary realisation that we live in a food-insecure world with a fast-growing population—many authors, experts and stakeholders within the private and public sector believe Africa can become the breadbasket of the world—I certainly shared the same enthusiasm at the start of my tenure at the Council. Now, I ask myself if this dream will become a reality in my lifetime or that of my children's.

At the 2017 African Agri Investment Indaba, I opened the conference by stating Africa will not feed its children, let alone the world, with potential only. We need to move away from continuously presenting baseless stats and potential without drafting implementable strategies that will convert them into economic potential.

Can Africa's annual food import bill of US\$35 billion, estimated to rise to US\$110 billion by 2025 (as quoted by the President of the African Development Bank (AfDB), Dr



Ben Leyka, Executive Director, African Agri Council (AAC)

Akinwumi Adesina), ever reflect the continent's potential? This is a reality that has weakened African economies, decimates its agricultural industry and exports jobs from the continent.

Whether it is called agriculture or agribusiness, the fact remains the same, it is a business and, as such, it requires an entrepreneurial approach, plenty of risk capital, favourable policies and the involvement of many actors with various perspectives.

Despite the African continent's vast agricultural potential, our food import has been rising consistently in the past decades; there is lack of adequate programmes that integrate

the youth into the industry, limited financial schemes supporting the sector growth and a lack of market access among other pressing challenges. Investment in agriculture is particularly treacherous, with low productivity in many African countries, the vicissitudes of climate change, and limited access to infrastructure and technology. As a result, institutional investors, donors and funding partners are unlikely to reach those most in need to truly ensure a food-secure Africa.

Therefore, should Africa continue to depend on outside donors and financial aid to develop this industry? Certainly not! The continental agricultural frameworks developed by the African Union have clearly stipulated the industry needs to be developed from within Africa and approached as a business rather than a donor.

The AAC believes Africa's agricultural development must be based on sound economic and business principles to ensure long-term sustainability. As a result, all our programmes and initiatives are built on a solid business foundation, with an understanding that accelerated agricultural investment and development can only take place if realistic fundamentals exist.

To rapidly support Africa's diversification and agricultural agenda, the AAC's newly-nominated Board of Directors and its Secretariat have elected to join the African Union's continental agricultural frameworks and drive three pillars for its new mandate:

- Youth integration into agriculture
- The modernisation of agriculture to increase production and market access
- Increase investment in bankable agricultural projects

Africa presents some of the most dynamic markets in the world and at a time of growth and positive changes on the continent, the potential for agricultural investment and the growth and integration of the Fourth Industrial Revolution in the sector in Africa is high. As an industry and community, we need to take actions that will realise the potential of the agricultural sector for economic growth and job creation.

I believe sustainable development of the sector across Africa will be driven by agriculture entrepreneurs—the agriculture value chain universe covers hundreds of subsectors serving myriad crops, livestock, processing activities, agriculture technologies (AgriTech) and customer needs. These subsectors are exposed to

- Investment and trade missions
- Investment roundtables (IR)
- An entrepreneur support programme (ESP)

Market Access Africa (MAA)

Food security and agricultural growth to feed rapidly growing and changing urban markets are now continental and global priorities—with the global population expected to reach 9 billion by 2050, the industry offers untapped opportunities for investors and industry stakeholders.

Sub-Saharan African agriculture is still, however, underdeveloped. Its transformation from subsistence farming to modern, commercial agribusiness represents a massive

continued to put emphasis on this question since the establishment of the World Trade Organization (WTO), in which African countries are playing an increasingly dynamic role. The question of market access is especially crucial for their development agenda—more so agricultural development.

This is attributable to the restricted nature of African markets and to the need for the continent to open up to export markets in order to support growth dynamics and efforts to diversify production structures. The Continental Free Trade Area (CFTA) and the Malabo Declaration have both placed an emphasis on boosting intra-African trade in agricultural commodities and services and as such, presenting a real opportunity for Africa to emerge as a big winner in the current global environment.

Despite these encouraging steps, market access remains a key challenge in African agriculture for large- and small-scale agribusinesses—with investors increased interest in agriculture, in addition to favourable policies and infrastructure to allow for the better movement of goods, technological advancement to increase and improve productivity and the supply chain, as well as market access, are key strategic priorities that will ease the flow of capital into the industry.

Investment roundtables (IR)

The AAC Investment Roundtables are high-level roundtables specifically designed to remove barriers and expedite large-scale deal closure by bringing together policymakers, deal makers (investors and financiers) and projects. The investment roundtables are transaction platforms to increase private sector investment in agriculture.

