

OPPORTUNITY

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Smart living enabled
How the shift from 4G to 5G
affects security and surveillance

Mining companies are
becoming power generators
Supply constraints and the need
to go green are driving innovation

Realigning supply chains
in times of disruption
Research findings point to the
importance of future-proofing
operations

Looking ahead with hope

SOUTH AFRICAN CHAMBER OF COMMERCE
AND INDUSTRY CEO ALAN MUKOKI



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Banks find new growth in next generation networks

Kevin Odudoh, Executive Head of BFSI Sector at Vodacom Business, outlines what to expect when migrating from MPLS to SD-WAN.



Kevin Odudoh, Executive Head of BFSI Sector at Vodacom Business, has an MBA in Global Business, Entrepreneurship and Innovation from IE Business School, Madrid, and a BSc Degree in Mathematics and Statistics from the University of Nairobi. Prior to joining Vodacom Business, he worked in national, regional and global sales leadership roles, most recently as Global Account Manager, responsible for the global business relationship between Vodafone Business and the largest financial-services clients in Africa and the Middle East.

If you are a large bank with multiple points of presence across the country, continent or even globally, you need to be able to leverage the best technologies available to remain agile, competitive and future fit.

In addition, an increasing number of employees are choosing to work remotely, and more BFSI (Banking, Financial Services and Insurance) customers are opting for digital channels, putting pressure on BFSI organisations to move their internal and customer-facing applications to the cloud. This increases the demand on networks to deliver reliable and secure services from anywhere, using any available transport medium, whether it's dedicated leased lines, open Internet or GSM-based access services like 4G and 5G.

However, many BFSI organisations are still running pure Multiprotocol Label Switching (MPLS) technology to connect their branches, offices and data centres, which is also proving too costly.

The solution

One of the ways to modernise your network is by leveraging a Software Defined Wide Area Network (SD-WAN).

According to Gartner, "Vodafone identified as a Leader in the 2022 Gartner Magic Quadrant for Network Services, Global":

- By 2025, 65% of enterprises will have implemented SD-WANs, compared with approximately 45% in 2021.
- By 2025, 40% of all enterprise locations will use Internet access as their only WAN transport, compared with less than 20% in 2021.

Migrating to a SD-WAN, a next generation network, which is the backbone for many of today's most important technologies, can help BFSI organisations to use the Cloud more effectively, manage business-critical traffic more efficiently across a network and enhance cyber-security all the way from the end users and clients to the cloud.

"Choosing the right SD-WAN technology is critical when transitioning from a pure MPLS network. Factors to consider include your cloud strategy, business applications, geographic presence, employee profiles and customer experience," says Kevin. "Data and Security are also key considerations, because how you collect and leverage data, and which security processes and tools you have or are willing to invest in, will influence the SD-WAN technology you choose," he adds.

Migrating from MPLS to SD-WAN is becoming a no-brainer

Deployment and transition

Any transformation project has inherent risks. "Scope, cost and time are constraints that need to be carefully understood and managed to ensure quality delivery. Usually, a controlled pilot can help to identify risks and mitigation plans, and even assist in choosing between technology alternatives before a scaled roll-out," says Kevin. "From experience, however, this is the easier part. Often, the hard part is ensuring seamless contracting and transition between service providers. This is especially true if there are several supplier contracts across the networking stack, including routers, switches, firewall and access links across multiple territories. To ensure speed to value with minimal scope creep, choosing the right provider with experience in delivering large-scale network-transformation projects is key," explains Kevin.

Juggling a multitude of regional contracts is common in multinational banks with global operations, where each country invariably has its own budgetary constraints, challenges and demands. The one commonality is that a multinational's head office often desires to source a service (like SD-WAN) from a single supplier and be able to provide the same user experience across all its branches. "For highly dispersed multinational banks, SD-WAN is ideal, affording a single view across the entirety of their network," adds Kevin.

The benefits

By opting for one service provider, customers benefit from volume pricing. Furthermore – and crucial for banks with a large physical footprint – they can have the reassurance that comes from working with a Tier 1 operator. Vodacom was the first service provider in Africa to achieve the prestigious MEF 3.0 SD-WAN certification, which confirms that its services comply with the highest industry standards for performance, assurance and agility.

Legacy networks "work" so to speak but are not optimised for future-ready businesses. One of the best features of an SD-WAN deployment is the fact that it uses any existing broadband infrastructure and does not require the ripping and replacement of legacy systems.

The rationale for migrating to next-generation networks is as clear as it is compelling – SD-WAN networks are a significantly

better fit strategically for Cloud services, IoT, digital twins and unified communications. It is particularly relevant for well-established global banks who were traditionally bound to an expensive legacy access infrastructure for their wide area networks. In contrast, next-generation SD-WAN networks open them up to utilising low-cost Internet connectivity.


Disruption to business continuity need not be a concern. Banks can have a hybrid setup, maintaining some of their legacy MPLS wide-area networks, while moving branches individually to SD-WAN. Depending on their transformation roadmap, banks could adopt a phase-in phase-out approach, running a hybrid network with legacy MPLS VPN in some branches and SD-WAN in others, and then migrate those branches that are still on the legacy networks over time.

Futureproofed for the digital era

Beyond modernising their infrastructure and availing themselves of the cutting-edge technology, the underlying reason behind migrating from legacy networks to a Software Defined Network is that it affords BFSI organisations greater agility and the ability to open up new revenue streams.

In recent years, banks have been pressured to diversify their offerings to remain competitive in response to mobile players like Apple and Google moving into banking and fintechs such as Chime capturing market share. However, for a bank to expand into other verticals without jeopardising its core business requires a greater degree of agility, which is ultimately what next-generation networks offer.

For banks, time is of the essence. In 2021, the EY NextWave Global Consumer Banking Survey urged incumbent banks around the world to "act with urgency to protect their advantages, which are under direct attack by these new providers." It added that banks must also "build new business models capable of satisfying today's consumer needs and evolve and scale to meet future needs and market developments."

This is exactly what Vodacom Business can enable for banks today. By migrating to SD-WAN, banks are future-proofed and ideally positioned to take advantage of a nimble network. They can use big data, along with machine learning and artificial intelligence, to refine their processes and better cater to their customers' needs and thus remain relevant. 

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Lessons from Uitenhage

The men and women who make railway wagons at Transnet Engineering's Uitenhage plant have good reason to be proud. They do excellent work and the plant itself is clean, efficient and productive.

A visit to the plant some years ago left me hugely impressed by the commitment to quality of the workforce and the leadership. Apart from maintaining South Africa's freight-wagon fleet, the plant manufactures new wagons and was responsible for the design, engineering and building of a new generation of car wagons to transport a wider variety of vehicles more safely.

The launch in 2013 of those car wagons was supposed to mark the beginning of a major move of cargo from road to rail. Although there have been some baby-steps in that direction, the country's roads continue to take a pounding from countless trucks roaring up and down the main national routes.

The other main components in the freight equation – rail routes and ports – are performing poorly. The South African Association of Freight Forwarders says that 40 000 companies within South Africa import and export.

In 2022 an announcement that certain rail routes would be offered to private operators was greeted with joy. A week later, once it became clear that the contracts would be for a two-year duration, that joy was replaced by disdain. What rail operator would accept a two-year contract underpinned by a multi-million-rand investment?

Given that Transnet is still locked in negotiations about the ill-fated 1 064 locomotives ordered from China, the need to get freight moving on rail, through any entity, becomes more urgent.

In 2021 the mining sector exported product worth R850-billion and by June 2021 a record trade surplus of R57.7-billion had been reported. And yet the country's miners can't export anything like what they want to export because of limited rail capacity.

Port revival plans seem to be moving more smoothly. Transnet has signed 15-year concessions with the country's biggest agricultural company, Afgri, to run the East London Grain Elevator in the Port of East London and the Durban Agri-Port at the Port of Durban.

In February 2022 Transnet National Ports Authority announced that a subsidiary would be created to operate under a licensing agreement. This body would be in a position to more quickly sign up private partners, for example to upgrade the Durban Container Terminal Pier 2 and Ngqura Container Terminal in 25-year contracts.

In response to this shift in the legislative environment, the Old Mutual Infrastructure Fund has bought The Logistics Group from Zeder Investments for R1.6-billion and Dubai-based DP World has made a bid for Imperial Logistics. The companies making those bids are betting on the people responsible for rail routes and ports taking some lessons from the proud wagon-makers of Uitenhage.

Logistics focus

This issue of *Opportunity* interrogates some of these themes through articles on the creation of an independent ports authority and the latest set of rail regulations related to safety and security are discussed.

Research findings by SYSPRO Africa show the importance of future-proofing supply-chain operations against unexpected events. Innovation in agriculture is covered with a report on South Africa's biggest agricultural festival, NAMPO Harvest Day. Innovation in mining is becoming key with power-supply constraints and the need to go green.

Marcel Bruyns of Axis Communications explains how the shift from 4G to 5G affects security and surveillance. Another aspect of the digital world under the microscope is the need to continually keep learning. Michael Hanly suggests ways to ensure that learning stays up-to-date and relevant.

For small-business owners, experienced entrepreneur and new KwaZulu-Natal EO President Denzil Steyn dispenses good advice.

John Young, Editor

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News & snippets

Industry insights from the past quarter

UAS is building the next generation

Umzamo Analytical Services, a leading coal analysis and sampling company, is also a dedicated player in providing training and experiential learning to build up the next generation of analysts. Just over 40% of UAS employees are young people and future laboratory operators and analysts. UAS seeks to ensure that trainees complete their studies with the opportunity of employment at UAS to build up their experience and skill sets. With a permanent staff complement of 260, UAS offers training intended to expand the skills set of employees, believing that a skilled workforce is key to the company's success. Staff are sent on outings to other destinations, for example Botswana, to learn new skills. The company aims to employ local people and offers jobs and in-service training to chemistry students and matriculants, giving them a chance to work in a world-class laboratory environment. In this way, UAS plays a role in uplifting communities in which it operates.

Website: www.u-a-s.co.za



Studying hydrogen



The Chemical Industries Education and Training Authority (CHIETA) has embarked on an 18-month research project: *A comprehensive study of hydrogen power in SA*, which will assist the authority's efforts to support the Hydrogen Economy, identifying growth areas for skills and economic development.

With projects such as a recently-completed hydrogen production proof of concept (PoC) initiative in Vredendal in the Western Cape, it's safe to say that South Africa is well on its way to producing green hydrogen as part of its renewable energy posture, says CHIETA CEO Yershen Pillay.

CHIETA is also working on a Green Hydrogen Skills Plan for the petrochemicals sub-sector. This is to identify the top-10 skills in the green hydrogen economy and close the hydrogen skills gap.

The Innovation Hub is supporting indigenous knowledge

Research shows that about eight in 10 South Africans rely on the country's estimated 400 000 traditional healers for their primary healthcare. Trade in traditional medicines generates more than R2.9-billion annually and provides a source of income for more than 133 000 people.

According to Dr Phuti Chelopo-Mgobozi, Innovation Specialist at The Innovation Hub in Gauteng, traditional health practitioners have sustained the health of millions of South Africans over centuries. Given the vital importance of indigenous knowledge systems (IKS) in healthcare, The Innovation Hub prioritises the development of IKS researchers and entrepreneurs. Through the Bioeconomy unit, programmes such as the CoachLab IKS Entrepreneurship Programme are offered, targeting SMMEs, indigenous-knowledge holders and scientists.

Research organisations such as the Council for Scientific and Industrial Research and some tertiary institutions offer product development support and testing while the Technology Innovation Agency (TIA) and the Department of Science and Innovation (DSI) are providing financial support to IKS-based innovations.



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SMME VIRTUAL ROADSHOW

GLOBAL AFRICA NETWORK IS A TRUSTED PARTNER OF BUSINESS CHAMBERS AND OTHER REPRESENTATIVES OF ORGANISED BUSINESS IN EACH PROVINCE.

SMME VIRTUAL ROADSHOW

Global Africa Network Media (GAN) is an established authority on business development in South Africa's nine provinces. GAN's online products include its well-established B2B portals www.globalafricanetwork.com and www.southafricanbusiness.co.za, and its e-newsletters with a reach of over 23 000 subscribers.

Its stable of provincially-focused B2B print annuals was launched in 2005 and each of the nine titles has been utilised by all levels of government, parastatals, corporates, and national and provincial businesses. This uniquely provincial and local focus has established GAN as a specialist in small and developing business, and the company is a trusted partner of business chambers and other representatives of organised business in each province.

The SMME Virtual Roadshow 2023 will take the form of an online event targeted at specific needs of the participants, which will vary across levels of development and support requirements. Presentations by thought leaders will be pre-recorded to ensure quality. Supporting collateral will also be available for download.

Creating Entrepreneurial Opportunities and Value with Technology
Changing lives one community at a time.



Venture Capital Investments to Build Sustainable Business

Does your business have the long-term growth potential to qualify for venture capital investment?



EVENT FORMAT

Seven Focus Hubs will structure the Roadshow:

- Access to funding for start-ups
- Access to funding for established small businesses
- Doing business with government
- Skills and development training
- Banking for small business
- Compliance – practical solutions
- Internet and telecoms solutions for small business
- PLUS: SMALL BUSINESS SUCCESS STORIES

Registration for delegates is free. Delegates will be filtered according to their objectives.

- Ongoing discussion forums monitored by Global Africa Network SMME online team.
- Attendance by delegates is monitored and measured.
- All interaction and attendee databases will be monitored and packaged for Hub sponsors.
- Selected questions and answers will be posted (sponsor branded) for general access.



PARTICIPATION

Attendance will be free of charge, and companies that register will be required to provide relevant information about their business, their objectives, and their requirements.

MARKETING

The event will be marketed through relevant business bodies, and GAN's monthly email newsletter, TradeInvest Africa, will promote the event to its custom database of 23 000 recipients.

DRIVING ECONOMIC GROWTH AND JOB CREATION.

REGISTER ONLINE: www.globalafricanetwork.com/smme-virtual-roadshow



Alan Mukoki, SACCI CEO

Hope is the key into 2023

SACCI's CEO sees change as the way to stay relevant as business body launches new research indices.

As we approach year-end in what has been another year of unexpected events, we return to the much-anticipated and longed-for event of the year in the business community, the annual SACCI Convention and Gala Dinner.

It is especially pleasing after two years of Covid lockdown when we were unable to host this event. The standards expected from members and stakeholders have always been at the top of the chain and the small group of personnel who pulls this off are expected to rise to the challenge, and we can expect nothing less in 2022.

SACCI has one of the longest track records in organised business with a 77-year history. Formalised in 1945, the institution has undergone change at various times which is reflective of a process that has kept SACCI relevant. Through its transformational process the standards of governance are arguably the highest in organised business. So, the 2022 Conference and Gala Dinner are at a confluence point when the country has once again been battered by external factors which have had a direct bearing on business and, indeed, society.

The war in Eastern Europe precipitated fuel price increases at a time when our economy was already vulnerable and struggling to grow. Our export markets were impacted, our domestic economy saw fuel, interest rates and general-goods prices rising rapidly and directly impacting on the general affordability of goods and services for the average person. In short, the country has gone through a rough year which has, more recently, been compounded by the severe load shedding and water shedding as the temperatures in the country rise to dangerous levels before summer has even arrived.

So, we are looking forward to an event which highlights the business perspective on the "new normal" going forward and how we see things entering the new year and beyond. This alone is intended to serve as a guiding light to the business community as to what we can expect.



Who is The South African Chamber of Commerce and Industry (SACCI)?

SACCI is the Republic of South Africa's apex chamber of commerce, having been in existence for 77 years. We are a broadly-based representative national business body.

SACCI membership is divided into three categories: corporates, large multinationals and national companies, the majority of which are JSE-listed. The second tier of membership is national associations, which are the country's industry-specific bodies. Finally, there are the chambers, which include town and city chambers across the country as well as a few township chambers. We also host the 20 000 or so SMMEs that are also members of SACCI through the chamber to which they are affiliated.


Our mission is to protect and promote the interests of business in all sectors and across all sizes of enterprise. SACCI is committed to forging closer relationships between organised business and government. Our vision is "To be the major voice of business in the policy, regulatory and legislative environment, business growth, locally and globally and improve the human condition."

From a new Small Business Growth Index that SACCI will be launching, together with UNISA's Bureau of Market Research (BMIR), through to the new African Sovereign Ratings Agency, the programme promises to be one that will remain in our memories for some time to come. These are the highlights of what business can expect before the grand finale of the prestigious SACCI Gala Dinner.

As always, a mix of formalities from the black-tie affair, entertainment and high-profile speakers, we expect our keynote address to come from the His Excellency President Cyril Ramaphosa, this is the high-class event that the business community expects from SACCI annually.

The event is traditionally attended by high-ranking government officials, captains of industry, ambassadors and diplomats and indeed, a wider spectrum of movers and shakers.

By the time this goes to press SACCI will have concluded the first part of its Convention where the Annual General Meeting will elect its new directors in accordance with the Companies Act Schedule I provisions. The new directors will also be announced at the Gala Dinner.

After a year of unusual happenings, SACCI intends to end the year on a more positive note with hope as the key message for 2023. 

ABOUT SACCI

The South African Chamber of Commerce and Industry and its almost 50 constituent chambers is a lifeline for business people.

The voice of business

SACCI's vision is to be the voice and preeminent business chamber organisation by offering superior value to its stakeholders. SACCI lobbies for and represents the collective interests, domestic and foreign, of South African businesses. Our mission is to effectively protect and promote the interests of business.

Lobbying and advocacy

We represent the business interests by influencing policy and legislative development and regulation. We engage government and legislatures or regulators in respect of certain of the regulations or pieces of legislation that we think would not be conducive for our business members or the economy in general or job creation. We are consulted in a lot of the policy that government looks at.

Membership

SACCI remains the most broadly-based representative national business body, not only in South Africa, but in Southern Africa, focusing primarily on national and international issues.

As the "Voice of Business" SACCI assists its members by preparing and submitting policy positions on business related issues to government: International Trade, Taxation, Economic Affairs, Labour and Company Wellness, Education and Training, Information Technology, SADC, NEPAD, Small Business, Transport and Regulatory Affairs. SACCI also interacts with many other agencies on business issues. During the year, SACCI holds various informative seminars and presentations using top Government and noteworthy speakers.

SACCI's seven pillars

- Inclusive Economic Growth and Employment Creation
- Constructive Public and Private Stakeholder Engagement
- Entrepreneurship
- Infrastructure: "The 4 lines to Heaven"
- Continental Development in Africa and the CFTA
- Revenue Generation
- Membership Rewards and Benefits

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SACCI ANNUAL CONVENTION

South African business calendar highlight.



The SACCI Annual Convention and Gala Dinner is the highlight of the South African business calendar where a range of issues of importance to the South African economy and business members is debated.

SACCI hosts around 500 delegates annually, representing business, government, labour and the diplomatic corps, and the Convention typically enjoys wide media coverage.

The Annual Convention consists of:

1. Annual General Meeting (AGM).

Meeting of all SACCI members where the new Board and Council is elected.

2. Themed Conference.

A relevant theme is decided on early in the year and speakers are invited to address members in a two-hour session usually including a high-level address.

3. Gala Dinner.

New members for the year and the newly-elected Board are announced and introduced to the rest of the membership and the conference programme is wrapped up with a Keynote Address.



