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## Over R100-billion to be invested in data centres in South Africa

Amazon Web Services (AWS) plans to invest R46-billion in Cape Town by 2029.



Artist impression of Amazon's new African headquarters in Cape Town. Source: The River Club.

By Larry Claasen

THE setting up of hyperscale data centres in South Africa has become a major boost to the local economy. Hyperscale data centre providers have committed to spending up to \$6-billion – about R112-billion – in Africa over the next three to five years on the continent according to the 2023 Africa Interconnection Report. With South Africa making up 90% of the African data centre market, it is set to get the lion's share of this investment.

The emergence of local companies like Teraco, Africa Data Centres and NTT (Dimension Data), along with international rivals Digital Realty, Equinix and Vantage has seen a spike in these types of data centres. Established local players like the telecom groups, Telkom, MTN and Vodacom also have extensive data centre facilities.

The growing importance of data/internet to South Africa can be seen in the sharp rise in internet traffic seen on the NAPAfrica internet exchange, which reached 4,17Tbps as of March 2024. This is factors higher than the 1Tbps generated in March 2020.

World Wide Worx founder Arthur Goldstuck says, on the consumer side, stream-

ing services like Netflix and Spotify are behind the need for hyperscale data centres. Demand has also been driven by business's increasing dependence on data.

Goldstuck says tech group Cisco has long predicted the sharp rise in data traffic, but he expects it to rise even further with the growing popularity of Generative Artificial Intelligence (AI), which requires huge amounts of data.

**An essential service**

Though there is no official description of hyperscale data centres, they are generally regarded as being able to scale up rapidly in capacity and provide "mission critical" services.

Examples of services offered by hyperscale data centres is being a "carrier hotel." This is where multiple telecom carriers store equipment, so they can exchange data directly with each other.

Exchanging data at the hotel is seen as a safe option, as doing so in the carrier's data centres might lead to allegations that carriers are favouring transferring their own traffic over that of a competitor.

The business case for these services has also been supported by the landing of several

high-speed undersea cables and the rolling out of metro fibre and the increased availability of the high-speed wireless broadband service, 5G.

### Not the whole picture

The figure in the Africa Interconnection report, however, is not the whole picture as the report only records investment in carrier-neutral data centres and does not include that made by operators like Amazon Web Services (AWS), which plans to invest R46-billion in the Cape Town region by 2029.

AWS, which is currently building its African headquarters in Observatory, Cape Town says this figure includes investment in construction, engineering, energy consulting, plumbing, maintenance, security, specialised engineering regarding heating ventilation and air conditioning.

"They [data centres] support a vast ecosystem of employment," notes Goldstuck.

### The data centre supply chain

Several South African companies have established expertise in the construction and servicing of data centres. EDS Engineering, for example, has provided civil and structural engineering services for Teraco, and b2 Architects designed several of its centres.

For its part Cummins is a global provider of backup power solutions for the data centre industry, and Fire and Security Techniques provides a range of services to suppress and fight fires in these centres.

The importance of data centres to some companies can even be seen in the construction equipment group, Caterpillar joining the African Data Centre Association, a trade group that promotes the growth and awareness of data centres among government agencies, media, and the public across Africa.

"The evolution of digital business services, rapidly accelerating mobile data consumption, and the expansion of the tech sector are driving growth for African data centres," said Alban Hohmann Schaully, data centre segment manager for Caterpillar's Electric Power Division.

## One of Cape Town's two landfills only has four years of capacity left, warns infrastructure report



By Larry Claasen

THE City of Cape Town says purchasing and developing a regional landfill site should be a "critical priority" as its Coastal Park site has only four years of remaining capacity.

The city, in its 2023 Infrastructure Report, warns that Coastal Park in Muizenberg is running out of capacity and that once it is full, all waste will have to be transported to its other landfill, Vissershok near Table View, which will come under increased pressure.

The pressure to find more landfill space comes as the city has seen a rise in its population.

"We are now a metro of almost 5-million people, and we're about to overtake Johannesburg as the most populous metro in the country," notes City of Cape Town executive mayor Geordin Hill-Lewis in the report's forward.

This means that in a metro with a growing population, it is uncertain if there will be sufficient capacity to dispose of its waste.

### Long delays

The city says it has been trying to establish a regional landfill for sev-

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The “construction mafia” is not only a threat to the economy but also to the broader society - WCPDF

By Larry Claasen

THE emergence of extortion rackets, commonly called the “construction mafia”, over the past few years has become a real threat to not only the sector but also the economy.

“It is as big a danger to our sector as criminal activity, and in particular, extortion has been for many years now across many sectors throughout the country, not only the property development and construction industry: any mafia can derail an industry,” says Deon van Zyl, chairperson of the Western Cape Property Development Forum (WCPDF).

He warns that if this kind of extortion goes unchecked, it could have far-reaching implications for society as a whole.

“While the biggest danger is to the economy, it’s patently a danger to law and order and, of course, to service delivery.”

This can already be seen in the City of Cape Town, which halted the R400-million expansion of its MyCiTi bus service into Mitchells Plain in February 2024 following



Deon van Zyl, chairperson of the Western Cape Property Development Forum.

extortion threats to contractors.