Please contact our office for further details on Market Access Africa (MAA), investment and trade missions, investment roundtables and the Entrepreneur Support Programme (ESP). ▲

Ben Leyka, Executive Director, African Agri Council (AAC)

The AAC believes Africa's agricultural development must be based on sound economic and business principles to ensure long-term sustainability

broadly similar macro trends. Each, however, has unique supply, demand and competitive situations. Agriculture entrepreneurs can adapt offerings and business models to access and serve both local and international markets. This principle will drive youth integration, the modernisation of agriculture across the value chain and attract investment. However, many entrepreneurs face huge challenges—from obtaining initial funding and accessing essential skills to understanding market access and operating a sustainable business. Delivering on the abovementioned three pillars will bring sustainable success—success, which will create employment, ensure food security and contribute to societal development, and perhaps help me sleep better at night.

In 2019, the AAC will introduce the below platforms to support the above agenda:

- Market Access Africa (MAA)

long-term opportunity, especially considering Africa's wealth of natural resources. But, equally, it faces many challenges in achieving the changes required that, in turn, will create improved incomes and access to both local and international markets for its many small- and medium-scale primary producers and SMEs.

Once a nation is self-sufficient in terms of food, then the opportunity arises to allow farmers to diversify into cash related commodities, both traditional for the region and high value for export in order to compete on the global market. With surplus homegrown food produced, it then allows for the value addition of these traditionally low-value food commodities, either into higher-value processed foods or animal proteins both for local consumption and export.

The question of market access is of crucial importance for Africa. African countries have

Sanlam at the forefront of South African needs

A very low percentage of people in our country can afford to retire with appropriate cover

Many people within South Africa live from day to day with little planning for the future—this, of course, is not entirely the fault of the people as our economy continues to struggle. However, the economy shouldn't be allowed to force its people out of dignity or a good future. In order to find out more, we sat down with Shakeel Singh, CEO of Sanlam Umbrella Solutions.

Please tell us more about the Sanlam Umbrella Fund?

Umbrella funds are retirement funds where unrelated employers participate to benefit from economies of scale. The structure enables employers to offer employees packaged retirement savings and insurance.

What would you say is the biggest concern with regards to South Africans and their retirement funds/or their lack of retirement funds?

Disengaged people don't pay attention to their savings. Less than 6% of South Africans can afford to retire with an appropriate level of income. To improve retirement outcomes we must improve members' cumulative decisions over time by providing access to information and tools as well as support at key points in their lives.

Everyone is different, with different jobs, dreams and goals, how do you/Sanlam come up with strategies for each individual in terms of affordability and when they'd like to retire?

Employers have flexibility of contribution rates and we allow members to make additional voluntary contributions on an ad-hoc or monthly basis.

Employers can offer employees choice in terms of the level of life cover they wish to have.

Our investment choice options include smoothed bonus, absolute return, passive,



Shari'ah, multi-managed and single manager funds. Members can even create their own share portfolios.

Can you please talk to us about the trustees of the Umbrella Fund—do they all work for Sanlam or are they independent?
50% of the board are appointed by Sanlam and other 50% are elected by members.

Independent candidates are short-listed by the Principal Officer taking into account qualifications, knowledge, and experience, on condition that candidates must be entirely independent of Sanlam. The independent trustees are then elected by the member-elected representatives of every Joint Forum.

What have you put in place to assist Sanlam clients in their retirement savings?

The tools and calculators on our app and portal are powerful. They guide members, step by step, when joining the fund and upon leaving.

There are budgeting tools, tax calculators, replacement ratio calculators as well as the ability to obtain real-time annuity quotations. Our retirement benefit counsellors are also helpful; they cannot give advice but can explain what their options are.

Considering we are in the midst of the 4th Industrial Revolution, how important is it to Sanlam to continue innovating and offering clients better solutions?

The future will bring a number of disruptions that may fundamentally change the way we do business.

The automation that we brought into our administration system has allowed us to manage our costs, the average annual administration fee increase has been under 2% since inception of the fund. Investment in technology is also about data integrity and protection against cybercrime.

What makes the Sanlam Umbrella Fund stand out above its competitors?

It isn't just one thing that allows us to stand out from the crowd, it's just that we put in a little more into everything that we do, and that adds up to something remarkable.

The industry knows our administration platform is superior to what is currently out there. We led the pack on a number of industry firsts, including being the first commercial umbrella fund to offer members a fully interactive app, an institutionally priced in-fund living annuity as well as retirement benefit counselling services.