2018 ANNUAL CONVENTION – GALA DINNER

DATE

8 November 2018

VENUE

Hilton Hotel, Sandton

THEME

"Infrastructure and Innovation towards the 4th Industrial Revolution"

SPEAKERS

Dr More Chakane – Chief Executive Officer, Sci-Bono Discovery Centre, CSIR

Dr Stephen Marais – Acting Emerging Research Area (ERA) leader for Mobile Intelligent Autonomous Systems (MIAS)

Mr Jabulani Simelane – Government Relations Manager, BMW

2019 ANNUAL CONVENTION – GALA DINNER

DATE

10 October 2019

VENUE

Birchwood Hotel, Boksburg

SPEAKERS

Mr Risenge Maluleke – Statistician General

Dr Kgositso Ramokgopa – Gauteng MEC for Economic Development

Mr Joe Heshu – Group Executive: Corporate Affairs, MultiChoice



2022 SACCI Annual Convention

Date: 24 November 2022

Venue: Emperors Palace, Kempton Park

Theme: Business defining the new normal: Economy, Communications and Technology

This year's conference is themed around the New Normal in the South African Economy. This normal is defined by a shift that has had to take place in order for the country to progress. The Communications and Technology sector has, for a long time, been one of the pillars of growth for the country and the Coronavirus pandemic has forced businesses to adopt a new "normal", in which digital transformation is no longer an option, but a necessity. The pandemic has thus acted as a catalyst for digital transformation, with businesses across industries investing in communications and technology to enable remote work, collaboration and customer service.

It is against this background that SACCI has brought business together to share their definition of a New Normal in the South African Economy, Communications and Technology which will play a critical role in enabling economic recovery and much-needed growth. This means a new way of thinking about how businesses operate and provide a platform for the rest of the country to thrive.

Our speakers include representatives from MultiChoice, African Bank and the Industrial Development Corporation (IDC). We will also have the Chief Executive of the newly-launched Sovereign Africa Ratings Agency, a new player that promises to give objective and scientific sovereign ratings to the world.

SACCI will also be launching South Africa's first-ever Small Business Growth Index, an initiative that will be run by SACCI and UNISA's Bureau of Market Research.



The Gala Dinner will be the closing event where SACCI will officially announce the new Board, welcome all new members that joined SACCI in 2022. His Excellency Cyril Ramaphosa, the President of the Republic of South Africa, has been invited to give the Key Note Address.

This Keynote Address will be introduced by the newly-appointed Gauteng Premier, Mr Panyaza Lesufi.

The event is sponsored by



Media partners



Unique offerings from SACCI



ATA Carnet and Certificates of Origin are practical cogs in making business work better.

ATA Carnet is a guarantee given through the International Chamber of Commerce (ICC) by the World Chambers Federation (WCF). It is an instrument that enables business to use the carnet for purposes of re-importation of goods that are temporarily moved out of the country. The cover is for taxes and duties that would normally apply to the goods moved cross border.

The ATA Carnet System is an International Customs facilitation scheme for the temporary admission of the goods into member countries. ATA stands for the French and English combination, "Admission temporaire/temporary admission".

Carnets are "Merchandise Passports" for the temporary importation of commercial samples, professional equipment and trade fairs/exhibitions. In South Africa, South African Chamber of Commerce and Industry is the National Guaranteeing Association to be the sole Issuing and Guaranteeing Association for ATA Carnets.

Advantages of ATA Carnet:

- Saves time, effort and money as they may be used for unlimited exits and entries into South African and foreign countries, within a period of one year.
- It is accepted in over 85 countries and territories.
- Eliminates the VAT, duties and posting of security required at the time of importation.
- Carnets simplify customs border crossing and cut red tape by allowing importers and exporters to use a single document for all customs formalities.

New agency to issue Certificates of Origin under SACCI Authority

An agency has been established to issue Certificates of Origin (non-preferential). EA Cargo Agents is the name of the agency.

When the Department of Trade, Industry and Competition (dtic) formalised an MOU with SACCI on CoOs, the department emphasised that it wanted open competition in the marketplace to the benefit of the end consumer.

The SACCI CEO gave a mandate to the team to promote black economic empowerment within the newly-formed agencies, with the encouragement of young black females to encourage small business formations.

The team at SACCI selected a group of logistics companies and approached them with regards to this innovative idea. PCA Logistics



was the organisation with the foresight to invest in developing an agency along the lines promoted by SACCI, and EA Cargo Agents was formed.

By announcing this breakthrough, we are encouraging the market and specifically users of Certificates of Origin to make use of the services of our agency, EA Cargo Agents.

Both Engi Khumalo and Calin Stoltenkamp from EA Cargo agents have been formally trained to SAQA standards and will be issuing authentic, encrypted, real-time Certificates of Origin to their clients thereby providing a higher level of service to the export and logistics sector.

Engi Khumalo, currently completing a Bachelor of Commerce degree with a major in Accounting, is leading the team.

SACCI is fully committed to supporting the legitimate issuers of Certificates of Origin, recognising that the SACCI office is inundated with overseas requests on fraudulent certificates of origin. By ensuring that our certificates fall under the agreement with government, we ensure the legitimacy of our trading system.

SACCI looks forward to working with these young dynamic ladies at EA Cargo Agents and believe that this will encourage others to approach SACCI and EA Cargo Agents on a model that can be replicated in other areas. **U**

For further information on this exciting new initiative, you can contact Engi Khumalo (left) and Calin Stoltenkamp (right):

Engi Khumalo: engik@eacargoagents.co.za

Calin Stoltenkamp: calins@pca.co.za

SACCI produces reliable economic research

A Business Confidence Index and a Trade Survey are among the reliable information regularly shared with the business community.



The SACCI Business Confidence Index (BCI) serves as a reliable and useful reference point for tracking the economic climate at specific points throughout the year.

Based on monthly assessments of 14 indicators and a base score of 100, the BCI gives a score to capture the state of confidence within the business community at a given point in time. These business climate indicators that are used to track confidence: Energy supply; Manufacturing; Exports; Tourism inward; Imports; Vehicle sales; Retail sales; Construction – buildings; Inflation; Share prices; Real private sector borrowing; Real financing cost; Precious metal prices; Rand exchange rate.

The September 2022 SACCI BCI, under the heading “The Buffeting Effects of International Fuel Price Instability”, included the following:

The September 2022 SACCI BCI measured 110.9 and implies that business confidence remains resilient and at a better level than the average for 2020 and higher than the March 2020 level of 103.9 before the Covid pandemic struck and economic lockdown was imposed.

Half of the fourteen sub-indices monitored in compiling the SACCI BCI reflected a negative impact on the business climate between August and September 2022. Higher real interest rates, lower share prices, and the real value of building plans passed had the most notable short-term (month-to-month) negative effect on the BCI. On the positive side inward overseas tourism and merchandise import and export volumes came in support of business confidence in the short-term (month-to-month).

Inward tourism and increased merchandise import volumes in particular also had positive year-on-year impacts on the BCI while increased retail sales and output activity of the manufacturing sector as major employers were also positive on a year-on-year basis.

The BCI uses reliable sources such as StatsSA and the SA Reserve Bank and the report includes an “economic review”, giving readers a broader view of the global and local situation.

See the full BCI report on www.sacci.org.za.



Trade Conditions Survey

The regular SACCI Trade Conditions Survey that was published in September 2022 came with a sobering introduction, which read as follows:

External adverse events had a damaging effect on certain businesses and a number of regular respondents went out of business. The results should therefore be interpreted with the necessary circumspection.

However, the Trade Conditions Survey (TCS) continues to receive regular replies from many correspondents in various sectors, and provides a useful snapshot of trading conditions in South Africa.

Under the heading, “Cooling off Trade Conditions”, the first two paragraphs of the August 2022 Trade Conditions Survey read:

The number of businesses that experienced improved trade conditions increased from 35% to 48% over the last six months even though (56%) just over half of the respondents experienced better trade conditions in August 2022 than a year ago. The power constraints and fuel price hikes would inevitably impact on this picture to the negative. Output growth in the trade, catering and accommodation sector slowed to 0.7% y/y in the 2nd quarter of 2022 compared to 6% y/y growth in the 1st quarter of 2022.

Although 59% of the respondents had optimistic expectations in April 2022, expectations in August for the next six months declined to 56% positive respondents. All components of trade activity including sales, new orders and the backlog on orders improved over the six months prior to August. It is notable that 49% of respondents are employing more staff than the 28% in March 2022. In general trade conditions had stabilised over July and August but the slowing down is already evident.

A trade activity index (TAI) is the composite index of sales volumes, new orders, supplier deliveries, inventory levels and employment and that is measured in relation to a baseline of 100.

The final paragraph of the report gave some hope for an uptick in the economy to come:

The trade conditions (still subdued with TAI below 50) although fragile, still managed to notch up an increase in employment with 49% of respondents increasing their staff in August 2022. After only 43% of the respondents in July expected to hire more staff over the next six months, some 45% in August intended to increase staff over the next six months.

Business body rolls out new initiatives

SACCI has a suite of important interventions, certificates and handbooks to assist businesses of every size.



Certificates of Origin

On 23 March 2020 SACCI signed an MOU with the Department of Trade, Industry and Competition (dtic). This agreement gives SACCI the rights to issue Certificates of Origin.

On 10 June 2021, SACCI invited all chambers of commerce and other issuers of Certificates of Origin to participate in a presentation and to advise them of the MOU signed with the dtic. Over 150 participants attended the presentation.



The presentation focused on the authority around the Rules of Origin. SARS Customs is deputised by the dtic along similar lines to the authority given to SACCI in the MOU.

SARS Customs has indicated to SACCI that, as it is the regulator in the trade space, it will assist SACCI with enforcement where non-compliance is determined in terms of audit and accreditation and Department of International Relations and Cooperation (DIRCO) does not have jurisdiction over Certificates of Origin as this is a trade function housed with the dtic.

A roadmap was implemented on the rollout of the Certificates of Origin and SACCI started engaging the motor vehicle manufacturers and freight forwarders to set up agencies. The purpose of the agencies is to empower young black women to be upskilled and become shareholders in the agencies.

A clause in the agreement stipulates that all issuers of Certificates of Origin must be trained by SAQA-approved trainers. On that basis, SACCI engaged a SAQA-approved training team and training began on 27 January 2022.

SACCI recognises that the implementation has to be phased in to ensure minimum disruptions to our export industries. Also, a campaign has to be actioned on educating the market and getting real information to the customers to ensure that they use the accredited services as well as the risks attached to utilising unauthorised issuers.

The umbrella body is cognisant that this process requires the building of trust in the business community which is in the interests of all the institutions in organised business.

Freight Forwarders – Certificates of Origin

SACCI has signed up its first Freight Forwarding Agency and its staff have been trained to start issuing Certificates of Origin.

SACCI has completed the process of capturing the agency's members on the SmartAdmin Database and they will start issuing the COOs.

The next step is to issue RFPs (request for proposals) for agencies, starting in the Western Cape and then rolling it out to other provinces.

The Township Economy

SACCI is cognisant of the challenges facing SMEs and is developing a pilot programme for the Township Economy.

Through SACCI's skills sets, internal capacity-building, improved services and an enhanced positioning of the chamber as a key stakeholder in the Alexandra township, the project aims to contribute to the reduction of structural obstacles that limit the growth of small enterprises.

SACCI currently has a chamber that has the infrastructure in place to take this pilot programme to the next level. This will be done by providing training, mentoring, consultancy and business advisory services, market access, building of business linkages and networks.

This programme will be used as a template for the development of other township-based chambers for SME development.



Small Business Growth Index

On 12 August 2022, SACCI and the Bureau of Market Research (BMR) signed a memorandum of understanding.

The areas of collaboration are based on the development and implementation of a Small Business Growth Index (SBGI) for South Africa to serve as an indicator for small business growth and development.

The collaboration builds on the SACCI business idea to develop an innovative and well-branded instrument to serve the small business community of South Africa by allowing this sector of the economy to express insights on how the small business environment is evolving on a bimonthly basis.

SACCI and BMR believe that shared resources, co-branding and cooperation between the two parties will provide a comparative advantage to the entire product concept which has great potential to become a national asset for small business development in our country, thereby contributing towards achieving the mandate of the Department of Small Business Development. That mandate is leading and coordinating an integrated approach to the promotion and development of entrepreneurship, Small, Micro and Medium Enterprises (SMMEs) and Co-operatives, and to ensure an enabling legislative and policy environment to support their growth and sustainability.

Toolkit for Chambers

Chambers in South Africa (and around the world) are struggling to remain relevant because of a lack of resources and skills.



In view of this the SACCI team decided to develop a Toolkit for Chambers (Chamber Guide). The purpose of the Chamber Toolkit will be to help chambers in “Getting back to Basics” by assisting them with recruiting and retaining members, networking, marketing, and promoting and operationalising chambers, among other things.

The first part of the Toolkit (Recruitment and Retention) has been completed and was presented to the chambers at the Chamber Forum meeting on 4 May 2022.

The Toolkit will be done in stages and will be forwarded to chambers in sections as and when it is completed. It will also be workshopped with the chambers when each section is completed.

All sections of the Toolkit (when completed) will ultimately be collated in one comprehensive manual and be the Chamber Guide for operating a successful chamber.

Toolkit for SMEs



SACCI is in the process of developing a Small Business Toolkit which will be a business companion guide for SMEs. This Toolkit will assist in the training of small business owners, managers, employees and other individuals to foster SME development. Training is needed to impart entrepreneurial, management and business-operation skills for SME business success.

Workstreams

In December 2020 the SACCI CEO and President decided that something needed to be done about the South African economy.

The Board of SACCI and the membership decided it needed to advance the economy and instructed the SACCI operational team to work on a suite of workstreams.

The Board of SACCI together with the membership agreed on the following 11 workstreams:


1. Small business development
2. Energy and water
3. Mining
4. Construction
5. Manufacturing
6. Transport
7. Agriculture (wholesale and retail)
8. Financial services
9. Telecommunications
10. Tourism and leisure
11. Education and skills

The operational team has completed the Small Business Workstream. The Agricultural Workstream is in progress. The Mining and Manufacturing Workstreams are in the process of being initiated. The team has established a timeline to complete all the workstreams by the end of 2022.

Benefits

SACCI has added the following suite of benefits as a value-add for its members:

- Accounting services (CIPC registration, annual financial statements, IT registrations, VAT registrations, management accounts, PAYE, etc)
- HR services (payroll, group share structures and taxation planning)
- CCMA resolutions (labour, issues, legal disputes, disciplinary issues, etc)
- Fuel management systems and rebates

These benefits will be rolled out in due course. 



Mining companies are becoming power generators

*Anglo American's hydrogen-powered truck is a sign of the cleaner power that mining companies are striving for.
Credit: Anglo American*

Supply constraints and the need to go green are driving innovation in powering mining operations.

By John Young

One truck. That's all it was, one truck. But what a truck it was! Anglo American announced on 6 May 2022 that it had unveiled "a prototype of the world's largest hydrogen-powered mine haul truck designed to operate in everyday mining conditions at its Mogalakwena PGMs mine in South Africa".

The unveiling of the vehicle was a significant event for mining and for the energy landscape and is one of many indicators that mining companies are taking an increased interest in power generation in South Africa, Africa and around the world.

This interest has manifested in many ways and was stimulated by the announcement by South African President Cyril Ramaphosa that the limit on the size of private projects

that did not need to apply for licences would be lifted to 100MW. This increase in capacity makes investing in a bespoke energy plant a much more viable economic proposition. Mining companies have been quick to respond.

The first two 100MW solar PV projects to receive the approval of the National Energy Regulator of South Africa (Nersa) are being built for mining company Tronox Mineral Sands by the Sola Group and partners. The R3.2-billion project is in the Ditsobotla Local Municipality in the North West.

Ivanhoe Mines has purchased a stake in Renergen, owner and developer of a liquified-natural gas (LNG) and helium project showing great promise in the Free State. Ivanhoe has the exclusive right to negotiate offtake rights with Renergen for gas to use at its

Platreef mining operations, where a 5MW solar project is also under construction.

Resources company Exxaro started taking an interest in renewable energy generation more than a decade ago. The company established a wholly-owned energy subsidiary, Cennergi, and that company commissioned two wind farms in the Eastern Cape, Amakhala Emoyeni near Bedford (134MW) and the Tsitsikamma Community Wind Farm (95MW). Cennergi Services manages these assets plus a further nine solar PV sites. Exxaro announced in 2021 that Cennergi is developing the 70MW Lephalale Solar Project that will supply renewable energy to the Grootegeluk Complex, the integrated coal operations owned by Exxaro Coal.

The press release that accompanied the Exxaro announcement about Lephalale referenced the company's "Powering a Clean World" strategy and its ambitions to lead South Africa's mining sector in the energy transition to a low-carbon economy. The release went on: "Cennergi is currently investigating bespoke renewable energy solutions for Exxaro's remaining mining operations and those of several third parties."

Finding new uses for platinum is one of the new priorities exercising the minds of the leaders of the mining industry as it moves to adapt to a world which is moving away from fossil fuels. Platinum coating greatly enhances the hydrogen absorption capacity of fuel cells.

In 2016 Impala Platinum Refinery unveiled a fuel cell forklift and a hydrogen refuelling station in Springs. Research at that facility is ongoing. The head office of the Minerals Council South Africa in Johannesburg is powered by 40 ounces of platinum and natural gas, South Africa and Africa's first baseload installation.

In addition, there is new interest in the minerals that are so important for the greener economy – copper, bauxite and magnesium. And these are minerals that Africa has in abundance.

Sibanye-Stillwater has also made a strong play in the battery minerals field, purchasing a stake in an established Finnish company.

A new platform has been created to manage investments in renewable energy, African Rainbow Energy (ARE). This comes about with the coming together of Absa Bank and African Rainbow Energy and Power (AREP), Patrice Motsepe's vehicle for holding renewable assets. Both entities will transfer assets to ARE, which will then hold 31 renewable assets, representing about R6.5-billion.

Harmony Gold is not only producing power for its operations but is looking for creative ways to help South Africa tackle its energy deficiency. The company wants to reduce emissions by 40% in 2031 and be a net zero miner by 2045.

Harmony will buy power from three independent power producers for its Free State operations, each of which is responsible for a 10MW plant, and start developing its own 137MW of renewable energy by 2025.

In addition, Harmony has raised the possibility of its closed mines being reinvented as sites for renewable energy plants.



The Bambanani mine is being closed down but has extensive infrastructure which could easily be utilised by an independent power producer to connect to the country's electricity grid.

That hydrogen-powered truck

The truck launch at Anglo American's Mogalakwena mine was a significant step forward in making the new technology a vital and real part of how business will be conducted in future.

Hydrogen is generated via the electrolysis of water using electricity. If renewable energy is deployed to make the electricity that makes the hydrogen, then that is "green hydrogen". Hydrogen has a wide range of uses across multiple sectors, from transport to heat generation and power.

Anglo American intends using green hydrogen which it will produce at the mine to feed into its green-hydrogen system, which includes production, fuelling and a haulage system.

The 2MW hydrogen-battery hybrid truck generates more power than its diesel predecessor and can carry a 290-ton payload. Forty Anglo trucks will be retrofitted, starting in 2024, and the whole fleet should be green by 2030.

The Chief Executive of Anglo American, Duncan Wanblad, said at the launch of the truck, "The impact of our nuGen™ project goes far beyond our operations. We believe that the emerging hydrogen sector has the potential to dramatically improve the growth and development of many economies by creating new industrial value chains and economic generation opportunities. Growing the hydrogen economy will revolutionise not just Anglo American's operations, but all mining and many other industries – and ultimately shape a better, cleaner world."

At Iduapriem Mine in Ghana, AngloGold Ashanti is testing a gas-hybrid haul truck as part of its plans to reduce emissions.

Hydrogen and Africa

Some estimates put the continent's potential for renewable power generation of at 1 475GW, but with most rivers untapped and almost endless supplies of strong sunshine and steady wind, it is difficult to put a figure to the real opportunity that exists to generate power from natural resources.