Build community relations

Van Zyl notes that the rise of this kind of extortion stems in part from the sluggish economy.

“The only way to truly address criminal activity of this nature is through economic growth and job creation. If we can see – and believe in – economic growth, the criminal activity will certainly start to dilute.”

Though the weak economy has con-

tributed to the rise in extortion, van Zyl says property developers can mitigate its impact by getting the buy-in of local business forums ahead of time.

“The most important and first thing that needs to happen is we must have community engagement from the start of projects. We must create awareness within communities as to why projects are happening, how they can benefit their community, and how service delivery to them can be impacted if disruptions occur on sites.”

“We need to give them information. A community that believes in a project will stand up for that project,” he adds.

Van Zyl notes a difference between forum business groups and actual criminal activity. Though both may cause disruption on sites, business forums often want community engagement, which can be achieved if they are involved from the very start of a project.

“It’s actually disrespectful not to engage with a community before any work begins in their

area, and this could be effectively achieved if such engagement begins with local stakeholders.”

Report the case

Aside from working with the community, van Zyl also calls on developers to report disruptions on-site, particularly criminal activity, so that those behind it can be identified and dealt with in terms of the law.

Reporting these disruptions will enable the authorities to better coordinate their efforts to combat this type of extortion.

The weak economy

But even if developers start working more closely with communities and report disruptions, van Zyl warns that stagnant economic growth will continue to foster extortion.

“As the WCPDF, we’ve warned for years the economic growth and the support of a key industry such as ours, which delivers the infrastructure and builds the spaces in which economic activity takes place, is critical. The chickens are coming home now to roost.”

One of Cape Town’s two landfills only has four years of capacity left, warns infrastructure report

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eral years but red tape between various levels of government has delayed the setting up of this new facility.

“Several challenges have been experienced with regard to stake-

holder appeals to the Environmental Impact Assessment process and a Record of Decision issued on 16 July 2007 by the provincial Department of Environmental Affairs and Development Planning.”

The report said appeals and litigation have ensued the matter has remained unresolved to date.

As a result, the land acquisition for a new regional landfill site has been delayed.

This meant the city has “had to initiate a new process, which is currently in the feasibility stage, for the identification of a new site for development.”

The report noted that this delay was a significant concern, as the targeted date for purchasing land is 2026 — the year before Coastal Park reaches its end.

“This will result in significant additional pressure being placed on the Viessershok landfill. This project is a



Coastal Park Material Recovery Facility (MRF).

critical priority for the city going forward.”

A landfill storage unit and composter

Though Coastal Park will soon run out of capacity, this does not mean it will be of no use once it is deemed full.

Plans are underway to create the Coastal Park refuse transfer station (RTS), which would allow waste to be disposed

of at this site before being transported to Viessershok.

The original plan was to develop both an RTS and also an organic reduction facility on the same site to process organic waste closer to the source of origin and divert it from the landfill.

However, this project has been delayed due to what the report deemed “procurement challenges” associated with the

appointment of professional service providers.

There are also a number of outstanding technical challenges regarding the strategy for organic waste collection and separation.

As a result, a phased approach has been taken that will first focus on the completion of the RTS with the construction of the organic reduction facility thereafter.

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## RLabs creates a R100-million venture unit to foster township businesses



By Larry Claasen

RECONSTRUCTED Living Labs (RLabs), a Cape Town-based NGO, has created a R100-million venture capital fund to support emerging innovative businesses that will have a significant social and economic impact.

RLabs, which operates in 24 countries and has had over 200 000 people access its skills training, has long been supporting start-ups since it was founded 15 years ago.

The move to create a dedicated venture unit is the fruition of all the work it has been doing to support start-ups, says RLabs founder, Marlon Parker.

Parker, who will run RLabs Capital says there will be several funds in the unit, like the RLabs Venture Fund, RLabs Seed Fund I, and RLabs Angel Fund III, each with a specific focus on early-stage and growth-stage investments.

He says RLabs has already sourced R100-million in funding from high-networth individuals based overseas and is in negotiation to get further funding from institutional investors.

The goal is to support

20 start-up businesses with its existing funding, and eventually to grow its assets under management to R1-billion.

Aside from getting funding, businesses will also get access to a range of support on offer from RLabs like mentorship, back office support, human resources management and graphic design services.

Parker, who was a computer science lecturer before starting RLabs with his wife Rene, says the aim of the venture funds is to provide support to people who have great business ideas but have never had the opportunity to get backing for it because they came from a disadvantaged background.

He says getting access to this type of funding is hard enough, but these business owners also have the challenge of going into a funding environment that they are unfamiliar with, even if they get their foot in the door.

These barriers to entry are why RLabs chose to base RLabs Capital's offices in the working-class community of Westridge, Mitchells Plain. This way when entrepreneurs walk in the door, they are in an environment where they are com-

fortable in and talking to people who better understand what they are trying to sell.

Parker says the aim is not just to support these businesses, but also to economically transform the communities in which they operate.

An example of this type of ventures is Zlto, an electronic currency that rewards young people for work they do in the community. This currency can be redeemed at 3 000 stores where it can be exchanged for products.