For more information on Sanlam Umbrella Fund, please email us at: Shakeel.Singh@sanlam.co.za



Leadership magazine sat down with the CEO of Sanlam Group Risk, Michele Jennings, to find out how South Africans and their employers can ensure that everyone is covered to their satisfaction.

In general, do you think South Africans are reasonably well covered in case of illness/death?

Although funeral cover has achieved remarkable market penetration in the South African market, the relatively low levels of life, disability and critical illness cover have resulted in an insurance gap which ASISA quantified at about R29 trillion at the end of 2015. This means that in the event of one of these life changing events, many South African families are left in a predicament where they cannot afford to continue with the same standard of living that they had before the event, with the ASISA study indicated that they are about 60% underinsured.

How can employers ensure that families of staff are well covered in the case of serious illness or death?

Given that only about 6% of South Africans retire with adequate retirement savings, Consultants and employers correctly focus on guiding members to achieve their retirement saving goals, with many actively making an effort to influence their member's retirement outcomes. However, there appears to be less focus on helping members to achieve adequate levels of insurance, with affordability being a key dependency.

With only about 10% of South Africans having financial advisors, it would be helpful if employers could play a more active role in helping their members to determine their insurance needs through communication strategies, encouraging the use of personal financial advisors (possibly on site), and by providing access to needs based calculators. Given the employer affordability challenges, employers can also assist by offering flex options on their group insurance schemes, whereby members would be allowed individual member choice to increase their personal insurance cover at their own cost, which would be facilitated through the employer.

Sanlam is known to not have blanket offers for all, but rather have solutions for every client—how does Sanlam manage that, and how have clients or prospective clients responded to it?

Sanlam does offer standardised/ off the shelf type products for those who want them. However, many large or complex clients are looking for bespoke solutions for their unique membership base.

Sanlam is able to deliver bespoke solutions to these clients as a result of our highly experienced and skilled team members engaging with clients to determine their needs, and then formulating flexible solutions using various well

established building blocks from within Sanlam to meet these needs.

In an era where many insurers and suppliers are digitising, standardising and automating their systems and product offerings to save costs, Sanlam's personal touch, together with their willingness to offer flexibility has not only resulted in increased levels of client engagement, but has also translated into record levels of new business.

Have there been any new developments or products recently that you can share with us?

One of the key benefits of regular client engagement is that Sanlam is able to stay abreast of market developments and needs. An example of this is the Severe Illness Product which was launched towards the end of 2017 in response to the increasing need for affordable critical illness cover. Another example is the Accident Booster benefit, which is currently being launched as a free benefit to qualifying members, who as a result of not submitting medical evidence have their cover limited to the medical proof free limit.

Do you feel that as a nation we take things such as disability insurance, life insurance etc too lightly?

In addition to the tendency to be in denial about the possibility of death or disability impacting us personally, many South Africans tend to avoid or defer the purchasing of insurance largely due to affordability challenges. Furthermore, the extent and sometimes the complexity of options available to members, results in a fear of making the wrong choice, which is a challenge given that only 10% of South Africans make use of a financial advisor.

*For more information on Sanlam Group Risk, please email us at:
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The indelible image

Antarctica. Charcoal and oil on paper collage by Richard Smith, who was also a renowned Cartoonist and Chief Illustrator of *Leadership* magazine. He was born in Edinburgh, Scotland, in 1947 and had a varied career as a Cartoonist, Social Commentator, Illustrator and Fine Artist. In the late 1960s, he studied graphic design at the Johannesburg School of Art and in 1968, began his career as a cartoonist. In 1980 and again in 1984, he won the Standard Bank Cartoonist of the Year award. Smith's fine art career began in 1971 with a solo show of drawings at the Arts Theatre Club, London. He began painting in the mid-1980s and exhibited in a major Johannesburg gallery, primarily as a painter of abstract expressionist landscapes. In 1990, while a Resident at the Cite Internationale des Arts in Paris, Smith began making oil on paper works, some of which were torn up and re-worked as collage elements. It was at this time, too, that his fascination with charcoal's malleability began. He stated that he didn't really see a distinction between fine art and any other kind of art, be it a simple line drawing, a cartoon or an oil painting. One of the biggest challenges was to make the transition from cartooning or illustrating to 'Fine Art' with a capital 'F'.

This artwork was originally published in the June/July 1991 edition of Leadership

Safety and innovation for today and tomorrow

Jaguar Land Rover lights up the road ahead
for self-driving vehicles of the future



Humans have to learn to trust new technology, with 63% of pedestrians worrying about how safe it will be to cross the road with regards to self-driving vehicles. It is imperative that pedestrians have confidence they can cross the road safely when interacting with self-driving vehicles.