Some big projects hold massive potential. As listed by African Energy Week (AEW), such projects include the 6 450MW Grand Ethiopian Renaissance Dam in Ethiopia, the 580MW Noor Ouarzazate Solar complex in Morocco and the 310MW Lake Turkana wind farm in Kenya.

AEW points out that developments on this scale "could be used to create competitive green hydrogen markets".

A structure has been created for the development of hydrogen on the continent, the African Hydrogen Partnership Trade Association (AHP), which is incorporated as a non-profit company in Mauritius.

The AHP argues that Africa is uniquely well-suited to achieve a green hydrogen technology revolution because: the region is not locked into old energy technologies; African governments have the power and flexibility to kickstart such a development in a very short time; national hydrogen energy plans can be developed from scratch in the region; African governments are already proactively and decisively supporting environmental policies (Ethiopia's green policies, for example); there are unlimited natural resources for producing low-cost green electricity and green hydrogen; and a rapidly-growing, young population demands innovative green energy concepts.

AHP wants to see power-to-gas renewable energy hubs all over the continent. The AHP website states:

"The first hydrogen economies will begin with construction of large-scale P2G renewable energy facilities for exporting green hydrogen or hubs along important trans-African highways. They'll also be built in ports, where hydrogen stations will provide fuel for long-haul heavy-goods vehicles (HGVs), buses and trains powered by hydrogen fuel cells."

The global hydrogen economy will achieve annual global revenues of \$2.5-trillion by 2050, according to the Hydrogen Council, with demand expected to go beyond 500-million tons

by the same year. The great thing is that hydrogen is everywhere and all it takes is the process to separate oxygen from hydrogen in water – electrolysis.

The "supermajors" in the oil industry (BP, ExxonMobil, Royal Dutch Shell and TotalEnergies, by *The Economist's* reckoning) have started investing in "hydrogen clusters and technologies". Green hydrogen company Air Products will spend \$5-billion on a renewable hydrogen project in Saudi Arabia, a sign of the times if ever there was one.

Toyota South Africa and Sasol are investigating a "mobility corridor" whereby long-haul trucks powered by fuel cells would be able to replenish their power along the way.

The Department of Science and Innovation (DSI) has a chief director of hydrogen and energy. The Industrial Development Corporation is mandated by national government to champion the commercialisation of the green hydrogen economy. A hydrogen strategy was compiled for the country as far back as 2008, the National Hydrogen and Fuel Cell Technologies Research, Development and Innovation strategy.

Three hubs are planned to create a Hydrogen Valley which will stretch from the metals-rich Bushveld area through the country's industrial and commercial heartland to two of the continent's busiest ports in Richards Bay and Durban.

It is envisaged as a means of kickstarting the hydrogen industry in South Africa. The other two hubs are Johannesburg and Richards Bay. Demand at the Limpopo end of the corridor will be driven by trucks used in the mining industry and along the busy N1 highway. Current users of hydrogen in the Johannesburg area will be expected to switch to green hydrogen and green hydrogen will also be used as feedstock substitution for ethylene production and fuel, and as catalyst for iron and steel, in public buildings and buses. Future private-building demand is expected. At Richards Bay Port there is potential to export green hydrogen and use it as a fuel for port functions. Trucks using the N3 could be another market.

The Hydrogen Valley concept is being researched and developed by a collaboration that includes the Department of Science and Innovation, the South African National Development Institute (SANEDI), Anglo American, Bambili Energy and ENGIE. A 2021 feasibility report suggests that \$4-billion could be added to South Africa's GDP if the valley were successfully implemented, with an additional tax revenue of about \$900-million. **U**



The Tshikondeni solar PV plant in northern Limpopo is run by Cennergi, a subsidiary of resources company Exxaro.
Credit: Cennergi

New laboratory holds great promise



Respected analysis company set to expand services into the water sector.

Umzamo Analytical Services (UAS) has a stellar reputation for offering accurate coal analysis and sampling. Since 2012, the company has signed up a string of blue-chip clients and become a reliable service provider in the coal industry.

The wintry weather could not take the excitement out of the air in eMalahleni in July 2022 when UAS unveiled its latest new, state-of-the-art laboratory. Increased capacity will allow the company not only to offer more services in the sectors to which it already caters, but to expand into the water sector, where the need for accurate analysis is so vital.

Among its facilities, Umzamo Analytical Services also has an accredited chemical laboratory at Sasol, Twistdraai Export Plant.

For promixate and ultimate analysis of coal, pinpoint accuracy is required and UAS believes that it has the Big Three required to provide that sort of analysis, namely:

- High-quality equipment
- Top accreditation credentials
- Decades of experience among experienced staff.

The newly-opened laboratory's inventory includes advanced new technologies such as Inductively Coupled Plasma (ICP), Atomic Absorption and Emission Spectrometers and XRF. These machines and techniques will allow UAS to offer a wider range of services to the mining sector and beyond.

The company sees the establishment of the new laboratory as a testimony to the collaboration of companies in the mining sector and UAS as a company providing services to that sector.

The company is South African National Accreditation System (SANAS) approved, which includes ISO 17025 for laboratory management as well as ISO and ASTM methods for coal sampling and analysis – the highest international quality standards that can be attained. The scope of accreditation has eight coal analytical methods.

This also applies to the on-site laboratory at Overlooked Colliery and these standards are benchmarked with the world's best. The laboratories offer the following analytical services:

- Total moisture
- Moisture in analysis sample
- Ash content



The finishing touches being put to UAS's technologically-advanced analytic laboratory.

- Volatile matter
- Fixed carbon
- Calorific value
- Total sulphur
- Carbon
- Hydrogen
- Phosphorous
- Swelling Index
- Ash fusion temperature
- Abrasive Index

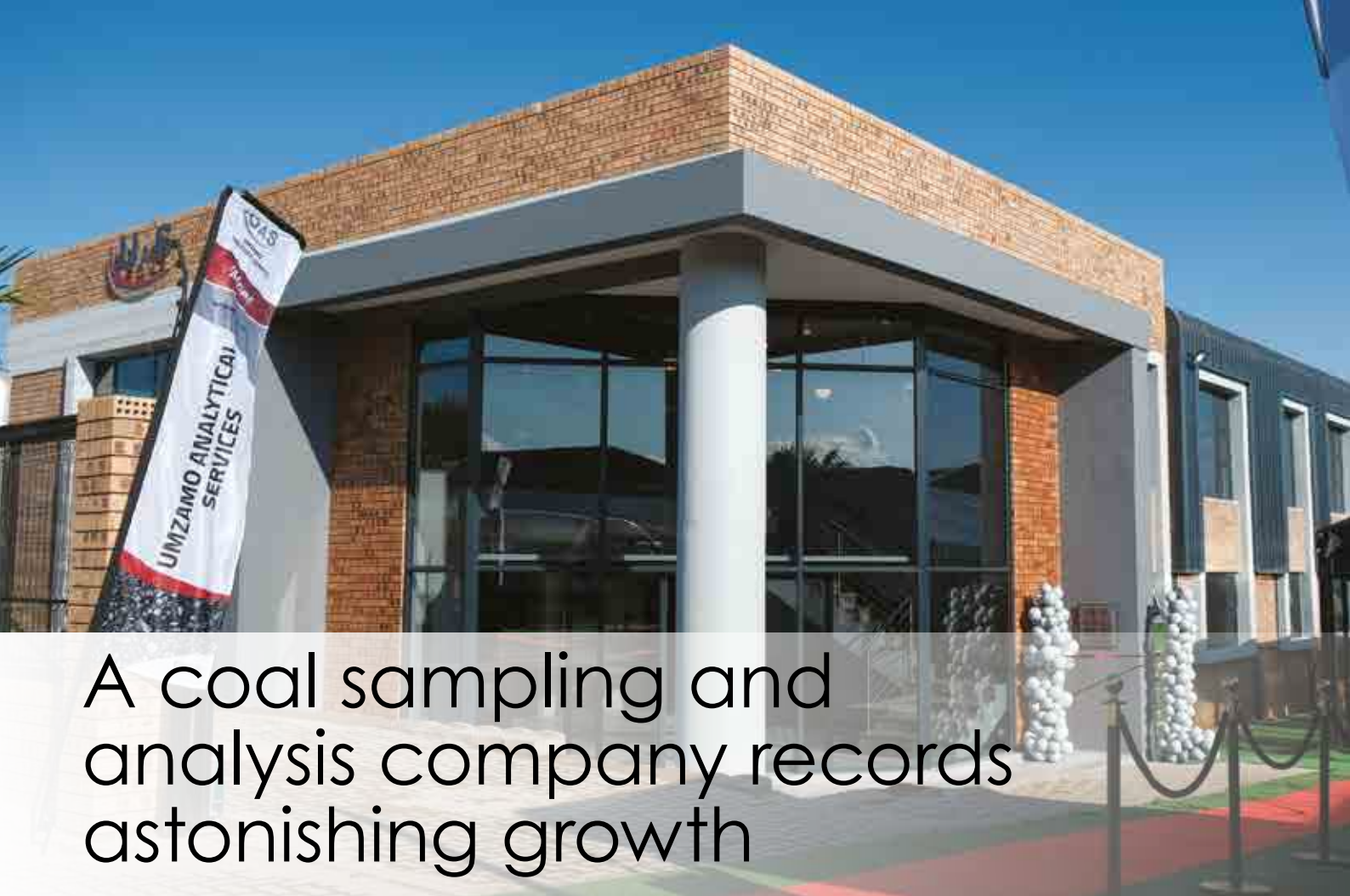
Projects

UAS has a highly-skilled and experienced team in multiple disciplines that can assist in projects that include the following:

- Commissioning and management of coal-testing laboratories
- Plant bias tests
- Plant efficiency testing
- Implementation of quality management systems (ISO 17025)
- Training on laboratory quality management (ISO 17025)
- Third-party monitoring, certification of consignments
- UAS has gained a reputation for the competent and timely delivery of laboratory results in the coal-mining sector.

About UAS

Coal Lab is a coal analysis and sampling company based in Emalahleni offering coal sampling and analysis services to a wide array of companies in the energy and coal industry. Founded in 2012, UAS has worked on many coal sampling and analysis projects for a number of major players in the energy industry.



A coal sampling and analysis company records astonishing growth

Umzamo Analytical Services, which has its head office in Emalahleni, is set to continue its upward trajectory with the addition of a new laboratory, as founder and CEO Audrey Ndlovu reports.

Could you have imagined when you left school that this is where you would be now?

My dream was to become a medical doctor, but I got cold feet due to the seven-year training period and opted to pursue a career in chemical analysis.

Have there been specific obstacles you have encountered as a woman in your entrepreneurial journey?

Being female is a major obstacle because mostly, senior management comprises of males, who mostly don't take females seriously as they assume females will not cope in the very dynamic and highly-demanding entrepreneurial space. One's competency is constantly tested.

What sort of growth has UAS experienced?

It's been a remarkable 10 years in operation with UAS achieving an astounding 400% growth in its first five years of being in business. Today, the company has a proven track record of success within the

coal analysis and preparation sector of coal mining and recently added high-profile companies to its list of clients based on its reputation for offering a comprehensive suite of analytical services to meet the needs of local coal producers across South Africa.

What accounts for that growth?

Our management team, committed and loyal employees and a strong company value system.

What capabilities will your new coal-testing laboratory have and how will this expand your offering?

The new lab is fully equipped with technology that will continue to ensure our clients receive seamless analytical support. Opening a new analytic laboratory is a tribute to the collaboration between the mining sector and the success of UAS. The new facility has broadened the scope of work for UAS as the environment is conducive to the use of modernised equipment, specifically the Inductively Coupled Plasma (ICP), Atomic Absorption and Emission



The new laboratory

Spectrometers and XRF to mention just a few.

What services does UAS provide?

UAS offers a diverse range of coal sampling and preparation services as well as laboratory services that include several industry-specific coal sample measurement tests.

What does it mean to be SANAS approved?

The company is South African National Accreditation System (SANAS) approved, which includes ISO 17025 for laboratory management as well as ISO and ASTM methods for coal sampling and analysis – the highest international quality standards that can be attained.

What is your market?

We strive to go global and continue to provide laboratory services nationwide to private and mining sectors.

How many employees does UAS have?

260 permanent employees.

Is training available to staff?

A skilled workforce is paramount to the company's success. UAS offers ongoing training that has enabled employees to grow within the company.

Recently, a few employees were given the opportunity to travel to Morupule Colliery in Botswana to learn how to prepare samples and effect float and sink structures.

Does UAS offer internships?

UAS is committed to uplifting communities by offering job opportunities and in-service training to chemistry students and matriculants in need of laboratory exposure. In addition, the company looks to employ local people.




A containerised laboratory has been opened at Overlooked Colliery.

Please give an example of a successful employee who has risen in the ranks.

Nqobile Ntuli – Current position, Laboratory Manager.

Nqobile joined UAS in 2015 as an operator from Leeuw Coal Mine in Vryheid. She relocated to Witbank and over the years has been promoted to Process Coordinator based at Overlooked Coal Mine in 2018. In 2019 she was again promoted to supervisor at Londani Coal Mine but returned to Overlooked Coal Mine in 2020. In 2020, while on maternity leave, she received a call to inform her that she was being promoted to laboratory manager in Witbank, and the rest is history.

What is the future path for UAS?

We are keen to build on the success of the company and are actively eyeing other growth opportunities. This includes the establishment of coal sampling and analysis in other countries in Southern Africa and the establishment of soil-testing and minerals-processing support laboratories in the region. The company is also aiming to offer technical support (quality consultancy, training and audits) to stakeholders conducting work relevant to the UAS scope of work. 

Biography

Audrey Ndlovu's decision to switch her educational focus from the dream of becoming a medical doctor to a career in chemical analysis has paid off. With more than 26 years of laboratory experience, she now heads a thriving and growing business offering coal sampling and chemical analysis to a range of companies. In 2012, she used her vast experience and knowledge and identified an opportunity in the coal industry and from this Umzamo Analytical Services was born.



Audrey Ndlovu, founder and CEO

Energy security and sustainable development

Petroleum Agency South Africa is balancing the need to explore the country's natural resources with managing the environment.



Can oil and gas continue to be exploited without destroying the environment? The answer to this question is what drives the environmental management policy of the country and is an ever-present conundrum in the work of Petroleum Agency South Africa.

Speaking in the aftermath of court cases brought against seismic surveying, PASA CEO Dr Phindile Masangane has said, "We acknowledge that exploration and production of oil and gas has risks to our environment but we must also acknowledge that technology has advanced. As South Africans we have adopted those technological advancements that help us to minimise the risk to our environment.

"What does this exploration entail? A lot has been said in the media about seismic surveys. Seismic surveys are actually a very old technology that has been used and it has matured now.

"It has matured to an advanced state to make sure that the impact on our marine ecosystem is minimised. I think there is also a big misconception in the public that these seismic surveys are purely for the oil and gas industry. This technology is used not just for oil and gas, but it is actually used to define our maritime borders. In other countries it is used for offshore wind technologies. It is a misconception that seismic surveys are only applicable to oil and gas.

"A seismic survey is literally releasing of pressurised air into our seabed and then we collect the signal as the sound bounces back into the bottom of the ship and that's what helps us to collect data to know where the oil and gas is located underneath the seabed.

"The impacts are well-known and there are mitigation measure that can be used to minimise these impacts," Dr Masangane concluded.



A just transition

The International Energy Agency has recently released a report on energy on the continent. A major takeaway from the IEA report relates to Africa's historical export of its oil and gas to power other regions. This serves to undermine the continent's economic development. As Dr Masangane states, "It is time for Africa to shift gear and catch up with transformation." Africa's gas resources can reindustrialise some areas and industrialise for the first time some countries on the continent.

Being able to supply electricity to citizens of South Africa and Africa is a key human development goal, and halting oil and gas exploration would make it more difficult to provide energy to places where electricity is scarce.

Current methods of heating and lighting for poorer communities are themselves very polluting and lead to deforestation. If natural gas were to replace traditional methods, that would be a form of decarbonisation in that deforestation would be reduced.

Gas as a fuel in the transport sector is also considerably less polluting than current options, which is why gas is increasingly being seen as a transitional energy source on the road to a cleaner, greener future.

The multiple uses of gas could play a major role in helping South Africa transition away from fossil fuels while at the same time boosting economic growth and creating jobs,



PASA CEO Dr Phindile Masangane




as illustrated on the right. “We need gas not just in electricity and transport,” noted Dr Masangane, “but importantly for South Africa, which is in desperate need of an economic turnaround, is for us to use this gas for our manufacturing industry.” In this way, a just energy transition can be achieved.

Dr Masangane sums up the IEA report and its conclusion: “So the use of oil and gas can be part of the decarbonisation and I think that people give a false narrative that it cannot be part of your decarbonisation strategy. This report puts that argument to rest.”

Balancing investment and environmental management

South Africa has vast gas and oil resources and exploration and the exploitation of these resources has barely scratched the surface. Having to import oil and gas has a serious impact on the country’s balance of payments.

This makes it more difficult to industrialise the country. For the 2021/22 financial year about 50 applications for exploration and production were received but only about 10% of that number were approved.

This is because of very stringent licensing and environmental regulations which must be followed. As Dr Masangane explains, “We assure South Africans that the slow pace is because we have to make sure that we have a robust system that incorporates all the aspects of licensing but importantly, that the environmental impact assessment is thoroughly undertaken.” 



PETROLEUM AGENCY SOUTH AFRICA

Mission

To promote, facilitate and regulate exploration and sustainable development of oil and gas contributing to energy security in South Africa.

Within Petroleum Agency South Africa’s five-year strategy there are five new objectives to enable it to effectively deliver on its mandate by “capturing the opportunities being presented by the changes in the environment as well as ensure that the Agency overcomes the challenges that it faces”.

These initiatives are:

- Increasing exploration activity, to move the industry from a predominately exploration phase to development and production phases
- Sustainability to ensure the company has sufficient financial and human resources to carry out its responsibilities into the foreseeable future
- Advocacy to provide input into policy and regulations that impact the industry it regulates
- Digital transformation to adopt new, more efficient technologies
- Operational excellence, to ensure efficiency of its processes.

These five strategic objectives position the Agency as a strategic entity of government in its goal of diversifying the energy mix and developing the domestic gas market, embracing digitisation and automation to improve efficiency, rising to the requirements of the new legislation and finding a place in the global transition towards a low-carbon future.

Values

A diverse upstream industry contributing to energy security through sustainable growth in exploration and development of oil and gas.

PASA’s value statement remains unchanged but a further aspect of value is being considered, namely value representation and creation. PASA delivers value to its shareholders and stakeholders. This value is created for all South Africans, for oil and gas companies investing in opportunities and for the Agency’s stakeholders including the Department of Mineral Resources and Energy (DMRE), the Department of Environment, Forestry and Fisheries (DEFF), the Central Energy Fund (CEF), host communities and NGOs and NPOs representing interested parties.

PASA has been restructured internally in line with the new strategy. IT has been elevated beyond its former role as a support function, to drive the company’s digital transformation. In addition, the Agency now has a communications and stakeholder engagement function to respond to the negative perception about the oil and gas industry.





Steinmüller Africa's specialised induction bending solutions benefit industry

One of only two machines in Africa brings advantages to partners across South Africa.


Steinmüller Africa, a specialist in the engineering and fabrication of high-pressure components, offers exclusive induction bending solutions to the South African market. Its Cojafex PB 850 induction bending machine is one of only two induction bending machines on the African continent, enabling paper and pulp, power, petrochemical and mining plants to source custom bends locally, as well as large radius, multiple or complex bends – all with quick turnaround times.