To date it has over 400 000 members, tracked 2,5-million hours of good works, helped 3-million beneficiaries and generated R3-million in transactions.

Zlto is one of RLabs' highest profile ventures, but there are other ones like Loop, a platform that enables users to haul and pay for a minibus taxi, as well as insure their belongings.

It also enables drivers to streamline their business processes using our geolocation and payment software.

For their part, owners and managers are able to track, and manage their businesses using a web portal and analytics tools.

Aside from RLabs, Loop is also partnering with telecoms group Rain, life insurer Old Mutual and Zlto.

## Concerns raised over (TFR) proposed tariffs sustainability while TNPA and ICTSI Global deal looks positive but slow

THE ongoing process to introduce private sector investment, skills, and capacity across Transnet's various divisions and facilities might hit a few more bumps before full implementation and adoption.

It was hoped that Philippines-based company International Container Terminal Services Incorporated's (ICTSI) partnership with Transnet National Port Authority (TNPA) to manage and operate Durban Port's Pier 2 would be concluded by April; this has now been pushed to May or June.

At the same time – as part of wider reforms envisioned in the Freight Logistics System roadmap and other documents – Transnet Freight Rail (TFR) (the overall state-owned entity's largest division) will be separated into an infrastructure manager and a rail operating company.

A twist in the tail, however; the proposed tariff for private operators seeking to access the rail network might simply prove to be too high – meaning the reforms that are desired will ultimately not result in substantial improvements.

On the TFR side, a 19.7c per gross ton kilometres tariff is proposed. Emeritus professor in macrologistics at Stellenbosch University Jan Havenga said, "it will make it impossible to get our low-value high-volume commodities to the sea for export, make domestic industrialisation impossible and there will be no chance for a clawback of rail market share."

Brendon Hubbard of ClucasGray Investment Management told Business Times, "To give you an idea, the

65Mt iron ore line of 860km would bring in R11-billion of toll fees. The coal line, with a capacity of 81Mt and 580km long, would bring in R9,2-billion in toll fees. Now add the container corridor, the north corridor from Zimbabwe, the Cape corridor and the mangrove corridor and you are probably heading for R30-billion in toll fees. That's an outrageous toll fee."

Of course, the tariff is merely a proposal – not final. And hopefully industry and other stakeholders will provide their respective concerns and feedback, such as the tariff is readjusted and moderated. Nonetheless, it is concerning – and might signal that the kinds of deep reforms needed in South Africa's trade-infrastructure and -policy areas, could well be a long way off from the kind of shape in which they need to be for the ailing ports and railway network to be turned around.

On the ports side of things, it appears that matters have stabilised somewhat since the major disruptions and bottlenecks experienced in November and December 2023, especially at Richard's Bay, Durban, and Cape Town.

But 'stabilised' is not necessarily a good thing, given the perennial underperformance of the country's ports, especially as measured yearly in the World Bank's Container Port Performance Index. It will take a lot to improve the ongoing downward trend that has taken hold over the last few years.

The deal between Transnet and ICTSI touched on above could now begin in May or June this year. Durban Port's Pier 2 is the largest port terminal on



Chris Hattingh, executive director, Centre for Risk Analysis

the continent; persistent equipment problems, digitalisation problems, and more consistently inhibit the port's potential – with negative consequences for various importers, exporters, manufacturers, farmers, and others across South Africa.

In March Transnet indicated that due diligence on this deal had been completed. The following matters remain outstanding: approval from TNPA for the subcontract and subleasing of the port; the exemption of the partnership from Public Finance Management Act; tax advice on the transaction structure; the parties reaching a consensus for the terms and conditions of project agreements; and finally (and possibly the most difficult), agreement from unions for the transfer of

employment.

ICTSI global corporate head Christian Gonzalez has sent positive signals, "Following the successful conclusion of third-party due diligence on ICTSI, the process continues to move forward positively, and we are excited to get started to deliver improvements."

In a broad sense there is positive momentum towards reforms in South Africa's trade infrastructure space. But – given the devil in some of the details elucidated here – that momentum might yet be squandered.

There are ample opportunities for the private sector to get involved; provided the government is held to account, and clear requirements and concessions are communicated and then held to.

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# ifm South Africa new warehouse ribbon cutting ceremony



IFM South Africa celebrated the launch of our new warehouse on 19 February 2024. The event commenced with a welcoming address by ifm South Africa's MD, Alwyn Skelton, who expressed gratitude to the team for their hard work and dedication in bringing the project to fruition. He emphasised the significance of the new

“ifm staff and guests came together to celebrate not only the launch of a new facility but also the spirit of innovation, teamwork, and shared success...”

warehouse in enhancing ifm's capacity to serve customers & clients more effectively and meet the growing demand for their products and services. The festivities concluded with a tour through the new warehouse and a sit-down lunch decorated in

black, white & gold with a pop of orange in the back of the warehouse. ifm staff and guests came together to celebrate not only the launch of a new facility but also the spirit of innovation, teamwork, and shared success that defined ifm South Africa's journey. The afternoon celebration served as a reminder of ifm's resilience and adaptability in the face of challenges, instilling confidence in the organisation's ability to navigate future endeavours with grace and success. In essence, ifm South Africa's celebration of the new warehouse launch was more than just an event; it was a testament to innovation, teamwork, and a commitment to excellence that will propel the organisation forward into a future filled with endless possibilities.