Driven by a desire to deliver class-leading vehicles, which will provide experiences their customers will love for life, Jaguar Land Rover developed a system that projects the direction of travel onto the road ahead of self-driving vehicles. This new technology will be able to tell other road users what it is going to do next. It features everything from self-driving pods, also referred to as “virtual eyes”, to intelligent pods that make eye contact with pedestrians to signal intent. Brian Hastie, the Network Director, Jaguar Land Rover South Africa and Sub-Saharan Africa, provides a detailed explanation of their research, new technology as well as what to look forward to from them in the near future.

Congratulations on developing a new system that projects the direction of travel onto the road ahead of self-driving vehicles. Can you tell us more about this system?

Jaguar Land Rover has developed a system that projects the direction of travel onto the road ahead of self-driving vehicles to tell other road users what it is going to do next. The intelligent pods beam a series of projections onto the road to show the future intentions of the pod—for example, stopping and turning left or right—as part of the research into how people can develop their trust in autonomous technology. The pods are fitted with a projector on the front that beams a series of lines with adjustable spacing onto the road ahead to show intent. The gaps shorten as the pod is preparing to brake before fully compressing at a stop. As the pod moves off and accelerates, the spacing between the lines extends. Upon approaching a turn, the bars fan out left and right to indicate the direction of travel. In the future, the projections could even be used to share obstacle detection and journey updates with pedestrians.

There have been a number of concerns from pedestrians and other drivers about self-driving vehicles, such as crossing

roads and general safety. How does Jaguar Land Rover’s new technology take those concerns into consideration?

The safety of our customers and those around them is our number one priority. We would not introduce technology into our cars unless we had complete confidence in it, after undergoing our stringent testing procedures.

We are still in the development phase of autonomous vehicles. In every vehicle, we have a highly-trained safety driver who is given robust guidelines on being fully alert and fit in order to regain control of the vehicle. Automated vehicles should be capable of achieving much higher safety levels than conventional cars, and will make the roads safer for all road users.

Information sharing between vehicles will allow drivers and vehicles to react more quickly, whilst automated features will reduce the number of incidents currently caused by human error. As pioneers of safety, we have a responsibility to make the roads safer for everyone by being at the forefront of autonomous vehicle research.

What are some of the long-term goals Jaguar Land Rover have in place to make cars safer, thus improving mobility for everyone?

The greatest progress in semi-autonomous and fully autonomous driving is improved safety. Our vision for the mobility of tomorrow is “Destination Zero”: Zero emissions. Zero accidents. Zero congestion.

Can you tell us more about the trust trial programme with regards to intelligent pods?

The pioneering trials were set up by a team of advanced engineers, working in Jaguar Land Rover’s Future Mobility division, after previous studies showed 41% of drivers and pedestrians are worried about sharing the road with autonomous vehicles.

The trials were part of the £20 million government-funded project, UK Autodrive, which began three years ago and came to an end in October 2018. Jaguar Land Rover is working on a host of advanced autonomous technology features as part of its pledge to deliver zero accidents, zero congestion and zero emissions. This particular programme focused on how people can develop their trust in autonomous technology.



In terms of innovation, what do you hope to improve on by 2020?

From 2020 onwards, every new Jaguar or Land Rover will have the option of electrification. Our innovative MLA architecture will empower customers to find an electrified option that suits their lifestyle—full electric, hybrid or ultra-clean petrol and diesel.

To what do you attribute the popularity of your cars, with so many units selling very fast?

At Jaguar Land Rover, we are driven by a desire to deliver class-leading Great British vehicles, which will provide experiences our customers will love, for life.



We are still in the development phase of autonomous vehicles

What kind of relationship do you hope your new technology will build with your clients and their vehicle experience?

At Jaguar Land Rover, we believe that any self-driving vehicle will only enhance the drivers' experience, not replace it. Self-driving will create choice.

It will fill the gap between a driver's own personal driving ability and the full capability of the vehicle.

The customer will always be in command with the option to resume control. Self-driving will transform the way we spend our time. Time is the new luxury and it will be better spent while travelling—to work, read or relax.

What does the future for Jaguar Land Rover look like? What do you hope to achieve in the near future?

Today's research is tomorrow's reality. The world of mobility will see more change in the next 10 years than in the last century.

Our ambition is to provide safer, cleaner and more efficient vehicles. As aforementioned, our future is electric, however, the internal combustion engine is far from obsolete. It is a state-of-the-art technology and we will continue investing in new Ingenium petrol and diesel engines alongside our ambitious electrification plans.