Induction bending is the process whereby a straight pipe is precision-bent by a specially-engineered machine. The front of the pipe protrudes through an induction coil and is clamped into position. The induction coil is heated to a specified temperature and then the arm of the machine moves in a predetermined radius, pushing the pipe through the coil. "This is programmed into the machine upfront and is an automated process," explains Lee Chapman, Divisional Manager – Piping, Steinmüller Africa. The automation and machine control renders a precise and top-quality pipe bend. "Our Cojafex machine is capable of bending pipes between 48.3OD and 850OD with a wall thickness up to 100mm. It can create bends up to 180 degrees," adds Chapman.

Induction bending is ideal "when standard size bends are not available and custom or large radius bends are required," states Chapman. Since it can create complex (multiple) bends without the need for welding, induction bending guarantees pipe-system integrity and a reduced maintenance requirement, making it especially well-suited to high pressure (HP) piping, steam piping and industrial piping systems. This also means it delivers a relatively low cost of ownership. In addition, if multiple bends are done at once then there is a cost saving during the erection and ongoing maintenance phases of a plant's operation.

The benefit of partnering with Steinmüller is that it offers complementary services in addition to induction bending. "There is no need to move the component between different suppliers as we are able to do all the necessary bending, welding and heat treatment in-house," says Chapman. Using its Schlager gas furnace, Steinmüller conducts post bend heat treatment (PBHT), which ensures the pipe's mechanical properties are restored following the bending process. In addition, Steinmüller specialises in various welding processes, enabling custom welding onto pipes.

A commitment to safety and quality, backed by international expertise, has made Steinmüller Africa the fabricator of choice for some of South Africa's largest power, paper and petrochemical companies. "Steinmüller has been carrying out induction bending for over 10 years at its facility in Pretoria and has a number of qualified bending procedures to both EN and ASME standards for safety and quality. Our in-house quality management system ensures that our products meet all the necessary international standards," adds Chapman.

Steinmüller Africa is a Bilfinger Power Africa company and is a BBBEE Level 1 company. For almost six decades, Steinmüller has provided comprehensive solutions for steam generating plants, from design through to commissioning and after-service maintenance. 

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WE MAKE POWER

Steinmüller Africa (Pty) Ltd. is one of the enterprises in Bilfinger Power Africa (Pty) Ltd., the South African subsidiary of German based Bilfinger. Our presence in the local market, spanning 53 years, is testimony to our unrivalled expertise in the steam generation industry. Services offered range from the design and manufacturing to the construction and maintenance of boiler pressure parts.

At our South African based manufacturing facilities, we also specialise in fabrication of high-pressure feedwater heaters, pressure vessels, pipe supports and compensators. On-site maintenance crews provide support to the power generation and petrochemical sectors.

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- Heat treatment (workshop and in situ)
- HP Heaters
- Piping technology
- Pipe supports
- Plant erection services
- Explosive welding

Steinmüller
africa



BILFINGER

Buildings must display Energy Performance Certificates

Building owners and Accounting Officers have weeks to comply with the EPC Regulation.



An Energy Performance Certificate (EPC) is not a new concept as the Regulation is derived from the National Energy Act of 2008.

The Regulation to display an EPC was first published on 8 December 2020 in the Government Gazette Notice 700 of 2020 and signed into effect by Minister Samson Gwede Mantashe, the Minister of Mineral Resources and Energy of South Africa, as a Regulation of the National Energy Act, 1998 (Act no 34 of 2008). The EPC Regulation obliges accounting officers of organs of states and owners of buildings whose buildings fall within the required occupancy classifications to comply on or before 7 December 2022, or risk facing penalties of a fine of up to R5-million and/or imprisonment of up to five years.

One of the aims of the EPC Regulation is to actively implement the targets in the post-2015 National Energy Efficiency Strategy (NEES), which states that buildings need to reduce their energy consumption by 16% by 2030. Buildings alone contribute about 30% to 40% of the world's carbon emissions, therefore it is imperative that government promotes energy efficiency and climate change consciousness through the improvement of buildings' energy performance. This has resulted in energy-efficiency interventions such as EPCs that support post-2015 NEEES policy. Buildings that fall within the following occupancy classes must obtain an EPC:

- A1:** entertainment and assembly
- A2:** theatrical and indoor sport
- A3:** places of instruction
- G1:** offices

An EPC rates a building from grade A – G, indicating how efficiently a building is being used by the occupants. A D-rating is a benchmark which is in line with the National Building Regulations (NBR), indicating the best practice for buildings, benchmarking the building against the average figures contained in the SANS 10400-XA: 2021 Standards.

The EPC regulation does not penalise accounting officers or building owners for a low EPC rating because the primary objective in enforcing compliance to the EPC regulations is to make accounting officers or building owners aware of their building's energy consumption.

This awareness will encourage them to make their buildings energy efficient. Over 300 EPCs have been issued to date, a fraction of the estimated 250 000 – 350 000 that will need to be issued in order to cover the buildings that need to comply with the Regulation.

The South African National Energy Development Institute (SANEDI) is mandated to maintain the National Building Energy Performance Register in support of the Department of Mineral Resources and Energy (DMRE) in the roll out of EPCs. This will help keeping record of building particulars.

According to the Regulation, an EPC must be displayed at the entrance of a building and a certified copy of the EPC must be submitted by the accounting officer or a building owner to SANEDI within three months from the date of issue.

Accounting officers and building owners need to comply with this Regulation by 7 December 2022.

Email for EPC submissions is EPCsubmission@sanedi.org.za

Ways SANEDI's work is making South Africa more sustainable and energy efficient

- It is common knowledge that South Africa has bountiful wind resources. Through the Wind Atlas of South Africa programme, there is now a quantitative assessment of the country's wind capability.
- Over 420 solar thermal demonstration projects have been built and more than 3 000 people have been trained through the SOLTRAIN collaborative project.
- SANEDI places exceptionally strong emphasis on gender equality in its corporate strategy. To this end women have benefitted from SANEDI's bursaries for human capacity building in the energy sector.
- South Africa hosted the first-ever International Renewable Energy Conference on the African continent under the theme "RE-Energising Africa".
- The Cool Surfaces Projects is an important contribution to the suite of South African energy efficiency solutions. In 2019 SANEDI became one of 10 global teams awarded a portion of \$1-million in grant funding as part of the Cool Roofs Challenge.
- The Cleaner Mobility programme contributed towards the development of the first Green Transport Strategy and Electric Vehicle (EV) technology standards for South Africa.
- SANEDI has implemented more than 12 000 smart meters across 10 municipalities.
- SANEDI's Geological CO₂ storage atlas was published to characterise and identify potential storage reservoirs, develop the necessary skills and technology base and to consult with the public. This atlas is a key component of the programme that is intended to develop a full-scale Carbon Capture and Storage (CCS) deployment plan beyond 2025.
- SANEDI has contributed to the development of standards and guidelines to ensure energy efficiency across industries including plumbing, manufacturing and buildings. To assist in the implementation of Energy Performance Certificates, an Energy Performance Certificate Guidelines has been published (and is available on the website).



About SANEDI

The South African National Energy Development Institute (SANEDI), established by government, directs, monitors and conducts applied-energy research to develop innovative, integrated solutions to catalyse growth and prosperity in the green economy. It drives scientific evidence-driven ventures that contribute to youth empowerment, gender equity, environmental sustainability and the 4th Industrial Revolution, within the National Development Plan (NDP), through consultative, sustainable energy projects. For more information, go to www.sanedi.org.za.

Reigniting the birthplace of industrialisation in South Africa

Strategic location and available land gives Sedibeng a head start.



Government and business are coming together to preserve and improve the manufacturing capability of the Vaal region. A key step along that path will be the creation and promotion of the Vaal Special Economic Zone, Vaal SEZ.

An innovation will be to declare the whole of the Sedibeng District Municipality an SEZ, with a core hub and several satellite locations throughout the three local municipalities that comprise the district, Lesedi LM, Midvaal LM and Emfuleni LM.

The Sedibeng District Municipality is strategically located on the border of the population- and resource-rich central Gauteng region which encompasses three of South Africa's economically most potent metropolitan areas, Johannesburg, Ekurhuleni and Tshwane.

Investors in a wide range of sectors will find this access to large markets and the availability of affordable land and good infrastructure an attractive combination.

In addition, Sedibeng is particularly well-served by railways and roads, making it the ideal destination for logistics and warehousing investors, not to mention agricultural and agro-

processing companies. The Vaal SEZ is paying particular attention to the low-carbon economy and will be pulling out all the stops to attract investors in the green economy, the circular economy and the renewable energy economy. To complete the colour palette, the Vaal Dam and the Vaal River give the region unique access to aspects of the blue economy through varied forms of water tourism and water investments.

The application to be formally constituted as an SEZ is well advanced, with the Sedibeng Investment Conference of October 2021 having provided a boost to the process. The Deputy Minister of Trade, Industry and Competition, Mr Fikile Majola, said at the conference that, "As the dtic, we are fully committed and are behind Gauteng government's plan to introduce SEZs where feasible and necessary, to add momentum towards turning the Gauteng City Region into a single, multi-tier and integrated SEZ."

The dtic is the national department driving the process for the setting up of SEZs throughout the country.

Since the Sedibeng conference, a Master Plan has been drawn up, a striking logo agreed upon and various plots of land have been identified and allocated by the three local municipalities.

Integration of regional strategies

The map to the right shows how the proposed Vaal SEZ aligns with the various initiatives which have been rolled out or are planned in other parts of Gauteng. All are designed to concentrate activities within targeted sectors, provide for economies of scale and support growth and job creation. These include:

Nigel Locomotive Hub: home of the Gibela train manufacturing facility at Dunnottar Park

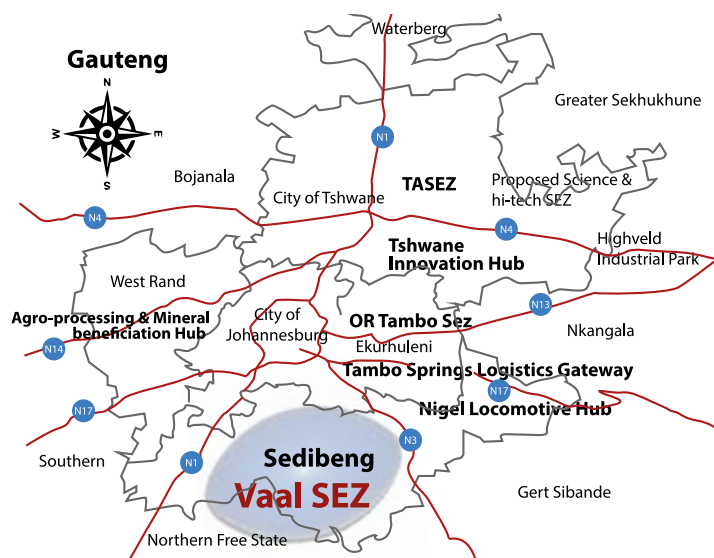
Tambo Springs Logistics Gateway: intermodal logistics hub

OR Tambo SEZ: high-value export manufacturing

Tshwane Innovation Hub: innovation agency of the province and responsible for The Innovation Hub Science and Technology Park; it is a wholly-owned subsidiary of the Gauteng Growth and Development Agency (GGDA)

Tshwane Automotive SEZ: close to automotive manufacturers and Rosslyn Automotive Supplier Park, supports SMMEs and training

West Rand agro-processing and mineral beneficiation hub: part of the plan for the Western Corridor to support small producers



Strategic intent of the Vaal SEZ

- Regenerate the Vaal area and support economic activity.
- Build on the competitive strengths, technology, capacity and skills base in the area.
- Develop infrastructure required to support targeted industrial activities.
- Facilitating the creation of an industrial complex that has strategic national economic advantages for targeted investments in various industries.
- Creating decent work and other economic and social benefits in the region.
- Regional development aimed at creating linkages and integration of Gauteng's growth strategies with the local economic development strategies of the host municipalities to national economic initiatives.

MISSION

To reignite the birthplace of industrialisation in South Africa.

OBJECTIVES

Development of a multi-sector multi-site Special Economic Zone in the Vaal region.

Regenerate the area and build on its competitive advantages. Building a socially-cohesive society, with sustained economic growth that results in the creation and retention of quality jobs.



Reindustrialising the Vaal region



Green energy, low-carbon manufacturing and agro-processing will allow the Vaal SEZ to transform the Sedibeng District.

The Vaal Special Economic Zone (Vaal SEZ) aims to build on what has come before, leveraging the strong steel sector legacy of years gone by, and the existing businesses that still work hard to deliver quality products.

The area has a long history of industrialisation. As a result, a number of industrial skills and artisans can be utilised to support businesses of the future.

Studies have shown that businesses in the area have been investing in their futures, continuing to support communities and explore ways to be more sustainable. This process must be supported with infrastructure support and investment in logistics and security.

The young population of the Sedibeng District have enormous potential.

The area is rich in tertiary institutions. The SEZ is in the process of concluding a Memorandum of Understanding between the Vaal SEZ, North-West University (Vaal Campus, pictured) and the Vaal University of Technology.

- High impact investments into the food, agro-industries and agriculture value chain
- Investment in gateway logistics (air, road, rail, river) to exploit the locational advantages of the Sedibeng District
- Investment in the Blue Economy and the Tourism Sector on the back of the Vaal River
- Building a Smart City along the Vaal River to enable SEZ development and to drive urban regeneration
- Building strong local linkages between township/rural economies with the value chains that the Vaal SEZ will develop and strengthen

Unique selling proposition (USP)

Location: uniquely well-located both in terms of logistics and concentrated markets of three major metropolises

Logistics: access to major national highways and railways. Ideal for warehousing and storage

Skills: artisans available

Land: affordable land for agriculture, commerce and industry available and allocated by three local municipalities

Vaal River and Vaal Dam: unique assets

Links to provincial programmes: including rural and township economies and SMME initiatives

Economic returns: including incentives and rebates

Infrastructure services: One-stop shop services and the Vaal SEZ's Shared Services and investor access to serviced land and funding options

Management capability: Independent management body, cooperation between dedicated bodies, local, regional and national government.



Targeted investments

The Vaal SEZ sees a future in which there is:

- A green energy-fuelled reindustrialisation of the Vaal region, transforming this industrial basin into the country's pre-eminent hub for low-carbon manufacturing and renewable energy production



Regional and national context



Credit: Chris Kirchoff/Brand SA

The Growing Gauteng Together 2030 Plan has the objective of unlocking economic growth within the Gauteng City Region, to enable employment creation and poverty eradication.

A major plank in the GGT2030 initiative is the support of the Special Economic Zone programme as a means of achieving sustainable and job-creating growth.

The GGT 2030 reflects a collective vision for the Gauteng City Region in a decade's time, and beyond. GGT 2030 also highlights priority actions and measures of success for the plan and its execution. It sets out the vision for the Gauteng of 2030, guided by the principles and priorities contained in the Freedom Charter, the NDP and work carried out to date as part of Gauteng's Transformation, Modernisation and

Reindustrialisation (TMR) programme. The Vaal SEZ aligns to seven of the 10 priority sectors identified through GGT 2030.

District Development Model

The SEZ ecosystem is located within the framework of the integrated district-based approach. The implementation process of the SEZ programme requires collaborative efforts from all spheres of government to ensure that the roll-out of the programme is efficient, integrated and well-coordinated.

The District Development Model (DDM) is an all-of-government approach to improve integrated planning and delivery across the three spheres of government with district and metropolitan spaces as focal points of government and private-sector investment. It is aimed at facilitating integrated planning, delivery and monitoring of government's development programmes through the concept of a joint "One Plan". Monthly meetings are held with the municipalities relevant to the SEZ to track and monitor progress.

The Africa Continental Free Trade Area (AfCFTA) holds enormous potential for all businesses operating on the continent. Market access through these initiatives should be considered by investors in the zone as the zone can be used as an entry point to SADC as well as continental markets for both exports and imports for manufactured goods. The Sub-Saharan Africa region should provide export market development and investment opportunities for Vaal SEZ investors. The potential market of the AfCFTA is about \$2.5-trillion. Increased intra-continental trade will encourage demand for more industrial goods as opposed to extractive goods and natural resources. 



Xola Sithole, Programme Director for the Vaal SEZ Programme

Xola is an experienced development-finance practitioner, business executive and entrepreneur. In a career spanning more than 28 years, he has gained expertise in the areas of public policy, entrepreneurship, economic development, development finance, corporate finance and infrastructure planning and investment. He started his career at Unilever, before joining the IDC for a nine-year stint. He has been CEO of two Development Finance Institutions (Sefa & MEGA) and has held a number of directorships in listed and private companies. He is currently contracted as a Technical Advisor to the Industrial Zones Programme, a division of the IDC. The IZP is tasked with accelerating the implementation of the regional industrial zones (SEZs and Industrial Parks) and corridors. His current assignment is Programme Director for the Vaal SEZ Programme, which is housed within the Gauteng Growth and Development Agency (GGDA). He has a passion for steering economic development and navigating the nexus between the public and private sectors to advance national development goals.

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Shifting Africa's climate change disaster-risk architecture

Envato Images

Developed countries must support in building Africa's climate change resilience, argues African Risk Capacity, a specialised agency of the African Union.

All eyes are on the existential crisis posed by climate change. The regular United Nations Framework Convention on Climate Change meetings put the focus on the multiple threats the world faces, with many warning that lessons for dealing with climate change threats must be learned from how Africa handled the Covid-19 crisis. COP27 will be held in Egypt in 2022.

Resilience in Africa to these climate change impacts can only be built with the assistance of developed countries and these have a vested long-term interest in providing this support, says Ange Chitate, COO of African Risk Capacity Limited.

"Beyond Covid, the most critical risk to Africa is the availability of water, which is directly linked to climate change. The continent is extremely vulnerable to and bears the brunt of drought, flooding, cyclones and other climate change-led weather events, even though it has actually had very little impact on carbon emission," says Chitate. This is particularly serious for a continent like Africa which depends so heavily on agriculture for its economy and employment.

"When one considers that agriculture sustains two thirds of Africa's employment and that more than 80% of agriculture in Africa is conducted by small to medium-scale farmers who are at the mercy of climate change events completely out of their control, COP talks have to deliver practical and meaningful support from developed countries to help ensure a high level of preparedness in the developing world for what is being touted as the next pandemic," Chitate adds.

It is a view shared by South Africa Forestry, Fisheries and Environment Minister Barbara Creecy, who said that if the COP process is to be successful, developing countries need support from developed countries in the form of finance, technology and capacity building.

South Africa's suggested global goal on adaptation sees focus being placed on "the most vulnerable people and communities; their health and well-being; food and water security; infrastructure and the built environment; and ecosystems and ecosystem services, particularly in Africa, Small-Island states and Least-Developed Countries".

Minister Creecy also calls on developed countries to ensure access to long-term, predictable and affordable finance for developing communities.

Building African climate-change resilience

Natural disaster-insurance relief has a role to play in building resilience.

"There's a responsibility for G7 countries to support Africa in managing the impact of climate change by, for example, providing sovereigns with parametric insurance premium finance to help them respond swiftly and decisively to crises fuelled by climate change on the continent," says Delphine Traoré, ARC Limited Non-Executive Director.

Established in 2014, ARC Limited provides natural disaster-insurance relief to African countries which have joined the sovereign risk pool.

Along with its partners, which provide premium support, the insurer has already paid over \$65-million to seven countries to provide drought relief and address the economic concerns these countries' most vulnerable citizens face.

Governments then make payments to the most vulnerable households in drought-stricken or other climate-affected areas so the

most vulnerable communities can supplement their food budgets if reduced harvest tends to push up food prices.

"Our role is explaining to African governments the importance of having this type of insurance and accounting for food security and disaster risk in their budgetary work process.