# WEG Africa's new Cape Town premises reflect 30 years of growth



The new WEG Africa Cape Town branch in Richmond Park.

*Celebrating 30 years since its inception, WEG Africa's Cape Town branch can mark this achievement from its larger and improved premises in Richmond Business Park – a fitting measure of its success to date.*

STARTING out 1994 to serve the metropolitan area with a range of low voltage electric motors, WEG Africa's Cape Town branch has grown in its size and its offerings, according to branch manager Martinus Greeff. Testament to this is the fact that it has again outgrown its premises, and last year relocated to larger, well-equipped facilities in Richmond Business Park – enhancing its service capability while making life easier for its customers. “The branch had humble beginnings 30 years ago, with three staff members – the manager, an administrative assistant and a storeman,” says Greeff. “Our dedication and commitment to customers soon put us on a growth path which has continued to this day; the experienced staff complement at Richmond Park now stands at 35 people.” Another sign of success is the geographical area that the branch

now covers – from Cape Town upwards to the north as far as Upington and east to the town of George. Similarly, a wider range of industrial sectors reach out for solutions from WEG Africa's Cape Town branch. These include mining, cement, petrochemical, water and wastewater as well as building, food processing, materials handling and heating, ventilation and air conditioning (HVAC). He notes that a particularly exciting recent development has been in agriculture, where the branch serves farmers who want to use more renewable energy. In terms of the company's comprehensive product range, it covers low voltage electric motors from 0,18 kW to 500 kW. These are available in energy efficiency categories from IE1 to IE4. The branch provides high voltage electric motors up to 11 kV and up to 6,000 kW – for demanding applications such as a mill motors on mining operations. “We expanded into variable speed drives (VSD) quite early on, and offer low voltage VSDs from 0,18 kW to 500 kW,” he says. “Our medium voltage VSDs range from 1 MW upwards, in 3,3/6,6 kV and 11 kV.”

Another advance made by the branch was to open an Electrical Panel Division a decade ago. This facility manufactures solutions by combining the wide range of quality WEG components. These are supplied to customers across the Western Cape in enclosures which are electrical type tested and non-type tested. “We are also able to supply starters, VSD boxes and motor control centres (MCCs) – all custom-made to the required specifications,” explains Greeff. “Our motor workshop facilities allow us to conduct many motor modifications including fitment of space heaters and temperature monitoring devices such as thermostats, thermistors and Pt-100 (RTD) temperature detectors as well as the fitment of special bearings as required by the customers' application, ensuring we can deliver a high standard of quality in our value-added offerings.” This in-house capability also reduces lead-times and optimises cost effectiveness for the customer, he points out. The branch has its own in-house repair facility for all WEG drives and softstarters, staffed by three dedicated technicians.



WEG Africa's Cape Town branch has grown in its size and its offerings.



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# Woolworths launches Woolworths Ventures. A unit that will give it flexibility in expansion



Woolworths Group CEO Roy Bagattini.

By Larry Claasen

WOOLWORTHS'S takeover of Absolute Pets cements its new growth strategy, as the pet chain will be housed in its newly created unit, Woolworths Ventures.

The new operation inside the retailer will enable it to acquire and incubate businesses that fit into its strategic goals of expanding into specialised liquor and apparel retail, food services and pet products.

"Woolworths Ventures is a potential game changer for us," says Woolworths Group CEO Roy Bagattini.

"I'm really excited Woolies ventures will play, not only in accelerating new revenue streams and harnessing the potential of our talented people but also in attracting new customers to our trusted Woolies brand."

Bagattini said the Absolute Pets acquisition is an example of how Woolworths Ventures would work, while speaking at the group's interim results. The pet-focused retail chain, founded in 2005 and has over 150 stores, will position Woolworths to become "the leader in end-to-end pet care in the country."

The deal will see Woolworths buy 93,45% of the shares

in Absolute Pets from Sanlam Private Equity and Absolute Pets management.

The South African pet market is huge. There are an estimated 21,7-million pets in South Africa, and annual consumer spending on pet food and accessories is estimated at R8-billion, according to Euromonitor.

Bagattini is clearly not blind to the pet market's potential and said Absolute Pets, along with WPet, its existing pet care business, will fall under Woolworths Ventures.

## Smaller and nimble

Aside from pet products, its venture business will also house WEdit, its smaller-format stores. Bagattini says W Edit is about 10% to 15% the size of its stores and enables them to be located in areas more suited to smaller-format stores.

He says the hope is that by being in these locations and selecting products based on its data demographics, W Edit will be able to broaden its customer base.

"We will be able to access a whole new customer and bring the brand to them."

The group has already opened 30 W Edit stores and plans

to open 20 to 30 stores a year.

The group's liquor operation, W Cellar, and its Food Services — its coffee stands, standalone Now Now takeout, and W Café — will also be part of Woolworths Ventures.