All hybrid powertrains require internal combustion—diesel and/or petrol

engines—alongside electric technology. Our customers want choice. We will help them to make an informed decision on the cleanest Ingenium engine technology for how and where they drive, be that electric, petrol or diesel. Every future vehicle will be equipped with technologies to fulfil the desire to drive a fun, sporty, capable car because this desire won't diminish in the years to come.

Like our current cars, our future self-driving vehicles will be the most capable on the widest range of terrain and in all weather conditions. We are creating the benchmark for premium self-driving comfort and capability. ▲

Evans Manyonga

Is emotional intelligence the make or break of leaders?

Two of the most significant international political events for 2019 are the UK Prime Minister Theresa May's delivery of Brexit and US President Donald Trump's promise to build a wall between Mexico and the United States. What will determine their ability to achieve what they have set out to is their emotional intelligence or EI. It links logic, ethics and healthy negotiation.

The concept of EI has been with us for many years. It first appeared in a 1964 research paper by the Clinical Professor of Psychology at Cornell University, Michael Beldoch. In 1990, it was further developed and discussed by two prominent social psychologists: the University of New Hampshire's John Mayer and Yale's Peter Salovey, and it was widely popularised by the Author, Dan Goleman, in his 1995 book of the same name.

EI is a hotly debated concept and many different definitions have emerged but Mayer and Salovey's definition covers it the most. They define emotional intelligence as the ability to do two things—"understand and manage our own emotions", and "recognise and influence the emotions of others". The ability to recognise the emotions of others further requires us to consider and reconsider our own emotional response with the goal of finding the best way forward for all. This is central to leadership.

Leadership is described as "an emotion-laden process with the skilful management of followers' feelings representing a critical leadership function," in an article titled Emotional Intelligence: Sine Qua Non of Leadership or Folderol? written by Leadership and Management Professors Frank Walter, Michael S. Cole and Ronald H. Humphrey.

They argue that EI is central to the leadership process: "A leader who can effectively display



and manage emotions can more strongly and positively influence followers' feelings and address their concerns with greater proficiency. Scholars have noted that EI can help leaders generate and maintain follower confidence, cooperation, and trust; guide teams through situations of ambiguity, confusion, and conflict; and provide inspiration and a sense of meaning, identity, and commitment to followers."

If we look at Trump and May and examine whether they are displaying any signs of EI with regards to the wall and Brexit, we see the following: May has certainly shown tremendous determination in trying to negotiate the Brexit deal, yet she is often attributed with zero EI. This could well be her downfall because for

the Brexit deal to be compelling, May needs a master class of EI to communicate the logic of the deal, and achieve the magic majority buy-in from the British parliament. Brexit is supposed to happen in March but as things stand, it doesn't appear as though the MPs will accept the deal.

Is Trump showing any EI in the case of the wall? His supporters would argue that he is; that he responded with empathy to their concerns about immigration and that he is a man of integrity who is prepared to shut down the government to achieve it, and take a firm stand against the Democrats who are trying to usurp him. Going back to the second part of Mayer and Salovey's definition of EI, Trump certainly

knows how to “recognise and influence the emotions of others”; not necessarily in a positive way, but he is skilled at manipulating people and playing on their fears.

Those who don’t support Trump say he has zero EI; that he is playing hardball over the wall, not for the common good but simply because he did not get his own way. Trump’s opponents add that he does not have the EI qualities of temperament, emotional self-mastery or reflection, which are required of a president.

Regarding his communication skills, while there is no doubt that Trump has forever changed the way leaders communicate, many would argue this is not EI as he does not even connect with his own staff and his Twitter feed is all too often a barrage of insults and often unintelligible rhetoric.

So, how did he become the President of the United States? Well, because he’s a “conman”, writes the Professor of Public Policy at the University of California, Berkeley, Robert Reich, in his July 2018 column in Newsweek: “Trump is an extraordinarily talented conman. He’s always been a conman... and he’s been a great political conman. He conned 62 979 879 Americans to vote for him in November 2016 by getting them to believe his lies about Mexicans, Muslims, African-Americans, Barack Obama, Hillary Clinton, and all the ‘wonderful’, ‘beautiful’ things he’d do for the people who’d support him.”

Grand promises about the wall were part of this, as was Brexit for May. Their promises were critical to their ascendancy to power but delivering on them is another thing altogether, because the three Aristotelian modes of persuasion, namely ethos, logos and pathos, are lacking in their leadership styles. Ethos, meaning ethics, character and credibility; logos, meaning reason, logic, facts and figures; and pathos, from the Greek word meaning experience, emotion and suffering—qualities of EI. To be a great leader, you need to be strong in all three. If Trump was scored on these modes, he would in all likelihood get 0 out of 3 and May would get 1.5 out of 3 as she has shown ethos and some logic, but pathos? Probably not.