"There's been a lot of work done by ARC Limited with the support of the African Development Bank and other financial institutions to see how we can support these countries with a super replica programme. We need to do more still to find a sustainable way to do premium financing for countries that are not able to afford it but that are quite impacted by climate change impacts," says Traoré.

ARC Limited has also paid out \$2-million to the Madagascar government to meet the food security needs of over 600 000 people affected by a devastating drought.


ARC Limited's role as a parametric insurer is critically important in building resilience and ensuring a country is able to bounce back swiftly after a natural disaster. "We monitor the rainfall of countries in the risk pool and sovereign insurance payouts are triggered when the system reveals that there hasn't been enough rain, before droughts get to a crisis stage, farmers are left with nothing and people are starving," explains Chitate.

The programme further helps countries build capacity to manage climate-related risks. In this way it attempts to shift the disaster risk management architecture to be proactive, not reactive, says Chitate.

"We see a tangential benefit of this type of programme being the increasing sophistication of countries to better understand risk. The Covid pandemic is a good example of this.

"When dealing with risk mitigation and management, one needs to examine the reason why governments don't act. On the insurance side, one of the issues to address is around premium affordability because it's quite expensive to insure against natural disasters and payment of premiums competes against other national priorities," explains Chitate. Sovereigns which participate in the ARC programme must also develop a contingency plan which sets out at a very high level how the government would spend any insurance payout they receive from ARC.

"Through this plan, we ensure the funds get to the intended beneficiaries. Having a plan increases dramatically the speed of execution because at a point the government received the funding, it already has a plan on how to disburse this," she says.

With \$100-million in its kitty, ARC says it probably has the largest balance sheet dedicated to climate risks in Africa. 

About ARC Limited

African Risk Capacity Limited (ARC Ltd) is a financial affiliate of African Risk Capacity (ARC), a specialised agency of the African Union (AU), an initiative designed to improve current responses to climate-related food security emergencies.

ARC Ltd is a mutual insurance facility comprised of its members, which have included Burkina Faso, Mali, Mauritania, Niger, Senegal, The Gambia, Malawi and Kenya. The membership also includes its capital contributors. KfW on its own behalf, and for the account of the Federal Republic of Germany acting through Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ) and the United Kingdom (DFID) have contributed the first tranches of their respective €50-million and €90-million commitments.



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The Responsible Mohair Standard has restored trust

South African mohair is once again popular with global fashion brands.



The mohair industry has embraced the Responsible Mohair Standard as we are all aware that the consumer of today is rightfully far more conscious, not only of the impact of their purchases on the environment, but also the impact their purchases have on the people producing the goods.

The Responsible Mohair Standard is **all-inclusive** and is very specific as to its requirements in respect of the environment and welfare of the animals and all individuals employed in the production of mohair products.

There is no doubt that having Samil's manufacturing operations certified under the Responsible Mohair Standard has opened new opportunities for trade throughout the world.

However, the dynamic team at Samil feels compelled to ensure that not just the Samil manufacturing operations but all mohair operations owned or run in partnership with Samil, must also be RMS certified. Samil therefore embarked on a concerted drive to have all the Angora goat farms which are either owned or run in partnership with Samil Farming were also certified as RMS.

This was no mean task as there are more than 30 farming operations in the Samil Farming portfolio in and around the Karoo region. However, the Samil Farming Manager, Andries Coetsee, and his very able assistant, Nienke Scholtz, embraced the challenge and Samil is proud to announce that, as of the end of August 2021, all Samil mohair operations are proudly RMS certified.

The benefits of RMS certification

After the PETA exposé in 2018, the South African mohair industry became a pariah and many of the top fashion brands vowed to no longer use mohair in their products. This put nearly 30 000 people at risk of being unable to earn a living and feed their families.



Through the determined efforts of Mohair South Africa, in conjunction with The Textile Exchange, in ensuring the development of the Responsible Mohair Standard, the mohair industry has been able to regain the trust, not only of the big fashion brands, but also of the world.

This can clearly be seen in the record mohair prices currently being achieved as brands the world over are scrambling to reintroduce RMS-certified mohair articles into their product ranges.

The knock-on effect is that jobs that had previously been in jeopardy are now secured and, due to the new-found appetite for mohair, more jobs have been created.

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Innovation in agriculture

Danise Smit, Sales and Customer Services Director for RS Components South Africa, reports on the trends that were on display at South Africa's biggest agricultural festival, NAMPO Harvest Day.



great for us to have face-to-face interactions with the farming community after two years. So much has changed both in technology and in how farming is done. As a company that is always driving innovation to create a better world, it made sense to showcase our IoT and Food Safety solutions. Farming is becoming smarter, more efficient and more sustainable and it's really exciting to walk that journey with our customers," she said.

At this year's NAMPO Harvest Day, RS South Africa showcased several sensing and monitoring products and solutions. RS also displayed several RS Pro Food Safe maintenance products for use in food processing and farming. All RS Pro Food Safe products are registered with the National Sanitisation Foundation (NSF), an international public health and safety organisation, demonstrating risk reduction compliance.

From electric vehicles to smart monitoring drone technology, the NAMPO Harvest Day 2022 was an event that shone a spotlight on modern agriculture and various approaches that South Africa should consider in order to move this sector forward and keep up with international markets.

Regarded as the largest agricultural exhibition of its kind in the Southern Hemisphere, the renowned NAMPO Harvest Day saw thousands of visitors flock to Bothaville in the Free State to gain first-hand insights on the latest advancements in technology, equipment and tools to benefit the agricultural industry in South Africa. The town of Bothaville certainly enjoyed the opportunities presented by NAMPO, as local businesses and boutiques polished their offerings for the influx of people to the usually quiet town.

Due to the global pandemic, the NAMPO Harvest Day took a two-year hiatus between 2020 and 2021. To keep in line with Covid-19 regulations the 2022 event took place over five days as opposed to four to accommodate the restricted number of daily visitors to the show. RS Components South Africa was one of the many companies that exhibited.

Danise Smit, Sales and Customer Services Director for RS Components South Africa, said that the RS team who attended the show connected with hundreds of new and existing customers. "It was

The handling, preparation, processing and packaging of food products requires machinery with moving parts that encounter foodstuffs. Keeping this equipment clean and lubricated involves the use of non-food chemical products. NSF certification ensures that such products present a significantly lowered risk to health and assist to effectively eliminate the risk of foodstuff contamination when used appropriately.

Drone technology

NAMPO Harvest Day 2022 saw the introduction of commercial electric vehicles as well as the evolution of drone technology which can be used for surveying and analysis as well as seed and pesticide dispersion.






One of the many farmers at the event said that being a maize farmer in South Africa can be very challenging. “The introduction of smart-monitoring technology can help us overcome the many challenges that we face. The drone technology as an example can be used by maize farmers to monitor fields in real time. We can assess which areas of the fields need more attention than others. It is really great and what’s even better is that these technologies are becoming more accessible and affordable to us as farmers,” he said.

Grain SA, the organisers of the event, received several new applications for exhibition space for the 54th running of the

popular NAMPO Harvest Day. Dr Pieter Taljaard, CEO of Grain SA, said that the Harvest Day provides a much-needed injection into the local economy especially after a two-year hiatus, with many small business owners relying heavily on the income made possible because of this agricultural platform. “Furthermore, the economic importance of NAMPO to the corporate, medium and small businesses from all over South Africa participating in the show cannot be underestimated,” he said.

Grain SA’s objective is to use NAMPO as a platform to showcase the role of the commercial agriculture sector in South Africa and to highlight the country’s farming industry as a scientific and sophisticated economic sector that is committed to providing the nation with safe and affordable food. 



About RS Components

RS Components is a trading brand of RS Group plc (formerly Electrocomponents plc), a global omni-channel provider of product and service solutions for designers, builders and maintainers of industrial equipment and operations. We stock more than 700 000 industrial and electronic products, sourced from over 2 500 leading suppliers, and provide a wide range of product and service solutions to over 1.2-million industrial customers.

With operations in 32 countries, we trade through multiple channels and ship about 60 000 parcels a day. We support customers across the product lifecycle, whether via innovation and technical support at the design phase, improving time to market and productivity at the build phase or reducing purchasing costs and optimising inventory in the maintenance phase. We offer our customers tailored product and service propositions that are essential for the successful operation of their businesses and help them save time and money.

RS Group plc is listed on the London Stock Exchange and in the year ended 31 March 2021 reported revenue of £2.0-billion. RS Group plc has nine operating brands: RS Components, Allied Electronics & Automation, RS PRO, OKdo, DesignSpark, IESA, Synovos, Needlers and Liscombe.

For more information: za.rs-online.com



SEATHECHANGE

International Coastal Clean-up Day 2022 delivered clean and clear results.

Approximately 1.6-million kilograms of litter have been collected by more than 17-million volunteers globally since the inception of the International Coastal Clean-up Day (ICCD) – making our coasts cleaner and our oceans healthier.

As a result of the success of this annual event, the entire week has been turned into a nationwide awareness campaign that encourages citizens from all walks of life, ages and backgrounds to make a conscious effort to pick up and remove litter from their streets, neighbourhoods, schools, inland water sources and streams or nearby beaches.

In 2022 South Africa also celebrated National River Clean-up Day for the first time, on 14 September, in recognition of the importance of keeping our rivers clean for a healthier ocean environment.

Plastic marine litter is not only unsightly, thus impacting on tourism, but can also have a devastating impact on marine life through entanglement and ingestion. It has the potential to spread throughout the food web as marine animals consume each other. Research also shows that the presence of plastics can affect both the number and type of marine organisms that inhabit a particular area. Plastics are also capable of absorbing and

accumulating poison present in the water, which can be transferred to living organisms once ingested.

Marine animals such as fish, birds, sea turtles, seals and dolphins become entangled in debris that ends up in the ocean – including fishing lines, nets, ropes and other discarded fishing equipment.

SEATHECHANGE

The 2022 theme for ICCD is “SeaTheChange”. As a result, the Department of Forestry, Fisheries and the Environment (DFFE) would like impress upon all participating organisations and members of the public that every bottle, every straw and every piece of litter you clean up can lead to a cleaner and healthier ocean.

The Department has been actively involved in supporting clean-up initiatives through its Expanded Public Works Programmes (EPWP) and initiatives such as Working for the Coast, Working for Water and Working for Wetlands. These job-creation programmes play a crucial role in ensuring that our rivers, wetlands, estuaries and beaches are kept clean and in good health.

In addition, the DFFE will in due course commence with a further job-creation project aimed at preventing litter, especially plastic litter, from reaching our estuaries and beaches. The Source to Sea Employment



**forestry, fisheries
& the environment**

Department:
Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA




Dustan Woodhouse on Unsplash

Stimulus Project will target rivers and other waterways for clean-up action by employing and mobilising unemployed youth. The project is envisaged to commence in the province of KwaZulu-Natal, followed by a further rollout to the Eastern, Western and Northern Cape provinces.

Annually on the third Saturday of September, South Africa has joined over 100 countries to celebrate International Coastal Clean-up Day, which was established by the Ocean Conservancy in 1986. The ICCD, to date, remains the world's largest coastal clean-up initiative aimed at helping make the planet a cleaner, happier place for humans, plants and animals. This year marks 26 years of South Africa's involvement in the ICCD celebration – the first mask-free mass clean-up event since the country was faced with the Covid-19 pandemic.

This year's ICC Day was observed on the Saturday following the annual Clean-Up & Recycle SA Week, an initiative by the local plastics industry, supported and endorsed by the various packaging and retail streams and retailers.

Every year millions of tons of waste, especially plastic material, are generated worldwide and end up in the marine and coastal environment. This causes a dire situation for the health of the earth's oceans, which directly impacts the health of its people due to plastic material lasting for a very long time in the ocean. 





Smart living enabled

Marcel Bruyns, Sales Manager at Axis Communications, explains how the shift from 4G to 5G affects security and surveillance.

Smart cities will be enabled by 5G. Credit: State of Green

The shift from 4G and 4G LTE to 5G is far-reaching, and although its growth is relevant to most sectors, we can expect to see real and impactful applications in the network security and surveillance sector, particularly when it comes to smart buildings and cities of the future. It is therefore important to know what 5G's core benefits are, and how it forms part of effective digital transformation strategies and smart living initiatives.

The rollout of 5G

5G networks are likely to cover one-third of the world's population by 2025, accounting for as many as 1.2-billion connections. This global rollout is happening right now, with private and state entities investing exponential amounts into constructing new networks and upgrading existing infrastructure to deliver what some now consider an essential service.

The concept of 5G is not just about delivering faster and better broadband service. The technology can expand into new areas such as sensitive and high-priority communications and, more notably, the realisation of large-scale Internet of Things (IoT) networks and infrastructure.

With the infrastructure in place, 5G network carriers and suppliers will be able to offer affordable and comprehensive

options to businesses and individuals based on their technical and digital requirements. Network security and surveillance sectors may not be the primary driving force behind the rollout, but they do stand to benefit from 5G and, as such, should begin making the necessary investments into their own research, development and existing operations.

Overcoming the obstacles

Companies are moving forward with 5G, gaining a better understanding of how the technology best suits the application requirements of their particular industries. But it's still essential to manage expectations. We may refer to big numbers – with the number of future 5G connections being in the billions – but a wide-scale rollout is still a long-term prospect and it's at the mercy of several pertinent factors.

One important factor is that 5G requires spectrum. Countries and regions are taking steps to consider and apply the appropriate policies that will govern the provision of spectrum to operators – a process that takes time. And there is the infrastructure itself. While some countries are moving swiftly to establish their own 5G networks, developing nations are still working to provide widespread connectivity. Their existing – and considerable – investments into 4G networks and technology may compromise or elongate timetables regarding an eventual 5G rollout.

Then consideration must be given to usage parameters, which are already creating notable real-world impacts. In January 2022, mobile networks in the US were forced to delay the activation of 5G services near airports after receiving concerns from federal aviation authorities. Questions were raised about how the surrounding 5G signals might interfere with essential in-flight safety equipment such as altimeters.

It's still early days for 5G and, while this may be a circumstantial scenario, it does highlight the need for collaboration and planning between all concerned sectors to ensure a smooth and efficient rollout.

Smart cities, smart applications and a smart future

We need to take a holistic view on the rollout of 5G. It plays a significant role in smart cities – futuristic urban areas that use the latest tech for the benefit of citizens and businesses. In this scenario, IoT is key, giving cities the ability to use a network of interlinked hardware to gather, process and effectively use data. And this is not just a trend. Technology spending on smart city initiatives is forecast to more than double between 2018 (\$81-billion) and 2023 (\$189.5-billion).

Within a smart city, you have mobility and monitoring solutions that work together to not only identify typical, everyday problems, but also to compile the necessary data to solve them. It is predicted that in 2023, outdoor surveillance cameras will have a 32% market share for 5G IoT solutions worldwide. This enables licence-plate recognition, traffic monitoring and vehicle detection, all made possible by a series of edge-computing cameras and other surveillance equipment that feeds back to a central hub. Faster transfer speeds allow for quick responses from officials and data is efficiently compiled and processed through the cloud.

Body-worn surveillance equipment on city law enforcement is another example. Using 5G-enabled wireless technology, cameras integrated with established video management systems can transmit live pictures to a central command centre, where officials can react in real time. The efficacy of a solution such as this depends on the width and breadth of network coverage within the targeted area, but 5G guarantees the speed. And, when combined with edge computing, the reaction time becomes even quicker.

There is long-term value to this thinking and approach, but it also depends on trusted partners and vendors that can deliver on these

solutions. The security industry is always evolving, and the shift from 4G to 5G opens up more new opportunities to contribute to smart buildings, smart cities and critical infrastructure. Let's make sure we make the most of those opportunities. **U**



Photo by Florian Olivo on Unsplash

About Axis Communications

Axis enables a smarter and safer world by creating solutions for improving security and business performance. As a network technology company and industry leader, Axis offers solutions in video surveillance, access control, intercom and audio systems. They are enhanced by intelligent-analytics applications and supported by high-quality training. Axis has around 4 000 employees in over 50 countries and collaborates with technology and system-integration partners worldwide to deliver customer solutions. Axis was founded in 1984 and the headquarters are in Lund, Sweden.



Marcel Bruyns

Innovation is at the core for telecommunications organisations

Telkom

Telkom's Group Executive, Innovation and Transformation, Dr Mmaki Jantjies, stresses the vital role that new technology can play in bringing vital services to under-resourced communities.



Dr Mmaki Jantjies

Biography

Dr Mmaki Jantjies joined Telkom in April 2021 to establish the new Innovation Office focusing on leading digital innovation as well as research and development initiatives. Dr Jantjies is also an adjunct associate professor and holds a PhD in Computer Science from the University of Warwick (UK) and other qualifications from the UK and South Africa. She previously led two academic departments and has played a key leadership role in advancing technology innovation and programmes in emerging technology areas such as Augmented and Virtual Reality and Big Data. Dr Jantjies is a member of the South African Young Association of Scientists and of the World Economic Forum Young Global Leaders.

Are African telecoms responding fast enough to technological innovation?

The evolution of the telecommunication industry has involved a transformation mainly from voice services to data-led services. Owing to varying infrastructure investment requirements, these changes have not unfolded at the same pace across Africa. While a few countries such as South Africa, Nigeria, Kenya and Ghana have seen extensive innovation in data-led services in areas such as fintech, ecommerce, edtech, etc, many countries still require basic capital-intensive infrastructure to leap-frog them towards universal digital access and participation in the digital economy. Furthermore, the skills required in the key technology areas powering a data-led environment have also proven a challenge for many countries.

Telecommunication companies have also invested in data sciences, enabling a data-led approach to improve efficiencies. Telcos have thus embraced key technology to adapt to our evolving customer needs. We are now also seeing a number of 5G use-cases being tested across multiple sectors.

What are the things that have already transformed telecoms?

Telecommunication organisations continue to innovate at their core with offerings such as 5G with reduced latency proving crucial in supporting new technologies such as augmented reality. Similarly, new offerings such as WiFi 6 technology are supporting the reduction of lag time, so improving customer experience in streaming. Such innovations enable endless possibilities.

Customer-centric data offerings are now being offered as vital services in partnerships by telecommunications organisations. Here the Telkom group has played a key role in reflecting growing customer needs by ensuring growing access to digital services and in areas where products are supported in ecommerce, education, financial services and entertainment (which includes video streaming and gaming).

What are the first things your new office did after you started in 2021?

Telkom has been evolving and innovating continuously within the telecommunication and technology sector. Our

office began by ensuring a clear prioritisation of the focus areas. A group-wide innovation “sandbox” was piloted to enable a cross-disciplinary team to move a customer challenge from ideation towards incubation, using a bottom-up innovation approach.

In embracing this strategy, we have strengthened partnerships with higher educational research institutions. Research programmes have focused on our core network as well as identified adjacencies. It has also been important to develop our partnerships with the start-up community as we continue to invest in new innovation areas where we aim to establish growth.

What are key programmes that Telkom is pursuing for the future?

Internally, we’ll continue to expand our innovation sandbox while being more outward-looking with regards to partnerships with the start-up community. We will also continue to partner with original equipment manufacturers to co-create key solutions to the challenges faced by South Africans. We value our research and development (R&D) partnerships as they enable us to attain a sharp future-focused outlook. These partnerships will also enable us to invest in skills.

Where can improved digital technologies make the biggest impact on society?

The pandemic was an important reminder of the possibilities of technology while highlighting the inequalities that affect South Africans. Through technology, remote work and remote learning continued. However, lack of digital devices and access to connectivity affected some people.