## An emerging trend

Though the move by Woolworths to create an operation to act like an incubator is new to the retailer, it is a trend that is not new in South Africa. Tiger Brands launched the Tiger Brands Venture Capital Fund in 2023, and made its first investment in Herbivore Earthfoods, a Cape Town-based business specialising in the manufacture and sale of plant-based and vegan products.

For Woolworths, the creation of its venture arm will allow the retailer to have greater speed and agility in executing new growth initiatives without compromising its core businesses.

It should be noted that this targeted approach to acquisition growth is a sharp departure from its strategy, which saw it make an ill-fated venture into Australia when it bought retail chain Davy Jones for R4-billion in 2014, only to sell the struggling chain in 2022.

# Bonfiglioli and FLSmidth: The story of a successful project in the mining sector

ENVIRONMENTAL sustainability and constant performance improvement: these are the goals that drive the Danish company FLSmidth, a key player in the mining and cement sector.

These are also the goals that led it to engage in the construction of a collaborative project with Bonfiglioli.

FLSmidth's motto is "Sustainable productivity through innovation", and its global focus is on providing innovative engineering solutions, equipment, and services to the mining and cement industries. Its key targets are performance improvement, cost reduction and environmental sustainability. Its claim is "MissionZero is our sustainability goal: we enable our mining and cement customers to aim for zero emissions by 2030."

The completeness of the FLSmidth product

range allows it to support the end user in all stages of production, from extraction to sedimentation and storage.

## The Challenge

The company was looking for a useful solution to increase its market competitiveness in thickeners, designed to improve its efficiency and reduce its costs.

## The Application - Thickeners

Thickeners are used to concentrate solids. In the mining process, Thickeners are built to separate the mineral from the water using a gravity sedimentation process. They are big cylindrical tanks, with a diameter that can range to over 100 metres. The material solution is pumped into the tank. The combined effect of gravity and the use of flocculent composites make the minerals

## The Solution

Bonfiglioli, leader in the production of gear units, offers solutions that guarantee outstanding know-how and cutting-edge technologies, plus the skills to provide tailor-made answers to meet its clients' requirements.

In this case, Bonfiglioli's solution turned out to be the best choice for a thickener rake drive at a copper mine in the Atacama desert in Chile. aggregate and fall by gravity to the bottom of the tank.

Here a rake slowly sweeps the tank, pushing the high mineral content sludge out of the The Bonfiglioli planetary 300 series, thanks to the high power density and the compactness is the right choice for this rake drive application, the modularity of this gearbox allows to reach high ratio, fundamental for machine like this in which the output speed is less of 1rpm.

The solution is made by two gearboxes, the primary, small size, with the electric motor is installed and the secondary, big size that moves the rake of thickeners. Between these two units, an external load cell is installed in order to prevent the failure in case of peak of torque.

To meet the above requirements, was chosen and used the series 300 size 316 [Torque max 190000Nm]. machine through an opening on the bottom of the tank, and then the further processing.

The clarified water with low solids contents raises back to the top of the tank, where the excess overflows into an effluent launder.

Bonfiglioli is a family-run Italian company with a global presence. Its three business units are: discrete manufacturing and process industries, motion and robotics and mobility and wind industries.

# Electricity and water crisis: Black-out of pre-paid meters looms

MUNICIPALITIES across South Africa are in a race against time to enable residents to update prepaid electricity and water meters before they stop working on 24 November 2024, just eight months away.

The update is urgently required because the standard system that provides unique re-charge codes will soon run out of unique numbers to issue. A 'reset' code for each pre-paid meter is therefore essential to ensure that residents can continue to receive unique codes beyond 24 November 2024.

Failure to complete the reset will leave residents unable to buy electricity and municipalities unable to generate revenue from the sale of prepaid electricity or water.

"Households, businesses, and communities across the country face being completely

cut off from electricity and water if they don't update their pre-paid meters. The black-out is looming unless pre-paid users reset their meters, using a unique code, which will be issued in line with each municipality's approach to the reset process," said Western Cape, Provincial Minister of Finance and Economic Opportunities, Mireille Wenger.

Neglecting to update pre-paid meters in time poses a significant risk to the financial sustainability of local governments across the country, with potentially disastrous consequences for residents who rely on municipalities for basic services.

"I want to urge every resident who uses a pre-paid meter to look out for communication from their municipality on the reset process and their specific timelines. When prompted, residents can complete the

process by simply inputting a special token code that is issued with pre-paid electricity purchases. It's a once-off entry, done in the same simple way as loading a pre-paid electricity code. If you're not seeing the code, or if you are experiencing difficulty to get the code to work, please contact your local municipality immediately for assistance" added Wenger.

Municipalities in the Western Cape have been hard at work helping residents to update their meters.

"With an estimated 1 047 682 municipal meters in the province, approximately 82,5% of households have completed the reset, compared to 51,0% nationally. While we still have some way to go, I would like to congratulate Cape Agulhas Municipality for being the first municipality to complete the reset in the province. Several other

municipalities in the Western Cape are also on the verge of completing the process."

"But we are very concerned about the slow progress in resetting meters in areas where customers purchase electricity directly from Eskom. These consumers are at very real risk of being cut-off and face a permanent electricity black-out in their homes and businesses if they aren't helped to make the necessary updates" shared Wenger.