In *The Secret to Great Communication: Be Like Aristotle*, by the Harvard Keynote Speaker and Communication Specialist, Carmine Gallo, he says the ancient art of Aristotelian persuasion has regrettably been lost in the modern business (and political) world, yet it remains fundamental because it contains the three

ingredients that convince people to go with you and your story over your competitor’s.

Gallo explains that “SAP, a giant business software company that’s global, just hired a relatively new marketing manager in the last year, but her title is Chief Storyteller. Storytelling goes back 2 000 years ago to Aristotle. This is not new. But what they’re finding is that they cannot compete by giving you engineering terms and talking to you about business software that is so complex that it’s hard for the average person to understand.”

Storytelling is all about EI, it is, in essence, pathos, emotion, insight, understanding—all qualities of EI. As Gallo puts it: “You cannot persuade another person to change their mind without pathos, without emotion. Everything about human nature—from the stock market to where we invest to how we vote—is based on the emotional narratives that we tell each other as groups and within individuals.”

Notwithstanding that the nature of leadership is highly complex and nuanced, intuitively we know that leaders who exude EI—who are empathetic, strong, emotional communicators—and who have the temperament to manage power will, in all likelihood, succeed when others do not. Why? Because pathos/EI is as important to them as ethics and logic. It is not seen as a soft skill, quite the contrary; it is recognised as the golden thread of inclusiveness.

A different way of putting this is a quote attributed to Aristotle, Confucius, a native American proverb and an ancient Chinese proverb (clearly indicating its universal wisdom): “Tell me and I’ll forget; show me and I may remember; involve me and I’ll understand.”

In their own ways, Trump and May share the same problem. If you are not going to be inclusive and responsive to people, you are going to fail. Hillary Clinton is a classic example of this. She essentially accused Trump followers of not being able to think for themselves, calling them a racist, sexist, homophobic, xenophobic “basket of deplorables”. She later apologised but not only had she forever lost a substantial number of voters, she had also created enemies who would go out of their way to support Trump’s undermining of her.

Brexit and the wall are both turning points for May and Trump, and their political futures might significantly unravel because inclusivity and EI are not there. Will this be the ultimate death knell for their long-term leadership tenure? We shall see during the course of 2019. ▲

PROFESSOR OWEN SKAE



Professor Owen Skae,
Director of Rhodes Business School
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Rebuilding our continent's reputation

Burson Cohn & Wolfe is one of those companies that I have an immense amount of admiration and respect for, not only because of their consistently excellent campaigns that they annually win globally, but also due to the incredible work that they are doing across the continent to rebuild its reputation and give it its voice.

At the helm for the past 25 years, Robyn de Villiers, the Chairman and Chief Executive Officer (CEO) for Africa, has taken the company from strength to strength and into 52 of the 54 countries. De Villiers shares that some of the most noticeable changes started around the end of 2016 and have been continuing in 2018.

What has been the biggest change that your agencies across Africa have had to contend with this year?

The biggest thing that has happened over the past two years is the enormous rise in the level of activism from all stakeholder groups. There is a high level of emotion and a strong feeling that people have taken back or recognised their power and their rights and are proactive in making their voices heard.

Women's rights, consumers' rights and employees' rights are no longer taboo; citizens are no longer standing by and just watching, corrupt governments and executives are being brought to book and held accountable for their actions. It is strengthened by the power of social media but also by traditional media and direct interactions like strikes and protests.

There have been considerably more calls for boycotting products, calls for shutting down businesses and class action lawsuits, so crisis communication has become a much greater focus area for our agencies.

The number of reputation-damaging situations has increased not just in Africa, but globally as well over the past two years.



What is the biggest communication management challenge that African organisations are facing?

There is a lack of proper risk assessment, especially when it comes to reputational issues, which results in a lack of proper crisis preparation. This leads to extraordinarily large damage to reputation when something goes wrong because no one is well-positioned to handle the fallout. The need for effective crisis management is also, of course, intensified because of social media. A large percentage of those companies that are well-prepared for crisis management have not updated their plans to include social media, which leaves a large hole in their level of readiness.

When a company wants to invest in the services of an agency to help them

manage their reputation, what three questions should they ask the agency to help them make a decision?