Over this period, Telkom offered zero-rated educational content on its streaming and zero-rated learning sites. It further supported and continues to support edtech start-ups focused on enabling online education in important science, technology, engineering and mathematics subjects (STEM). Another example is the importance of being able to access online content through indigenous languages. While most of the content online is offered in English in text or as automated audio services, many Africans are not English first-language speakers. Machine translation and artificial intelligence technology then affords us the opportunity to enable online access to African languages.

What are potential obstacles?

Considering the capital-intensive nature of telecommunications, infrastructure investment led by public partnerships remains integral to scaling solutions. Although technology is not a silver bullet to solve major national challenges, technology can be deployed through partnerships as an enabler of access to health services, financial services, education and many other services.

Which one or two things most excite you about the future?

Transformative technology should not only serve to introduce efficiencies but to enhance people’s lives by moving beyond improved access to enable Africans to enjoy better participation on digital platforms.

NLP: Natural-language processing (NLP) technologies are enabling multilingual African speakers to access online services

seamlessly in their own languages. Telkom has invested in this area through its data-science team and our partnership with Enlabeler through the izwe.ai platform. Examples of the benefits of NLP include enabling government services to people in remote areas. Artificial intelligence and related technology areas will thus remain some of the main areas where we will see transformative innovation.

5G technology: In terms of telecommunications, improved connectivity speeds leveraging technologies such as 5G network capabilities as well as edge computing, enables lower latency. Increased connectivity speeds coupled with IoT devices can support smart-city uses such as using autonomous vehicles to deliver chronic medical supplies to remote areas. In education, these technologies can support immersive technologies where students can learn remotely while having a full immersive experience with 3D visuals.

In all, technology might not be the silver bullet solution to major social challenges such as economic inequality, but it can be leveraged to solve societal challenges in the key areas of education, health and food security.


Please tell us about some of your academic work on Augmented and Virtual Reality and Big Data.

In our published studies, we explored the potential for immersive technologies to support practical experience in fields such as mining, dental and medical education while reducing their related risks. Immersive technologies have also presented an immense opportunity to support access to remote learning, particularly for students in remote areas. I was also passionate about enabling access to maths and science education through African languages on mobile phones. I thus explored the potential of multilingual mobile learning in STEM subjects.

What is the South African Young Association of Scientists (SAYAS)?

SAYAS is a forum that enables young STEM (Science, Technology, Engineering and Mathematics) practitioners and scientists in the various STEM fields to collaborate in solving challenges facing South Africa and beyond.

Please tell us about the non-profit organisation which you have established.

My passion for enabling access to technology equitably for South Africans while fostering greater diversity in the technology field, has driven me to launch Peo ya Phetogo. Both technology skills and early exposure to technology have been a huge challenge and I sought to increase technology access opportunities for children in under-resourced communities. The NPO programmes have focused on helping young children solve their community problems through technology skills gained in sessions with graduate computer science students. The beginning of the pandemic also presented a moment to reflect upon the importance of teachers, not only in their role of sustaining online-learning environments but in scaling the transfer of digital skills. We took the opportunity to partner with several organisations in order to expand our existing teacher-training programme, particularly to rural and remote areas through continuous technology training. 



Credit: Alex Kotliarsky on Unsplash

Why eLearning is crucial in our brave new world

How do L&D practitioners keep re-equipping professionals with the insights they need, asks Michael Hanly, Managing Director of New Leaf Technologies.

There is no question that our work lives are being disrupted more than ever before, with the acceleration of change occurring across our daily interfaces, routines and work culture.

The increasingly competitive business environment, rising complexity and the digital nomad revolution is dramatically reshaping the workplace mix of employees.

While a subset of full-time knowledge workers has been the norm, companies are now seeking out talent, rather than talent coming to them.

As businesses and economic demands shift, so do the skills required to do the new jobs that are being created. The increase in job automation has catalysed the demand for retraining, upskilling and reskilling.

Simultaneously, the change is resulting in widening skills gaps and employee attrition. Especially in today's recruitment cycles, it is becoming harder to effectively induct new hires remotely while bridging the gap to productive performance where time is of the essence.

Training is vital for employers to support digital needs at the speed of change and so the scope of Learning & Development (L&D) beyond regular training practised within organisations has been greatly elevated.

The question is: how do L&D practitioners keep re-equipping professionals with the insights they need to stay relevant in their professions? The fact is that many organisations don't have the internal capacity needed to design, implement and manage multiple training solutions for multiple business units at the same time.

That means the onus is on L&D professionals to oversee and create a systematic process to enhance an employee's skills, knowledge and competency, resulting in better overall performance.

The key is to cultivate a culture that helps individuals and groups perform better. To get the most out of any investments in training, L&D leaders must embrace a broader role within the organisation and formulate an ambitious vision for the L&D function.

An essential part of this is a comprehensive, coordinated strategy that engages with departments, SMEs and the business holistically. To achieve this, proper collaboration needs to be encouraged, with the focus always on a business's goals and objectives.

Importantly, L&D professionals should constantly be on the lookout for the latest learning trends, know the pedagogic and didactical theories and track developments in digital-learning technologies. Where pedagogy speaks to the theory and practice of learning, and how this process influences



and is influenced by the social, political and psychological development of learners, didactics is intended to convey instruction and information-approach methodologies.

Systems are evolving quickly

Digital learning systems are evolving at a rapid rate, bringing out more value-added features daily that allow for effective, interactive and memorable learning experiences.

It is essential to keep track of the latest technological advancements to keep on top of L&D initiatives.

Traditionally, systems have been expensive to measure because many were server-based and slow, but with how technology is shaped now, there is no reason why small to medium-sized enterprises can't have access to the same tools as bigger companies.

What is required is deep-dive analytics, which is so much more than whether a learner has achieved a result or not. Questions need to be asked on whether the provided content is actually working effectively. If trends are picked up on this content, it may need to be reshaped.

By studying metrics, the organisation can easily identify and measure knowledge gaps.

The use of Excel spreadsheets, which have to be downloaded, filtered and added to before being sent to other stakeholders, can be an incredibly time-consuming process.

The New Leaf Training Intelligence System for the aNewSpring online-learning platform can be configured in such a way that it can be analysed once and thereafter provide meaningful, analytical dashboards that happen in real time. It can assess where there are currently gaps, where there may be gaps in the future, and what sort of interventions can be looked at.

Another key aspect is personalisation. With adaptive learning, where a learning experience is tailored to the skills, understanding and interests of individual learners, rather taking a "one-size-fits-all" approach, the instructor creates an outline that defines the relationships between the content items and their most effective order. This adapts based on a series of defined rules by using algorithms to detect a user's needs and provides personalised recommendations.

This learner-centric and accelerated approach to content delivery can greatly reduce overall learning time and increase knowledge uptake that addresses an individual's knowledge gap.

With the dawn of the Metaverse on the horizon, and virtual reality/augmented reality and immersive technologies entering the realm of training, a new and completely different learning experience awaits.

Artificial intelligence (AI) can take a much broader set of learning variables and quickly turn them into personalised learning paths. It has unlocked more capability to address specific and personalised knowledge gaps.

On the other side of the spectrum, there are tools such as Wildfire that unlock training material creation through AI, essentially creating eLearning materials based on the specific outcomes the individual would like the learning experience to deliver.


The deployment of a training solution can be easy, provided the solution meets relevant needs, is fit-for-purpose and supports the achievement of business goals by promoting a human capital advantage.

But it also requires a focused, pragmatic approach involving specialised solutions to ensure every member of the organisation is au fait with the strategy. Failure to do so effectively renders it useless to owners, managers and employees.

One of the big advantages of implementing training-intelligence systems is cost-saving. Companies often don't account for all the costs associated with classroom training – the juice and biscuits, out-of-office time and the cost to company for non-productivity.

That is why having training intelligence mapped to behavioural metrics, bottom-line metrics and safety metrics is so insightful and valuable. Businesses ultimately want to account for every rand spent on training and see real-time evidence on performance indicators.

Another benefit is accessibility. The system detaches a learner's geographic location to an exam that needs to be taken, while also taking out a lot of administration and the human-factor errors when it comes to assessing and moderating examinations. Essentially, it saves money while being more efficient.

And because there is far more automation with remediation and communication, the skills divide is bridged faster. 



Michael Hanly

About New Leaf Technologies

Hanly is Managing Director of South African end-to-end digital learning service provider, New Leaf Technologies. He has been in the e-learning industry for more than 10 years, overseeing a variety of projects in the corporate training space, working on a multitude of well-known brands such as Bidvest, Nando's, Allan Gray, Nissan and the Emirates National Oil Company. He has also developed high-level strategic eLearning programmes across a variety of sectors.

UPSKILLING YOUTH AND WOMEN IN THE AUTOMOTIVE INDUSTRY

PROJECT: Automotive Training and Re-Skilling in the Post-COVID Economic Recovery for Vulnerable Youth and Women in South Africa

PARTNERS: United Nations Development Programme
Department of Higher Education and Training

DONOR: Government of Japan

Youth unemployment in South Africa is a significant challenge, with 46.5% of youth aged 15-34 who are not in education, employment, and training (NEET) in the second quarter of 2022, up from 40.1% in the fourth quarter of 2019 prior to the COVID-19 outbreak. The COVID-19 pandemic caused an economic downturn and interrupted learning by the closure of educational institutions to curb the spread, resulting in a deepened unemployment rate amongst youth.

The automotive industry is key to South Africa's economic recovery from the COVID-19 crisis being the third largest sector in the country. The industry provides employment opportunities across various skills levels. As the industry is evolving rapidly with technological advances such as increased automation and robotics and smart manufacturing with artificial intelligence (AI), and machine learning, skill requirements are also changing with new and emerging industry trends. It is critical to provide the right skillsets required by the industry. Technical and vocational education and training (TVET) colleges

play a pivotal role in meeting industry skill needs and appropriately upskilling youth and women.

To support TVET colleges in providing demand-driven automotive training and equip youth and women with relevant job skills in a post-COVID-19 economy, including digital skills, the United Nations Development Programme (UNDP) in South Africa, together with the Department of Higher Education and Training (DHET) implemented a project '**Automotive Training and Re-Skilling in the Post-COVID Economic Recovery for Vulnerable Youth and Women in South Africa**,' with funding support from the Government of Japan, supporting three TVET colleges: Coastal KZN TVET College (KwaZulu-Natal), Northlink College (Western Cape), and Tshwane South TVET College (Gauteng).

To understand the specific needs and gaps in the TVET colleges landscape, UNDP conducted **a rapid needs assessment of TVET colleges** to identify common challenges and needs concerning the

alignment with automotive industry needs and digitization of education post-COVID-19, and recommended areas of support. Key findings included the necessity to align the curricula with industry needs, modernized technical workshop equipment relevant to the 4th Industrial Revolution, information and communications technology (ICT) infrastructure and lecturers' digital skills in teaching online, and graduates' soft skills with syllabi and lecturer capacity to help them.

Informed by the findings, UNDP has invested **R6.5 million in new automotive technologies and training equipment, ICT equipment, and digital content for soft skills and science, technology, engineering, and maths (STEM) skills** to enhance the training capacity of the three TVET colleges and youth employability. **Two lecturer development programmes** on automotive technical development and industry partnerships, and blended teaching and learning have also been implemented.

ZAR 6.5 M

invested in new automotive training equipment, ICT equipment, and digital content.

FIFTY-NINE

lecturers and staff trained on automotive technical development and industry partnerships, blended teaching and learning.

354 STUDENTS

benefitting from the mechanical, electrical, and electronic workshop equipment provided, including ICT equipment.

Through the project, in partnership with Toyota South Africa Motors, **the Toyota Manufacturing Academy** was established within Coastal KZN TVET College with new automotive technologies and training equipment (mechanical, electrical, and electronic workshop equipment). Furthermore, UNDP with the Harambee Youth Employment Accelerator, trained unemployed youth through **the accredited Operator Development and Work Placement Programme**. The training component covered work readiness, Gender Equality and Social Inclusion (GESI), and technical training in manufacturing and assembly.

CREATING OPPORTUNITIES FOR DISADVANTAGED YOUTH, LEAVING NO ONE BEHIND

GESI has been an intentional strategy in the Operator Development and Work Placement Programme. Opportunities have been created for youth from disadvantaged backgrounds with limited financial resources as **88% of the candidates were from township and rural areas**. The high proportion has been reached by adopting a holistic inclusive approach, including the use of the zero-rated SAYouth.mobi platform for advertisement and application, telephonic briefing sessions for those who may not have had data or were unable to attend online briefing sessions, and the provision of a device and data for virtual training and a stipend for physical training.

EXPANDING THE FRONTIER OF WOMEN'S WORK IN A PREDOMINANTLY MALE INDUSTRY

The automotive industry has traditionally been male dominant. Automotive manufacturing, which required physical labour but is changing with technological advancement, has been widely perceived as men's work. Hence, the programme has also focused on women's inclusion. As a result, **41% of the candidates were women**, which is higher than the women's representation in the industry. GESI sessions focused on breaking gender stereotypes and gave female candidates a sense of empowerment as they saw themselves doing work they had previously believed could only be done by men.

Not only upskilling youth and women has been a key focus, but connecting them to employment was an important component of the project. UNDP has contributed to strengthening the South African Government's efforts in implementing two strategic networks for youth skill development and employment. One is **the SAYouth.mobi Platform¹** through the Harambee Youth Employment Accelerator under the Presidential Youth Employment Intervention to link youth to learning and earning opportunities.

The other platform is **a new online automotive career experience and guidance platform, Yakh'iFuture² (Build Your Future)**, developed in partnership with National Association of Automotive Component and Allied Manufacturers and the International Youth Foundation. It provides TVET college engineering students with career insight, skills-building opportunities, and linkages to job search platforms, thereby enabling them to succeed in South Africa's growing automotive components manufacturing sector.

These project achievements reflect the power of strategic multi-stakeholder partnerships. The project serves as a pilot and the proof of concept for upscaled future rollouts. There is great potential for expansion across industries, occupations, and geographical locations. UNDP continues to explore a new phase and calls on our existing and new partners, such as government organizations, donors, industry bodies and employers across sectors, TVET colleges, Sector Education and Training Authorities (SETAs) and civil society organizations, to join hands in benefitting more youth and women, and ensuring that no one is left behind towards achieving the Sustainable Development Goals.

¹<https://sayouth.datafree.co/Home/Index/EN> ²<https://www.yakhifuture.org.za/>

24 STUDENTS

enrolled at the Toyota Manufacturing Academy.

64 YOUTHS

trained as Entry-level Manufacturing Operators. 4 of them linked to employment opportunities.

12230 STUDENTS

registered on the SAYouth.mobi Platform.

694 REGISTERED

users found employment and income generating opportunities through the platform.

126 VACANCIES

listed in the platform by NAACAM members and AIDC.



"They got rid of the shyness in me at the training centre, job! That's where the real life started. We were exposed to the workshop where we were actually doing everything with our own hands, and I thought this job was for men, but I know now I can do it too!" Nqobile Ntuli, KwaZulu-Natal.



On a recent visit to South Africa, a Samsung Global delegation recommitted to aligning the company's goals with the National Development Plan (2030) and making a measurable difference in the lives of black South Africans from previously disadvantaged communities.

Samsung recommits to scarce skills development and job creation

Samsung's impactful Equity Equivalent Investment Programme is gathering speed, as Hlubi Shivanda, Director: Business Operations and Innovation and Corporate Affairs, explains.

Please outline the main goals of the Equity Equivalent Investment Programme (EEIP).

Samsung's long-standing partnership and collaboration with the South African government as well as possible future opportunities for growth and further investment include the landmark R280-million Equity Equivalent Investment Programme (EEIP), which is already celebrating more than three years of sustained success.

Launched in May 2019 in partnership with the Department of Trade, Industry and Competition (dtic), and with the support of the Department of Communications and Digital Technologies (DCDT), this 10-year programme is projected to have a measurable impact on job creation, ICT skills development and a contribution of nearly R1-billion to the South African economy at large.

How does the EEIP align with national development goals and Samsung's goals relating to corporate social investment?

Samsung's EEIP programme is aligned to the dtic's Black Industrialists Programme through e-waste recycling, enterprise development and capacity-building in ICT as well as beneficiation, which has seen an investment in two black female-owned entities which now operate in the full value chain of e-waste. It also has a strong focus on enterprise development and capacity-building in ICT through scarce skills development.

Samsung's focus and alignment to the National Development Plan (NDP) 2030 has played a critical role in the success that has been achieved thus far. The company is looking forward to building on this momentum by enhancing its focus on entrepreneurship, job creation and technical skills development to make a measurable difference in the lives of black South Africans from previously disadvantaged communities.

Inspired by the transformative power of economic investment that took South Korea from one of the poorest countries in the world to one of the most successful economies, Samsung Electronics South Africa has made incredible strides forward in its long-term vision for the country. This is reflected in the company's continued investment locally coupled with its Level 1 BBBEE Rating, which is aligned with Samsung's dedication to remain an active contributor to the future of the South African economy and strong supporter of economic transformation.

South Korea is bidding to host World Expo 2030 in Busan, what could this mean for Samsung?

On his recent visit to South Africa, Samsung Global CEO Mr Jong-Hee Han had discussions with the South African government on South Korea's Busan World Expo 2030 bid with the view of getting support locally for the bid.

The Expo is a perfect fit with Samsung's vision of uplifting humanity through technology and innovation. Samsung believes the World Expo being hosted in Busan would be the perfect platform to share its technological advancements and how it views technology as the main catalyst for an eco-friendly and green future in line with the United Nations' Sustainable Development Goals. Ultimately, as part of a global community, these ongoing collaborations are designed to make a difference to all people.

Who is Samsung partnering with on this EEIP programme?

Samsung has partnered with the dtic, the sponsor of the programme, Department of Communications and Digital Technologies (DCDT), ICT Sector Council, the relevant Sector Education and Training Authorities (SETAs) and various other government departments.

What has so far been achieved?

On SME Development: A R93-million investment contribution has been made with the bulk of the investment channelled into enterprise development and black industrialisation to support black-owned and women-owned enterprises. The beneficiaries were part of a rigorous selection criteria to ensure that they could maximise the capital needed for business operations and future growth. Access to supply chain is a critical component and support through in-warranty volumes for its accredited service centre programme. Further support to e-waste companies includes access to e-waste volumes from Samsung warehouses and its network of service centres.

On ICT Skills Development: Samsung is developing Fourth Industrial Revolution (4IR) skills in partnership with a number of institutions of higher learning in South Africa. The Samsung Engineering Academy programme focuses on providing South

Launched globally in 2010, Samsung Solve for Tomorrow is a unique competition that encourages innovative thinking, creative problem-solving and teamwork to nurture social innovation ideas that address the community's most pressing problems

African youth with artisanal and electronics skills as well as coding, software development, IOT and artificial intelligence skills through the Samsung Innovation Campus programme. Additionally, Samsung's Solve for Tomorrow STEM competition is where learners in grades 10 and 11 are encouraged to solve social issues in their communities across the country.

Please give examples of success stories.

With environmental sustainability being one of the major focus areas for Samsung, two black women-owned e-waste businesses were created. With ICT skills development essential to combating youth unemployment, two software development enterprises were supported. In addition, to provide marginalised communities with better access to electronic repair services and encourage a culture of entrepreneurship, two accredited service centres were created.

What are the next steps for the EEIP? Are there plans to expand?

As Samsung enters its second phase of EEIP, the investment in the socio-economic development of South Africa and its people will remain as one of the main focus areas. Expansion of the programme to provinces beyond the initial focus areas that included Gauteng, the Western Cape and KwaZulu-Natal, the roll-out will now extend to other under-privileged provinces such as the Eastern Cape, Free State and Limpopo in an effort to improve reach and impact. Partners to the programme, which in essence are black SMEs, will be selected from these provinces. Through its investment, the Samsung EEIP aims to deliver measurable impact and a lasting legacy.