"I strongly encourage our municipalities that have yet to complete the process to follow the lead of other Western Cape municipalities to provide certainty for their own revenue management and financial stability. This process is also critical to ensure effective service delivery, so that residents have peace of mind. We can and must avoid the looming pre-paid meter black-out."



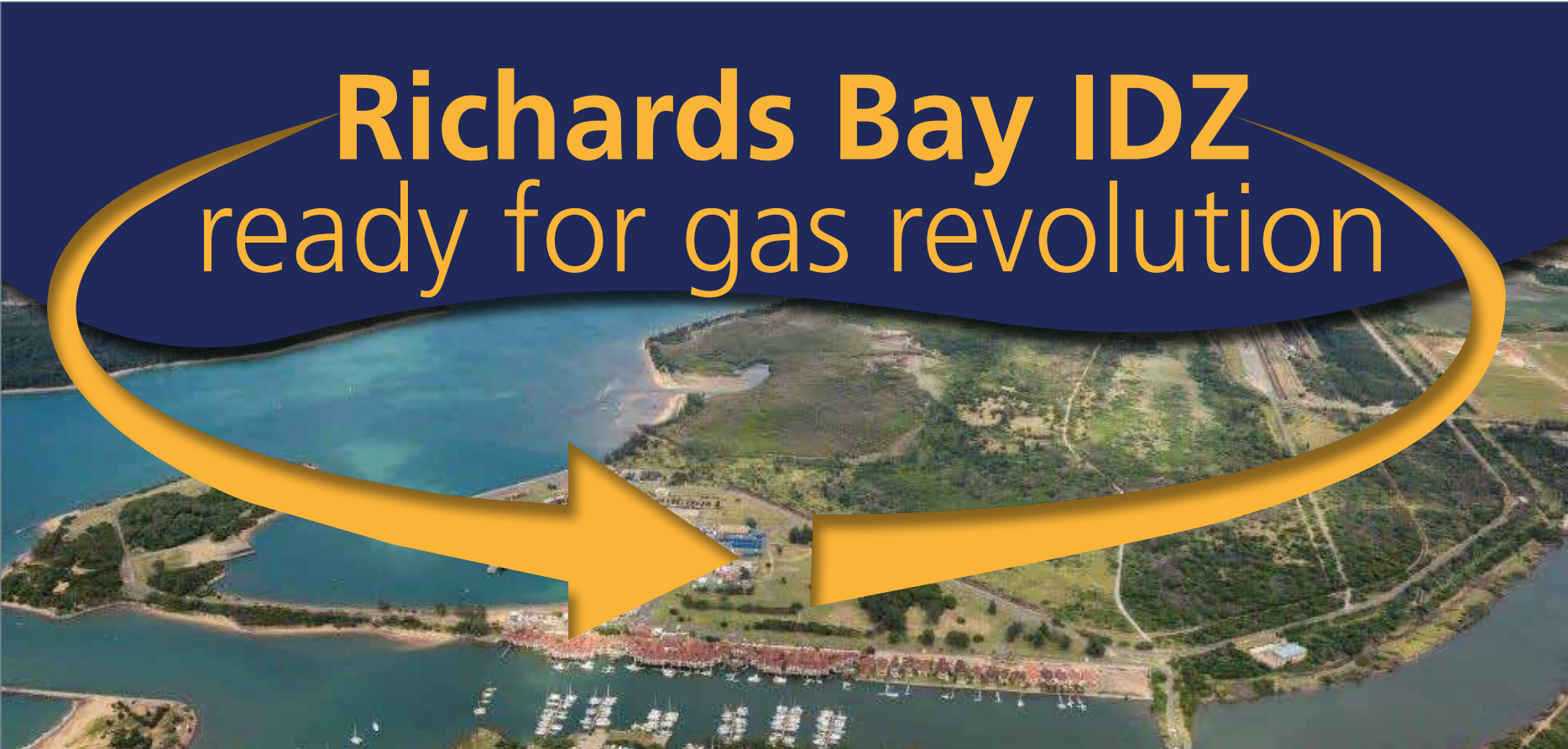
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# Richards Bay IDZ ready for gas revolution

Commenting on the suitability of the **Richards Bay Industrial Development Zone (RBIDZ)** for the location of South Africa’s first LNG gas terminal, Muzi Shange, RBIDZ Chief Operations Officer gave three fundamental reasons for the IDZ location as a key point.

Shange was speaking as an authoritative panel member during a recent gas webinar entitled “The Role of Gas in South Africa’s Energy Transition” that included Steve Nicolls, member of the Presidential Climate Commission, Tord Johnson, Wärtsilä Energy, Keith Webb, RMB and facilitated by Jaco Human, Industrial Gas Users Association.

“The RBIDZ is the ideal location for the LNG gas terminal as it has existing infrastructure, access to a deep-water port of Richards Bay and is the termination point for Lilly gas pipeline which connects gas users to the ROMPCO gas pipeline which currently brings gas from the Pande and Temane gas fields in northern Mozambique to Sasol’s Secunda plant in Mpumalanga and onward to the Durban conurbation.