I believe that companies should do solid due diligence on any agency they are considering appointing. They should assess the status of the agency's reputation, their governance procedures, their value system, their client base and so forth. I believe there is nothing more damaging than appointing an agency to help you manage your reputation and then having their bad reputation impact yours. The second aspect would be to check the credentials of the people from the agency who would be working on your reputation management to assess their competence but also their personal reputations so that there is no potential for a negative impact from this area either. The third aspect would be whether the chemistry is good

between the company's GSuite and the agency's senior advisors since reputation management has to happen at a very senior level and you need to know that there is mutual respect.

What is the one thing you wish your clients knew or did when it comes to investing in their reputations?

Benchmark research at the beginning of their reputation effort to ensure that they really do understand their current reputation and their stakeholders' perceptions, rather than assuming they know the starting point.

My experience with executives is that what they think the reputation is, is most often too extreme. Either they think the reputation is trashed/terrible or they think it is fantastic when actually, it is normally somewhere in between.

What do you think the biggest misconception is when it comes to reputation management?

Many companies think that it is not critical because "nothing will go wrong for them" and, therefore, it is not worth the investment. What they don't realise is that it is absolutely critical because the potential loss of value when something does go wrong is multiple times the investment in effective reputation management. And the loss of value is more than financial (which is often huge). It is the loss of trust of the critical stakeholders that is actually the longest-term damage and the one that is sometimes irreparable and always very slow to rebuild.

What does Africa need to do to get its reputation back on track?

Africa will only change its reputation if it takes responsibility for it and takes the power away from all those outsiders who continue to tell her story. The first critical step is the realisation that something needs to be done, the next step is a decision on who has to take responsibility for it, and the final step is a commitment to a properly staged plan. As long as we let others tell our story, they will tell the story that suits them and we will most certainly not like it.

Which of the African countries is getting their reputation right?

Why do you say this?

In my opinion, Ethiopia and Rwanda are doing well in terms of their reputation over the past

few years. Ethiopia has taken full advantage of the fact that it is the permanent home of the African Union (AU) Commission's headquarters and you can see that if you travel to Addis Ababa. Construction is everywhere, Ethiopian Airlines just won the African Business of the Year award at the CNBC Africa All African Business Leaders Association (AABLA) Awards, and your airline is the first experience a visitor has of your country.

Rwanda is doing brilliantly with regard to gender equality—this year, they had the highest number of women ministers in any government in the world. They have changed the official business language from French to English to make it more relevant on the global stage.

They offer excellent educational opportunities to children and adults alike and they are a leader in Africa in terms of connectivity. As a result of this, they hosted the World Economic Forum (WEF) on Africa meeting in 2016 and will host the Africa CEO Forum in 2019. They are definitely attracting global interest.

What do you think the biggest communication changes on the continent over the next five years are going to be?

I think Africans are going to take responsibility for communicating about Africa and for focusing on the many success stories, instead of letting the rest of the world tell all the negative stories. I think connectivity will be increased all over the continent and costs will come down so that everyone will have the opportunity to benefit from being online: financial services, health services, educational opportunities and work opportunities to name a few.

I also believe that in the next few years, business, the government and other organisations will all have chief reputation officers in their GSuite teams and I hope that Africa will be ahead of the pack in this area. I believe that as an industry, we can help to train these people to play a critical role in their organisations and I hope we will. ▲

For more information about Burson Cohn & Wolfe, visit www.bwcglobal.com

Continue the reputation management discussion with us at www.reputationmatters.co.za or call +27 (0)11 317 3861. We are also on Facebook www.facebook.com/yourreputationmatters and Twitter @ReputationIsKey

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Regine le Roux is the Managing Director and founder of Reputation Matters. She holds an M.Com degree in Communication Management from the University of Pretoria. She is a corporate reputation specialist and handpicks and manages several teams that conduct reputation research studies and implements business communication strategies. Regine is the author of: Reputation Matters, Building blocks to becoming the business people want to do business with. Regine is the Chairperson for the Western Cape Public Relations Institute of Southern Africa (PRISA) Committee, and on the Board of the Rotary Club of Newlands, responsible for Public Image, and chairs Rotary International's Public Image for District 9350. Over weekends you will find her donning her pink skort for the Hout Bay Harriers.

The top five gadgets for 2019

Leadership has collated a list of some of the best gadgets available on the market for the tech-savvy enthusiasts

The Samsung Galaxy S9 Plus

Samsung Galaxy has become the most popular Android smartphone on the market. Besides offering great specifications such as a big design for big hands, making typing more comfortable, it has a 3500mAh battery, 12MP rear camera and 8MP front camera. The Samsung camera can record in super slow motion and capture 4k video in true-to-life detail. It translates languages with Bixby and you can unlock your phone using facial recognition. Additionally, there is a centre-mounted fingerprint sensor.