Does Samsung have an over-arching goal with regard to training in the ICT sector?

Through a well-considered and integrated approach, Samsung partnered with universities and SETA-accredited training providers to train 1 440 software developers and accredited technicians to enhance their prospects of securing employment, starting their own businesses and further training. To date, 450 unemployed youth have been trained. This addresses a key need in the South African ICT sector and has resulted in a marked increase in female software developer graduates. Increasing female representation in ICT training is ultimately

vital to reverse the market trend of lower gender representation in this sector.

With which SA institutions are you partnering with in ICT training?

Samsung partnered with previously-disadvantaged universities (University of the Western Cape and Tshimologong Digital Precinct, Wits) and SETA-accredited training providers such as Ekurhuleni Artisans and Skills Training Centre and Ocule IT in KZN.

What is the Samsung Electronics Engineering Academy?

The Samsung Electronics Engineering Academy, which was established in 2011, now exists through partnership agreements with various colleges. These Academies, in collaboration with colleges, equip unemployed matriculants and college students from low-income areas with the latest global technological skills in the areas of electronics and refrigeration to assist them to compete effectively in the job market. Samsung's vision is to fast-track youth into the electronics job market, therefore aligning to the government's Vision 2030 that encourages entrepreneurship and self-employment initiatives.

Please tell us about the Samsung Innovation Campus programme.

Samsung Innovation Campus provides ICT education to students in tertiary education. The South African programme focuses on core competencies in coding and programming. Furthermore, the programme trains participants on a range of soft skills to foster talented youth who will go on to shape society. Samsung Electronics South Africa partnered with two previously-disadvantaged institutions, namely Walter Sisulu University in the Eastern Cape and Central University of Technology in the Free State, to improve reach and impact.

What is Samsung's Solve for Tomorrow STEM competition?


Launched globally in 2010, Samsung Solve for Tomorrow is a unique competition that encourages innovative thinking, creative problem-solving and teamwork to nurture social innovation ideas that address the community's most pressing problems. Samsung Solve for Tomorrow was designed to increase interest and proficiency in Science, Technology, Engineering and Math (STEM) education.



Celebrations after the Tshimologong Graduation Ceremony.

Samsung Solve for Tomorrow encourages young people to apply STEM to find creative solutions to solve social issues within their communities. This year, Samsung Electronics South Africa, in partnership with the State Information Technology Agency (SITA), will pilot the Solve for Tomorrow contest for the first time in South Africa with 52 pre-selected schools nationally. Samsung employees will mentor 10 finalists to create the prototype of their solution and will ultimately compete for the top prizes on offer.

What does the EEIP mean to Samsung?

Good corporate citizenship. Samsung is not just a leader in innovation, it also cares about the communities where it operates, the environment and the economic upliftment of disadvantaged communities. Through greater collaboration with various government departments, Samsung is contributing to the socio-economic development of the country and thus contributing to the overall transformation of the South African economy. 

ABOUT SAMSUNG ELECTRONICS CO, LTD.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions. Samsung believes that living by strong values is the key to good business. That's why its core values, along with a rigorous code of conduct, are at the heart of every decision the company makes.

The company follows a simple business philosophy: to devote its talent and technology to creating superior products and services that contribute to a better global society. To achieve this, Samsung sets a high value on its people and technologies.

For the latest news, please visit Samsung Newsroom: <https://news.samsung.com/za/>



Hlubi Shivanda, Director: Business Operations and Innovation and Corporate Affairs

Barloworld, reimagining diversity

Gender-linked bonds bring new levels of transparency and accountability to promoting gender diversity in the workplace.



Barloworld



Biography: Relebohile Malahleha

After studying at the University of KwaZulu-Natal and having done her articles at KPMG, Relebohile worked as a Chief Director at National Treasury. She returned to KPMG for an eight-year stint as partner. She describes much of her work as "accounting transformation". She was first appointed in Barloworld as the CFO of Avis Budget and subsequently promoted to Barloworld Corporate Office as the Executive Strategic Finance responsible for Group finance strategy, Treasury, Corporate finance and Technical.

Barloworld is committed to improving its gender diversity outcomes. The group has been a leader in this field for decades, going back to the 1970s with the formulation of a group-wide code of employment practice, the first of its kind to be adopted by a major South African company.

Now, performance-linked gender bonds will drive further positive change within the workplace and among the companies that supply Barloworld with goods and services. Women will be empowered.

As Relebohile Malahleha, Barloworld Executive: Strategic Finance and Treasury, says, "The bonds are a perfect fit with the group's policy and purpose." Barloworld was announced as the Gender Mainstreaming Champion for 2020 and is proud that two black women are chief executives of business units: Car Rental and the SMD business unit.

But the group continues to search for new ways to promote women and women's issues with diversity, equal opportunities and procurement practices as the key focus. This is why the issuance of Africa's first gender-linked bond is a significant milestone for Barloworld in their transformation journey.

Malahleha notes that the journey towards setting diversity targets began in 2017. When discussions began with financial services company RMB about placing a bond with them, the response from the bankers was very positive. "They said that Barloworld is probably the most gender-diverse business on the listed exchange," remembers Malahleha. "RMB thought that our pioneering a gender-linked bond would be absolutely perfect messaging for what the business believes in."

Sustainable finance with gender-specific key outcomes will also encourage greater transparency when Barloworld reports, and from other companies who might choose to follow the group's lead in going to the market for this type of bond financing.


Says Malahleha, "Investors can purchase a bond that holds us accountable in terms of performance from a gender perspective."

The key performance indicators (KPIs) imposed were to achieve equity in the number of women employed at senior levels and to procure from women-led businesses. We are looking for 50% representation of females in those senior positions."

The Barloworld Business System (BBS) is a structured business operating system that enables a high-performance culture of both continuous improvement and business excellence and enables our strategy execution. BBS is underpinned by two principles – respect for people and continuous improvement. Malahleha comments, "We are trying to make sure that there is decision-making at the lowest level of the business. We hold huddles every day where we identify problems. What doesn't get resolved gets escalated. That's how we make sure that we promote diversity and inclusion and it becomes a conversation at all levels."

On her own journey within the company, Malahleha remembers her early days as the CFO of Avis Budget: "You are always going to get challenged as an individual first and foremost, as a woman and as a black woman, even more so."

But she worked hard to overcome the challenges. "When you become more senior, it is about being able to work through people and it's about your ability to influence others. In life, and in whatever you do you need to be certain in what you believe in," she notes.

"We had to make significant changes to systems and processes. We had to challenge and convince senior members of the organisation to adapt to change. That means doing the hard work of being up to date with what is happening and educating myself. You need to find other mechanisms of fighting your fight and different avenues of influencing the people that you are trying to influence." 



Independent Ports Authority a step in the right direction

The free flow of cargo through ports is vital to economic prosperity. Credit: TNPA

There is a long way to go, writes Chris Hattingh, the Free Market Foundation's Deputy Director, and the kind of reform that takes place will be vital.

President Ramaphosa has announced that the Transnet National Ports Authority will become an independent subsidiary of Transnet and will be wholly owned by it. But more still needs to be done.

Ramaphosa said that making the Authority independent "will create a clear separation between the roles of the infrastructure owner, which is the Transnet National Ports Authority, and the terminal operator, which is Transnet Port Terminals".

The announcement comes in the context of South African ports' appalling performance on the latest Container Port Performance Index (CPPI): of 351 total facilities on the CPPI, Cape Town ranked 347th; Port Elizabeth 348th; Durban 349th; and Ngqura 315th. Those ports that performed better on the CPPI are predominantly from the East Asia region. Their operations are so efficient that cargo ships are able to spend less time loading and unloading, in turn encouraging the flow of goods.

This move with the Ports Authority could be precisely the type of macro-policy step needed to set South Africa's ports on a path of much-needed improvement. Whether actual improvement takes place depends on what happens next.

Ramaphosa indicated that, "revenues generated by the ports could be invested in port infrastructure, both for the replacement of old equipment and for the upgrading and expansion of our ports". Of course, simply collecting more revenue does not mean the allocation thereof will be done in the most efficient way – more government revenue may well act as a signal, attracting corrupt interests.

The setting up of the Ports Authority appears to be similar to the idea of unbundling Eskom: first corporatise the Authority, ensure it operates independently (in practice, not just in theory) and then further down the line separate it completely from Transnet itself. The Authority's ability and independence to make the necessary investment in capacity and efficiency upgrades will probably be the best way to judge whether the reform is successful.



It has also come to light that Transnet Port Terminals, a division of Transnet, is seeking to partner with an international terminal operator, both for the purposes of growing its revenues and to improve its efficiency.

Tough decisions needed

This move will mean very little if the tough decisions necessary for the “independent” Ports Authority are simply overridden by interests within Transnet, the Department of Trade, Industry and Competition, or indeed Cabinet. The Ports Authority will have its own board of directors, to be appointed not by Transnet but by the Minister of Public Enterprises. At this time that position is occupied by Pravin Gordhan, a man famous for refusing to allow the “independence” of

state-owned entities (ever-more questions and doubts around events at South African Airways have surfaced). It remains to be seen just how much autonomy he will afford the new Ports Authority board.

Private-sector expertise must be brought in, both to improve the Ports Authority and to improve the actual performance of the ports. Their work must not be interfered with, even if they step on the toes of bigger players and vested interests. One hopes that an environment for proper competition can be created, where those companies that provide inefficient facilities feel the pain in their bottom-line. For too long have South Africa’s state companies been protected – ultimately by the taxpayer – from consequences for their wasteful and corrupt operational and management decisions.

Over the last few years there has been much talk of the pressing need for the government to implement structural reform, to boost South Africa’s economic growth. While the push for reform is to be applauded, the bulk of the effort should be focused on obtaining the right kind of reform. The preference must be for policies that limit state involvement – which by implication opens opportunities for corruption and inefficiency – and policies that encourage a greater role for private sector expertise and competition.

The CCPI states, “How a maritime port performs is a crucial element in the cost of international trade for a country.” The South African economy will not be able to sufficiently recover, and grow, from the devastation of Covid-19-induced government lockdowns if our ports’ performance remains at such low levels as the CCPI indicates, and if we don’t attract the flow of more goods into and out of the country.

Setting up the Ports Authority as independent comes after a 15-year delay – much potential trade, and downstream benefits, would have been lost in the interim. It is encouraging to see that at least some measure of reform is taking place, however small that first step might be. It is also not just a case of improving ports – the country’s rail network forms a crucial part of getting goods through and out of ports, and that network is currently in various states of disrepair. If port efficiency across the board can be improved it will ensure the flow of more goods, more downstream investment, and most importantly in the South African context, the creation of desperately-needed job opportunities. **Q**



Chris Hattingh is Deputy Director at the Free Market Foundation. He is a member of the advisory council of the Initiative for African Trade and Prosperity, as well as a Senior Fellow at African Liberty.

About the Free Market Foundation


The FMF is an independent, non-profit, public benefit organisation, created in 1975 by pro-free market business and civil society national bodies to work for a non-racial, free and prosperous South Africa. As a policy organisation it promotes sound economic policies and the principles of good law. As a think tank it seeks and puts forward solutions to some of the country’s most pressing problems: unemployment, poverty, growth, education, healthcare, electricity supply and more. The FMF was instrumental in the post-apartheid negotiations and directly influenced the Constitutional Commission to include the property rights clause, a critical cornerstone of economic freedom.

The views expressed in this article are the author’s and not necessarily shared by the members of the Foundation.

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New railway regulations heighten safety and security obligations

The latest set of rules that will govern railway operations is interrogated by Kate Collier, Partner at Webber Wentzel, and Candidate Attorney Minenhle Shabalala.

New railway safety regulations have been published which set out the safety measures that must be followed by those engaged in activities on South Africa's railways and the requirements for reporting incidents.

In keeping with the global trend to prioritise safety and health, on 3 June 2022 the Minister of Transport published new regulations relating to the National Railway Safety Regulator Act (Act) under Government Gazette No 46471 (Regulations). The Regulations aim to improve the level of railway security in South Africa, which was once lauded as the most advanced railway system in Africa. The rail network has been severely compromised by cable and scrap metal theft over many years, but criminal activity ran rampant during the Covid-19 lockdown.

The Regulations focus on safety and security requirements at various stages of design, construction, operation or alteration of infrastructure and operations. The Regulations also set out what accidents and incidents need to be managed and reported to the Railway Safety Regulator (Regulator).

This entails conducting risk assessments of security management within the railway operation. Operators must adopt a Security Management Plan to ensure a more secure railway operation and a Safety of Persons Compliance Plan to

ensure the safety of persons within the railway environment in terms of sections 30(d) and (f) of the Act.

Security Management Plan

Security-focused risk assessments must evaluate measures in place to protect the railway system from theft, vandalism and other criminal acts that could have an impact on safe railway operations. In accordance with Regulation 5, the security management plan must incorporate:

- roles and responsibilities assigned to officials to give effect to the Regulations
- measures to manage safety and security, including responding to incidents and taking measures to prevent their recurrence
- the appointment or designation of a Security Compliance Officer
- the deployment of security personnel and technology or any other innovative means to ensure security
- details of the reports required by the Regulator
- emergency and contingency plans and
- strategies to reduce trespassing, unauthorised access and theft.

Safety of Persons Compliance Plan

A Safety of Persons Compliance Plan applies to everyone in the railway environment, including passengers and those with special needs. Measures to protect persons from harm or danger, including, injury, robbery, assault, terrorism and other criminal acts within the railway



Credit: Sergio Souza/Pexels

environment must be addressed. This extends to the safety of those on board trains, including the train crew and the safety of persons within the station precinct. It includes the adoption of emergency plans and emergency evacuation plans. The Regulations set out several other requirements in respect of passengers and persons in the station precinct. Operators must appoint or designate a Safety of Persons Officer, who will be responsible for ensuring compliance with the Regulations.

It is important to note that both plans must be submitted to the Regulator with the operator's safety permit application and operators must conduct awareness programmes to improve safety in the railway environment.

Railway occurrences

Operators must report all safety and security incidents in accordance with the provisions of the Act or any other regulations promulgated in terms of the Act. The Regulator may also require an operator to submit ad hoc reports, where appropriate.

The Regulations provide context to section 37 of the Act, which requires operators to manage and report on mandatory railway events. Network operators, train operators, station operators or a combination of network, train and station operators must put systems and procedures in place to report notifiable railway events.

Notifiable railway events include operational railway occurrences, security-related railway incidents, incidents related to the transportation of dangerous goods, crowd-related railway incidents and industrial action. Examples include collisions either on the railway or at crossings with other vehicles, derailments, unauthorised movements and persons struck by trains or locomotives, among others.

Operators must report fatalities and injuries resulting from railway occurrences and all fatalities and injuries to personnel performing safety-critical and safety-related work which occurred during the normal execution of their duties, including slips, trips, falls from height, electric shocks and service road accidents on the operator's premises. This obligation extends beyond employees to include contractors and subcontractors.

Operators must establish, implement and maintain procedures for reporting railway occurrences. When more than one operator is involved in a railway occurrence, all affected operators must report the incident to the Regulator in accordance with the reporting timelines. Contravention of any of the Regulations may result in a fine or penalty for the operator.

A fundamental shift in the way health and safety is viewed by the legislature calls for operators in the industry to revise their security policies and assess whether procedures are in place to address identified safety and security risks when conducting risk assessments and implementing subsequent plans as required by the Regulations. **1**

ABOUT WEBBER WENTZEL

With over 150 years of experience and industry knowledge, Webber Wentzel is the leading full-service law firm on the African continent. We combine the collective knowledge and experience of our firm to provide clients with seamless, tailored and commercially-minded business solutions within record times. We value excellence and innovation and we work with our clients to help them achieve success in whatever they do. Our alliance with Linklaters and our relationships with law firms across Africa provide our clients with the best expertise wherever they do business.

We believe in making a positive contribution to the communities in which we work and we are proud to call ourselves home to one of South Africa's most long-standing, dedicated pro-bono practices. We are committed to promoting access to justice for all South Africans, upholding the Constitution and protecting the rule of law. As a firm, we are committed to transformation and diversity. We are an accredited Level 1 broad-based black economic empowerment contributor and we are engaged in a number of initiatives aimed at driving transformation and inclusivity within our organisation, the legal sector and our society.



Kate Collier



Misenhle Shabalala



Customer focus is key to realigning supply chains in times of disruption

Credit: Tima Miroshnichenko on Pexels

Research findings by SYSPRO Africa point to the importance of future-proofing operations against unexpected events.

SYSPRO Africa has announced new research findings from its latest global research survey, “Realigning the links of the disconnected supply chain”, which explores the challenges and solutions to ongoing supply-chain disruptions that manufacturers and distributors face.

South Africa has experienced significant supply-chain disruptions in recent years, with the nationwide civil unrest in July 2021, the ongoing theft on rail networks and the well-documented Transnet IT systems cyber-attack leaving organisations scrambling for solutions.

Conducted towards the end of 2021, the report looks at how the pandemic has exposed the fragility of global supply chains and the extent to which manufacturers and distributors are unequipped to deal with global economic shocks. The report reveals four key themes and illuminates the need for a long-term digital strategy that incorporates improved customer centricity, external collaboration and data-driven decision-making to engineer a bounce-back.

“Manufacturers and distributors need to review and consider realigning their supply chain to overcome the ongoing crisis and set themselves up for growth into the future. They need to ask themselves, ‘How can I future-proof my operations against the disruptions of today, to bounce-back and thrive tomorrow,’” says Mark Wilson, Chief Executive Officer, SYSPRO EMEA&I.

Theme one: The disconnect between the investment in internal efficiencies and external collaboration

With global lockdowns and ongoing disruptions driving increased pressure, it comes as no surprise that 70% of businesses experienced supply-chain disruptions over the last few years. Concurrently, 60% of businesses were unable to engage and collaborate with customers and suppliers in real-time. As a result, those businesses were often unable to deliver to their customers. Pre-pandemic technology investments and outdated business models had been partly to blame for these ongoing challenges. In response to pressures, businesses have invested in short-term technology solutions to address the immediate impact of the pandemic. Even though 65% of businesses invested in business systems aimed at meeting order requirements and 64% of businesses invested in business systems to manage inventory control, the supply of inventory was not protected. “What we are seeing now is a knock-on effect of the supply chain disruptions. There has been a need to acknowledge that manufacturers and distributors operate within a larger and more connected ecosystem. Ultimately, if they are unable to communicate effectively with their external ecosystem and respond to shifts in the supply chain, businesses may fall behind,” says Wilson.

Theme two: Digital roadmaps do not align to execution

In response to the immediate impact of the pandemic, many businesses looked at building a digital strategy. The survey found that while building

What we are seeing now is a knock-on effect of the supply chain disruptions

those roadmaps, 69% of businesses considered a digitalisation strategy aimed at enhancing existing business processes with digital technologies. However, only 29% of businesses committed to a fully-fledged digital transformation strategy.

When exploring the execution of the digital strategy, the survey found a clear disconnect. With 34% of businesses focused on investments to improve internal operations management, quality management and warranty management, and 33% of businesses looking at improving sourcing, procurement and inventory management, only 18% of businesses invested in business systems to improve external collaboration. Additionally, 50% of businesses chose to not invest in any systems at all and to rely on current systems to keep the lights on.

Despite supply-chain disruptions that started long before the pandemic and despite a commitment to improve customer services, only 23% of businesses looked at increasing external collaboration with suppliers and customers as a part of their digital transformation strategy.