“Despite the delays on the release of Government’s long awaited Gas Masterplan which the industry trusts will give clarity on the future of LNG in South Africa, particularly in regard to gas-to-power (G2P) thermal industries and transportation, we are already at an advanced stage of planning the location of the gas terminal, three potential G2P producers (3GW) and associated reticulation to other users.

“The recently released 2023 Integrated Resource Plan clearly indicates that G2P is an integrated part of the country’s future energy mix with G2P expected to provide 6GW of flexible power by 2030. The characteristics of both open and the more efficient combined cycle gas turbine power plants means that a) they can run on a variety of fuels including natural gas, diesel and soon on hydrogen or ammonia, and b) unlike coal fired power stations, they can be switched on and off when needed, providing peak lopping, continuous or part load power when demand dictates.

“While the source of gas is currently being hotly debated – whether from offshore finds such as Total Energise Luiperd prospect or from existing producers in the Middle East, RBIDZ is an ideal location and we are currently working on feasibility studies ahead of investment proposals for the terminal and the downstream reticulation.

**THE IMPLICATIONS OF THE GAS CLIFF**

“The recent announcement by Sasol to gas users connected to the Mozambiquan supply that the resource to them will be terminated by 2026, now referred to as the gas cliff, could be catastrophic for existing users who rely on gas as their primary source of energy. Yet this situation presents another compelling argument for the terminal location in the RBIDZ. While the current flow of gas is from Secunda to Richards Bay is via the Lilly pipeline serving customers along the route, there is no reason why, when the flow of Mozambiquan gas is terminated, imported gas cannot use the existing pipeline flowing in the opposite direction!

“Although small by world standards, our gas economy is significant contributing some R300 – R400 billion to the fiscus annually while supporting 70 000 jobs. Developing an enlarged gas economy will rapidly contribute to this but right now investors, potential gas customers, and onshore developers of our own gas resources are waiting for a steady green light from Government.

**TIMELINES**

“While there is much that needs to be done to secure South Africa’s gas future – sources of supply, gas aggregation – matching demand

and usage logistics with supply and ultimately cost determination, our primary focus is on the logistics of managing the gas supply point and the reticulation to gas users in the IDZ. With that in mind we estimate that given the green light now, a functioning gas terminal could be fully operational by 2028 with costs estimated at approximately R500-million. Reticulation and a scaled-up Lilly pipeline would add up to an additional R1-billion investment. These numbers are not daunting to would be investors but clarity is required on the way forward and the role of private investors in what will become a strategic industry” he explained.

All panellists agreed that the issue of developing a gas economy is high complex with many potential stakeholders having differing vested interests and the shadow of global aspirations of net zero climate considerations by 2050 weighing on investment decisions and risks on what some might see gas as a stranded asset.

Structuring such an economy is another imponderable – government control or private sector involvement, concessions and operating licences – the list goes on and how will our major export markets respond to our apparent delay in carbon reduction in energy production?

The imminent release of the Gas Masterplan is not seen as the panacea but will, it is hoped, provide some clarity on the way forward, concluded Shange.

**BIOGRAPHY**

**Muzi Shange**  
Chief Operations Officer  
Richards Bay Industrial Development Zone

A seasoned professional with experience in both public and private sector, and expertise in energy and water infrastructure, economic development, strategy development, geomatics, and environmental sustainability.

- Former Head of Strategy & Economic Regulations – Air Traffic Navigation Services
- Founder and Former Managing Director – Accruetech Energy Group
- Former COO – Department of Mineral Resources and Energy
- Former Chief Business Analyst – Eskom Holdings
- Former Director at Spatial & Land Information - Water Affairs and Forestry
- Former President of the South African Rights of Way Association (SARWA)

**QUALIFICATIONS:**

- Master of Business Administration
- Master’s Degree – Environment & Development (Land Information Management)
- Post Graduate Diploma General Management
- National Diploma – Land Surveying





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# Stranded assets? Not so stranded thanks to technology

Associate editor Robin Hayes argues that G2P doesn't have to mean methane as a fuel; cleaner alternatives are just around the corner.



An 870MW gas to power plant in Oregon USA. Picture credit Oregon Clean Energy Center.

A major argument lodged by the renewable energy lobby against gas to power (G2P) solutions is that methane is a fossil fuel and burning it contributes to global warming, albeit much less so than coal and with the world aiming for net zero for carbon emissions by 2050, embarking upon a G2P rollout will lead to what has been coined as stranded assets.

This phrase when applied to a CCGT (combined cycle gas turbine) power plant warns that investment can't be justified as the equipment can no longer be used and may end up as a liability before the end of its anticipated lifetime as it fails to meet emission targets.

Alternative fuels

With so many advantages over coal fired power stations, it seems that the renewables brigade can only reiterate the stranded assets scenario occasioned by burning methane, but the manufacturers of these units have not been sitting on their hands – modern CCGT installations can run with near equal efficiency not only on natural gas, but diesel, biofuels, methanol, hydrogen/hydrogen blends and at least one firm is testing running its turbines on the ubiquitous NH3 - ammonia! The German government has recently issued a tender for the supply of 10GW of CCGT power, with the proviso that units must be capable of being able to run on hydrogen when available, as well as natural gas. Research into a hydrogen economy is gathering pace almost

daily with scientists addressing hydrogen's inherent disadvantages of the huge amounts of electrical energy required to separate its molecules from water and the advanced materials required to convey and contain the gas within a closed system.