Apple iPad 9.7 inch

It has a high-resolution screen, aluminium body with mechanical software and has a wide variety of applications. It is reasonably priced in comparison to other iPhone products and is usable under bright sunlight because of its 9.7-inch display.



Jabra Elite 65t wireless earbuds

Engineered for the best true wireless calls and music experience, these earbuds are perfect for those who really want their wireless buds to be “wireless”. They are comfortable and they stay in your ear when jogging or at the gym. The unique four-microphone technology provides effective noise and wind reduction on calls. Jabra’s hear through delivers external ambient noise into the earbuds for audio awareness of what’s around you. You can customise the sound using the sound equaliser app and it offers up to five hours of battery life on a single charge.

The iPhone X

This smartphone features the finest technology with the best-quality display OLED screen, energy saving options and the 3D touch glass panels on the front and back provide the best resolution. It has 2688 x 1242 pixels, Super Retina high resolution, premium glass. It has IP67 water and dust resistance. It boasts a two-camera system and both cameras are 12 megapixels with an optimum zoom lens. The smaller display makes it manageable in one’s hand, it can film up to 4k at 60 frames a second and has 1080P slow motion at up to 240 seconds a frame.



The Fitbit Alta fitness wristband

The smart, one-size-fits-all fitness tracker is not only limited to fitness tracking. It is designed to keep you motivated by using stand reminders that require 250 steps to win. Focused on tracking your health and fitness, it does this by helping you to track steps, burn calories, get a good night’s rest and record your heart rate. It can act as a fitness trainer as it comes with a coach app that can assist you in initiating a training session with some guidance.

Four technology shifts that will shape business in 2019

As we launch into a new working year, business leaders will need to take into account the key technology trends that will shape 2019

Without a doubt, these trends are transforming the very core of the enterprise environment in South Africa and globally, with a wholesale shift to automation, hyperconnectivity and data-driven efficiency. Forward-thinking business leaders and decision-makers are already weaving new technologies and platforms into daily operations, while those with a 'wait and see' approach quickly fall behind.

Let's take a closer look!

1. Accelerated automation

In 2018, automation was on everybody's watch list, and for good reason. Over the past few years, the automation of certain job functions and sectors has accelerated—fuelled by rapidly advancing artificial intelligence (AI) technology and the eagerness of business to leverage heightened efficiencies and reduced costs. According to the Harvard Business Review, a total of 1.2-billion full-time job equivalents and US\$14.6-trillion in wages are associated with activities that are automatable with current technology. This 'automation potential' differs among countries, ranging from 40% to 55%. Locally, it is estimated that around 41% of work activities could now be automated by adapting the current technology.

2. Embracing augmented analytics

While technology seers have long been extolling the benefits of big data and analytics, this realm is now entering a new level of aptitude. In essence, augmented analytics is business intelligence (BI) tools augmented by machine learning (ML) algorithms.

The ML algorithms used by augmented analytics are excellent at automating repetitive tasks, as with ML algorithms in other applications. Notably, Gartner predicts that by 2020, augmented analytics capabilities will be the "dominant driver of new purchases" of business intelligence software. Why? In a nutshell, augmented analytics takes over the repetitive, time-consuming work of basic data analysis and frees up key resources to turn data into real-time, critical business insights.

3. Preparing for blockchain-enabled business

Put simply, the blockchain is a decentralised database stored on multiple computers as identical copies. With its inherently decentralised form, a blockchain is believed to be highly secure as no single user can alter or remove an entry in the blockchain (because it would require changing all the nodes). Although the initial hype around blockchain was centred on the cryptocurrency Bitcoin, the applications of blockchain technology within the business

sphere are boundless. According to one report, the global blockchain market is expected to be worth US\$20 billion in the year 2024. As it stands, almost 70% of banks are exploring blockchain technology to propel growth. In South Africa, we are slightly behind the adoption levels of developed markets such as the United States and the European Union but interest is growing fast.

4. Edge computing is becoming key

While definitions vary slightly, Gartner defines edge computing as solutions that facilitate data processing at—or near—the source of data generation. Such solutions are becoming more important as the need for localised computing power grows. In the context of the Internet of Things (IoT), for one, the sources of data generation are usually things that have sensors or embedded devices.

As it stands, Gartner reports that around 10% of enterprise-generated data is created and processed outside a traditional centralised data centre or cloud—and by 2022, this figure will reach 75%. Locally, South Africa is moving closer to edge computing but faces headwinds such as the reliability of power and the security of edge locations and points of presence. ▲

*Neil Rampton,
Senior Product Manager at COLONY HQ*



NEIL RAMPTON



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