"It's no secret that manufacturers and distributors have been slow adopters of digital transformation. However, the pandemic has created a sense of urgency around starting their digitisation journey, implementing technology and processes to maintain some form of continuity. Businesses now have an opportunity to reset for the future and revisit their digital roadmap with the assistance of trusted advisors and industry experts. Of course, the inclusion of external collaboration solutions will be key," says Wilson.

Theme three: Supply chains are not competing at a global level

Technology selection played a pivotal role in the execution of a digital roadmap. When asked about key technology investments, 47% of businesses had invested in sensors, IoT or IIoT. While these sensors are collecting data, only 20% of businesses invested in data analytics tools to process and analyse the data and only 5% of businesses had looked into AI and ML to draw any long-term benefit from the data collection.

For more information, see <https://za.syspro.com/>

ABOUT SYSPRO

SYSPRO is a global Enterprise Resource Planning (ERP) software provider. SYSPRO specialises in key manufacturing and distribution industries. Established in 1978 by CEO Phil Duff, SYSPRO remains one of the longest-standing privately-owned vendors of ERP software in the world. With a strong commitment to channel partner growth and offices in the United States, Canada, Africa, the United Kingdom, Asia and Australasia, SYSPRO customers are backed by a team of global experts that drive maximum value out of IT systems and business solutions.

What sets SYSPRO software apart from other ERP vendors is an unwavering, long-term focus on the manufacturing and distribution sectors, a practical approach to technology and a passionate commitment to simplifying business to increase success for partners and customers.


Business models are rapidly changing before our eyes and without data insights, manufacturers and distributors will struggle to compete on a global level. Analytics, artificial intelligence and machine learning are essential to making sense of the mountains of data currently being captured and using that information to adjust business strategies and to further improve operational efficiencies across the entire supply chain.

"What we have seen is that the innovators and early adopters who were further along their digital transformation journey were able to gain valuable insights from their data and ultimately thrive during this period of disruption," says Wilson.

Theme four: Customers are placed at the end of the supply chain and not at the centre

It goes without saying that while businesses needed to overcome supply chain disruptions and additionally improve customer experience, the outcomes of any digital initiatives or technology tell a very different story. When exploring the benefits of the digital transformation shift and investment in digital technologies, 49% of businesses had improved cost efficiency, while 35% of businesses improved employee engagement and 31% of businesses improved product quality. But with limited success only 22% experienced revenue growth and only 26% of businesses achieved customer satisfaction.

Some fundamental changes are required if balance across the supply chain is to be restored. It will be key to establish a robust, carefully executed digital roadmap and it will require increased agility, improved communication and investments in internal and external systems.

"As part of any digital roadmap the customer must also be at the centre. Manufacturers require a 360 view of their customer base and how they purchase products or services. While businesses have improved operational visibility through technological investments such as IoT or even alternative e-commerce sales channels, the reality is that ongoing and real-time external collaboration with suppliers and customers remains vital," concludes Mark. 



Mark Wilson, Chief Executive Officer, SYSPRO EMEA&I

There is hope for entrepreneurs

Experienced entrepreneur and new KwaZulu-Natal EO President Denzil Steyn has three key pieces of advice for business owners.



Denzil Steyn, President of the Durban Chapter of the Entrepreneurs' Organization

There is hope beyond the bad news and the high petrol price. That is the message from newly-appointed president of the Durban Chapter of the Entrepreneurs' Organization (EO), Denzil Steyn.

"We have so much to celebrate as entrepreneurs in this province. If we all retreat, we are not going to go forward as a province. KwaZulu-Natal needs entrepreneurs that are bold and carry that hope," added Steyn.

Steyn takes over the mantle from Clinton Holcroft, CEO of Serco, one of South Africa's leading truck-body and trailer-building companies, as the city's businesses face a whole new set of hurdles in the face of both local and global economic turbulence.

"What I have learnt from Clinton and can take away is his willingness to empower others to be their best. He gives people the freedom to express themselves and even make some mistakes but in a very supported environment. Clinton is very level-headed but he is also very expressive when it comes to new ideas and new initiatives and investing in new things," notes Steyn.

For Steyn, entrepreneurs need the support of an organisation such as EO more than ever before.

"We are not going anywhere as individuals and as businesses if we don't have hope and that hope is going to come through a supportive and energetic environment. I want to make sure that members feel like they have a strong foundation, that they have a voice. That way, we can feel confident to be able to invest and move forward with those plans that have been in the back of our minds for the past few years," he says.

EO is a global, peer-to-peer network of more than 14 000 influential business owners with 199 chapters in 61 countries. It is open to entrepreneurs with businesses that turn over more than US\$1-million a year.

Since its launch in 1987, EO has encouraged entrepreneurs to grow by expanding interests and learning leadership skills from fellow members who challenge their perspectives and question their presuppositions as well as via interaction with experts, mentoring and networking.

Steyn has been a member of the Durban Chapter for more than six years and this perfectly aligns with his belief that business is an ecosystem of people and relationships. Creating an environment for good people to grow, perform and engage with other like-minded people is one of the key elements to success, he believes.

One team and a rented room

Steyn started his business, IntelliSEC, which installs and services CCTV, access control and fire detection systems, 14 years ago from a room that he rented from a friend who had a scuba-diving shop in Kloof. The fledgling company had three clients and one technical team and contracted in when needed.

It wasn't an easy journey. "I sold my vehicle to fund the business and rented a vehicle from the technician we had contracted in. By the grace of God and through hard work, the business was sustained and grew to six branches in South Africa and two across the border servicing over 650 clients, primarily blue-chip companies, with either national rollouts or large turnkey projects. We employ some of the most talented people in our industry," he says.

His three key pieces of advice for his fellow entrepreneurs are:

- Surround yourself with smart and experienced people who want the best for you and are willing and brave enough to tell you to stop when they see you heading into impending danger.
- Build people, systems and cash to support the business you plan to be in the future.
- Serve your employees, customers and suppliers well. They are all working to make your business vision a reality – and don't be scared to distance yourself from those who are not.

These closely echo the values of EO.

"As an organisation and as forums within EO, we are all feeding off each other. We may go into meetings with our heads down but we come up with world-class plans to bring about change, to improve efficiencies and to be smarter and leaner. We help create a positive outlook in what can possibly be seen as a fairly gloomy business environment," says Steyn.


Referring to a book by Steven Johnson called *Attacking Anxiety*, Steyn talks about two different forms of anxiety, debilitating anxiety and functional anxiety.

"What we've seen in EO is definitely functional anxiety. This is driving EO members to be that much sharper to look at the small



things that they possibly just left before and work out how to be leaner and roll with the punches. As Durban entrepreneurs, we are world class. We've had to be as we've had so much thrown at us. That's why we want to assist members to realise the benefits from that functional anxiety that we all have naturally," he says.

He believes that you have to be part of something like EO to fully understand the value that it provides.

As Mark Stockli, the head of EO, says: "We are an organisation that leverages trust and we all want the best for each other. It's not one person standing on the sidelines looking at an entrepreneur doing exceptionally well and hoping he is going to fail. We all want each other to succeed and we will go out of our way to make sure that everybody is supported." 

About Entrepreneurs' Organization

Entrepreneurs' Organization (EO) is a global, peer-to-peer network of more than 14 000 influential business owners with 199 chapters in 61 countries. Founded in 1987, EO is the catalyst that enables leading entrepreneurs to learn and grow, leading to greater success in business and beyond.

Denzil Steyn is the Managing Director of IntelliSEC, a systems integrator of intelligent site-management business that is based in Pinetown with branches in Johannesburg, Cape Town, Port Elizabeth, Richards Bay and Nelspruit.

Seed funding for economic growth and social impact



Barloworld Mbewu is supporting entrepreneurs who are making a difference.



Credit: Ali Khalil, Pixels

The Barloworld Worldwide Code of Conduct supports the group's commitment to sustainable development. Sustainability is included in the Code as one of the group's five core Values that informs employees' individual and collective behaviour. Also central to its responsible citizenship programme is the group's corporate social investment activities in response to the socio-economic development imperative to empower previously disadvantaged individuals and uplift communities in South Africa, to the benefit of all.

Mbewu

The intention of Mbewu is to provide seed funding, access to finance and incubation to social enterprises for a three-year period. The incubation entails training and mentorship, elements that give the social entrepreneur the much-needed support to grow and scale businesses for greater social impact.

Through Barloworld Mbewu, we believe we can make a significant and lasting impact on social enterprises doing excellent work in our communities.

Who can apply?

- Organisations run by South African citizens
- Organisations that are operational for more than one year
- Organisations active in marginalised and previously disadvantaged communities are preferred
- Organisations active in education, industrial technology, agro-processing, agriculture, green economy or ground-breaking social innovation or technology that addresses local challenges

Background

Mbewu was launched by Barloworld in 2019 to provide support to social enterprises and start-ups that work innovatively to solve challenges in society through their entrepreneurial activities. The programme seeks to drive economic sustainability, transformation and growth

through development, funding and facilitating access to markets for small and medium-sized enterprises.

A social entrepreneur is a person who pursues an innovative idea with the potential to solve a social and/or economic challenge. Social enterprises that will be considered for incubation in the Mbewu programme are technology start-ups and those that are active in agriculture (including agro-processing), industrial services, the green economy, the creative industry and social innovation.

Finalists incubated into the Mbewu programme join the ranks of past social entrepreneurs who are already blazing a trail in their respective industries. Successful candidates incubated into the Mbewu programme will receive mentorship, funding to scale up their operations and access to markets.

Since the launch of Mbewu, Barloworld has been encouraged by the zeal and enthusiasm that South Africans have demonstrated in developing innovative solutions that address socio-economic challenges in a sustainable manner. Through the Mbewu platform, we seek to unlock the potential of this growing sector of the economy and give promising start-ups in various fields the ability to scale up and blossom to their full potential.

Addressing food security

One of the successful candidates, Denzhe Development Agency, facilitates vegetable farming and agricultural skills development for ABET graduates, a focus area for economic growth and addressing the food security threat. Another social enterprise to have been mentored is Sindingulwazi, a recycling enterprise which fights drug addiction by offering addicts skills and an opportunity to earn a living from recycling.

Community members are enabled with access to food from the gardens and the surplus is used to generate an additional income. Through waste management and rehabilitating of illegal dumping

sites, Sindingulwazi extracts the recyclable waste and sells it to generate additional revenue whilst eradicating the culture of illegal dumping.

A catalyst for change

Barloworld is acutely aware of the challenges facing South Africa, and how the outbreak of Covid-19 has exacerbated the triple challenges of poverty, unemployment and inequality. Mbewu represents a tangible intervention that Barloworld has put in place to use the transformative power of social entrepreneurship to be a catalyst of positive social change. "We firmly believe that the private sector has an important role to play in helping social entrepreneurs to overcome the common barriers such as lack of financing solutions, human capital and information and networks. Through Mbewu, we believe that we can contribute positive to the growth of entrepreneurship with a social conscience and support a rare breed of men and women to foster positive change in a profitable and sustainable manner," says Noluvo Vovo Ngcwabe, Head of Corporate Social Investment at Barloworld.

"Over the past three years we have been impressed by the quality of the entries we have received for induction into the Mbewu programme, which is indicative of the high level of social entrepreneurship in South Africa. With the level of innovation that has been a surprising but welcome by-product of the Covid-19 pandemic, we are confident that the quality of the entries we will receive this year will blow our socks off. We are pleased that we could utilise our platforms and the power of our brand to contribute to economic growth and foster positive social change," Ngcwabe concludes. ¹

New applications are invited every year for the programme.

Eligible social entrepreneurs are invited to apply at www.barloworld.com/mbewu

ABOUT THE GROUP WHO WERE SUPPORTED BY THIS FUND

The Creative Arts Cohort

A group of creative artists were able to grow and scale their enterprises as part of Mbewu, Barloworld's social enterprise incubator. The programme's financial and non-financial support includes enterprise development skills, coaching and mentoring.

Art Versatile

Founded in 2008 by visual artist and creative entrepreneur Litha Ncokazi, Art Versatile is a value-driven art, design and tourism hub based in Arcadia, East London, in the Eastern

Cape. Since its inception, Art Versatile has grown steadily and become a branded house with a strategic design of six units.

Leshego Ceramics

Leshego Buy Back and Recycling Centre is a recycling and jewellery manufacturing co-operative established in 2017 by five previously-disadvantaged youth. It is founded by qualified and talented pottery and jewellery craft artists. Some of the company's products being manufactured include handmade recycle jewellery including necklaces, bracelets, earrings and bookmarks.



Flanders is an ideal location for South African business

New direct airlink from Brussels will bring South Africa closer to European businesses and markets.



Flanders, the northern Dutch-speaking region of Belgium, is an ideal location for South African businesses who want to export or to establish a new business to tap into the 420-million high-income customers of the European Union.

Small and beautiful

Flanders is three-quarters of the surface of the Gauteng Province but it is an economic powerhouse. The regional GDP of Flanders is around the same as South Africa, but the Belgian population is one-fifth of South Africa's. The Gini coefficient is one of the lowest in the world, making it not only one of the wealthiest regions in the world, but a place where wealth is also fairly distributed.

Chemical cluster

The Flanders region has the largest chemical cluster in Europe, mainly based in Antwerp with companies such as Aramco, Ineos, Total, 3M and Du Pont. The region has also a well-developed pharmaceutical and biotech sector. With companies such as Pfizer, Novartis, J&J (Jansen Pharma) and Sanofi, the region provides one of the few places in the world with a fully-integrated pharmaceutical and biotech sector from invention, financing, development, clinical trials to production and worldwide distribution. The corona vaccine of J&J was developed in Belgium, the Pfizer production plant in Puurs (close to Antwerp) was one of the plants supplying mRNA-based Covid-19 vaccines to countries like South Africa.

Microelectronics

IMEC (www.imec.be) is an established centre of microelectronics and is the largest integrated nanotech research facility in Europe, employing more than 5 000 people, of which half are PhDs. Chip developers such as NXP, TSC, Intel, Qualcomm and Infineon combine their R&D efforts to design the latest and smallest chips with additional functionality. A unique IP-sharing model is an industry

example of sharing technology and joint rewards of inventions. More than 50 companies have been formed from spin-offs from large commercial companies such as Dyamand (smart-building solutions), Solithor (battery-cell technology) and Swave Photonics (extended reality).

Beer

ABInbev, the largest beer company in the world with more than 169 000 employees, is based in the city of Leuven. The company acquired South African Breweries in 2015 and continues to employ more than 6 500 people in South Africa. More than 230 breweries are based in Belgium and 1 000 different kinds of beers prove our commitment to the art of beer making.

Entering Europe


In September 2022, Air Belgium started a new flight connection between Brussels and Johannesburg/Cape Town. Thanks to a code-share agreement with South African-based Airlink, Brussels is also connected to all the major cities in the nine provinces of South Africa and connects directly to Democratic Republic of Congo, Botswana, Zambia, Namibia, Mozambique and Tanzania. Freight forwarders can use Air Belgium for the fastest freight delivery (12 hours) to Europe's capital and the home of NATO.

All major shipping companies call the Port of Antwerp-Bruges home. It is the second-largest container port in Europe, has the largest gas terminal and has the biggest car terminal on the continent, transferring more than 2.5-million vehicles per year.

Home for South Africans

Flanders, Belgium, is attractive for South African companies. It is in the same time zone, Afrikaans is similar to Dutch, and it has top technology in all of the areas where South Africa excels, for example, chemicals, biotech, aerospace, defence and IT. Once a company is established, it can hire local talent or transfer personnel and tap into the different innovation support schemes of the Flanders government and link with strategic research centres such as IMEC (Microelectronics), VIB (Biotech), FlandersMake (Manufacturing, IoT, Automation) and VITO (material science, GIS, Energy).

Recent South African companies to establish themselves in Flanders include Simera Sense, ComprRSA, SilicoGenesis, G Studio Branding and GAP Resolve.

ComprRSA (full-service IT), GapResolve Consulting (business & IT consulting), G Studio Branding (online marketing), Mellowcabs (electric vehicles), Maeflynn (high-end design and furniture), SilicoGenesis (AI-based biotech) and Simera Sense (nano satellites). 



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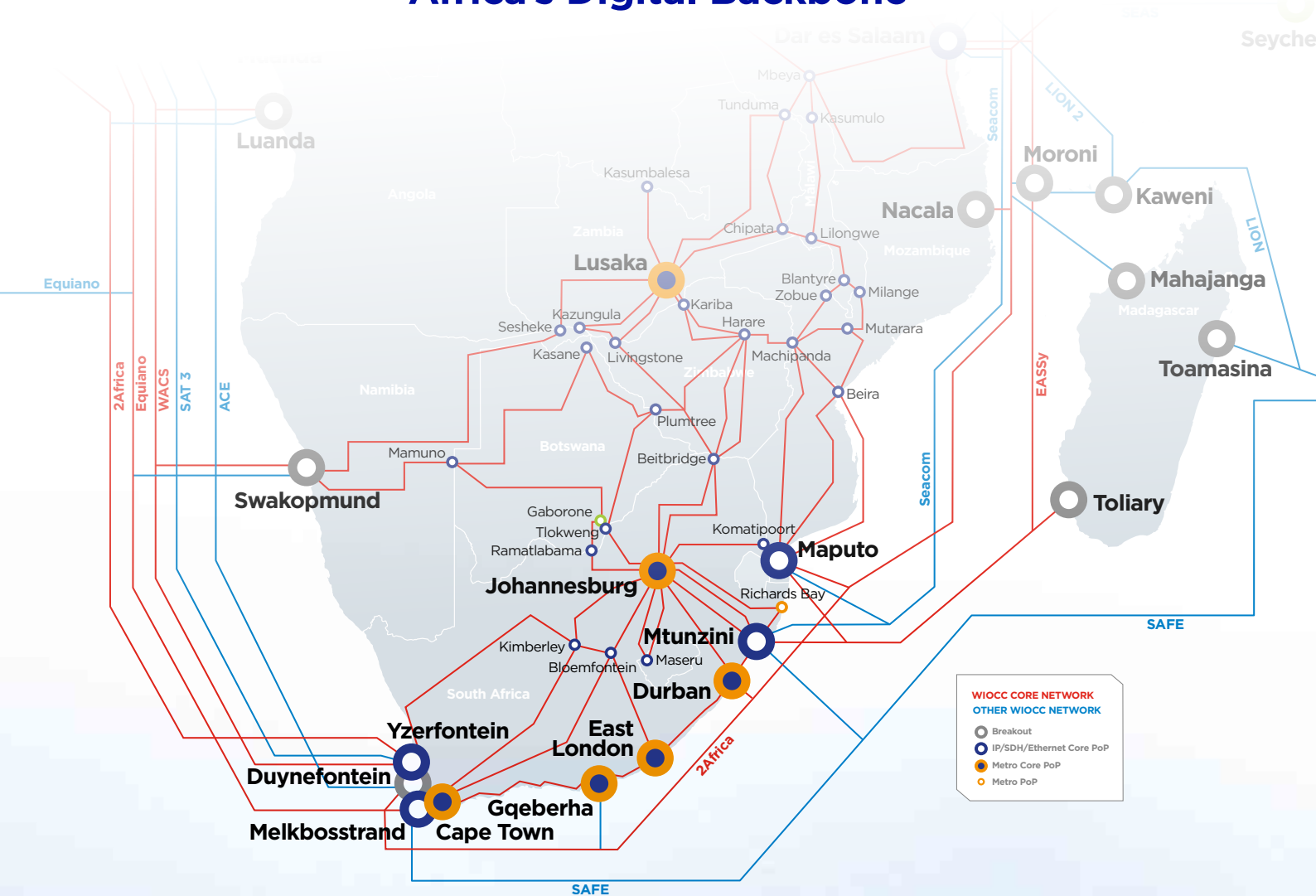
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