Many advantages

CCGT machines have many advantages: proven to be highly efficient both in terms of output, low maintenance and longevity. And they can be switched on and off more easily than a coal fired or nuclear station allowing flexibility of power delivery or even part load availability to top up base load when required or simply as 'base load'.

Thermal efficiencies of up to 65% are commonplace especially with the more modern combined cycle gas turbines, less so with the older open cycle units that Eskom installed back in 2007/8 at Ankerlig and Gourika in Atlantis and Mossel Bay respectively.

But they are still operating 16 years later, providing a vital lifeline in this era of loadshedding, giving a combined continuous 2 000MW plus to the grid even though they were originally intended for peak lopping, standby duties and in the case of Ankerlig, to provide power to Koeberg nuclear station should there be an emergency.

While critics rightly point out the huge cost penalty of running these units on diesel instead of natural gas, well, there was supposed to be a supply of gas to these two stations but that discussion

is for another day as it opens another can of worms as to why we don't have a fully functioning gas economy. The Gas Master Plan which is supposed to sketch out the fundamentals of a gas economy is still awaited, more than 10 years late...

Speed and meeting the need

In addition to their efficiency and longevity, gas turbine installations are quick to build – Ankerlig and Gourika were up and running within two years of turning the first sod, unlike our recent coal fired stations Medupi and Kusile which are still not (and never will be) producing their designed output after 16 years of construction...not to mention the huge cost overruns. Our latest IRP 2023 stipulates that more than 6GW of CCGT power must be available by 2030, which is achievable if we start building now.

Some of the largest CCGT power plants in the world have outputs in excess of that provided by our largest coal fired stations – Russia's Surgutskaya GRES-2 station has an output of 5 597MW while Japan's Futtsu power station produces 5 040MW – well in excess of Medupi and Kusile's 'design output' of 4 800MW.

Whether hydrogen or ammonia will be the energy salvation of the future remains to be seen or part of the mix, but technology and research is almost certain to overcome the emission problems that seem insurmountable today – remember the old proverb - needs must when the devil drives!

# New security provider drastically cuts cable theft on Transnet's rail network in the Western Cape

By Larry Claasen

THE appointment of a new security provider has resulted in a huge drop in theft and vandalism on Transnet's rail network in the Western Cape.

Before this company was appointed, Transnet experienced several criminal incidents a day, but now it is down to a handful a week.

"We are coming from an era where we had three to four incidents of cable theft and vandalism a day, but now, we only have two a week," said Transnet Freight Rail head of operations, Smangele "Smah" Khumalo at a presentation to the Western Cape Parliament.

"One of the major issues we are faced

with is security incidents. We have had a number of cable thefts, especially between Belville and Beaufort West," she said.

The impact of these thefts contributed to the delays experienced at the Port of Cape Town.

The cost of cable theft has been enormous to Transnet. The transport parastatal told City Press in December that it had spent R290-million to replace and fix stolen and vandalised cables in an 18-month period. Transnet Freight Rail had 2 731 cable theft incidents, with 668km of cables stolen in the six months to end of October 2023.

Khumalo did not name the security provider but said its success was based on a combination of intelligence and technology.

The provider has had an enormous impact, leading to an improvement in Transnet's operations and a blow to those responsible for theft and vandalism.

"Outcome-based security had yielded quite positive results in the Western Cape and had also led to arrests and conviction, which is something we never used to have."

According to the presentation provided to the Western Cape Parliament, the number of criminal incidents had fallen from 37 in November to 20 in January.

Better coordination on the way

Though Khumalo says the reduction in criminal activity is impressive, Transnet and the

service provider are working to reduce it further.

This will see them set up a Joint Corridor Command Centre, which will enable real-time monitoring and to enable quicker response times to security incidents.

Aside from setting up the Joint Corridor Command Centre, Khumalo says Transnet and the security provider are also trying to further reduce criminal activity by determining where to deploy the technology that detects possible criminal activity on its rail network.

Despite the progress made in reducing criminal activity, she says Transnet wants to reduce it even further.

"We have not yet gotten to a stage where we are 100% satisfied."

# Energy resilience is becoming a business incentive for the City of Cape Town

And lower tariffs could also be on the cards.

By Larry Claasen

THE City of Cape Town's efforts to reduce its dependence on troubled power utility Eskom by increasing its own electricity generation capacity is developing into a business incentive.

"Security of supply is of the utmost importance and is one of the reasons for wanting to make the city load shedding resilient for up to four stages..."

The city, which has launched a wide array of projects to mitigate Eskom's inability to supply sufficient electricity over the past few years, hopes to attract more businesses to Cape Town because it is able to offer security of supply.

"Security of supply is of the utmost importance and is one of the reasons for wanting to make the city load shedding resilient for up to four stages where possible by 2026. This is to show the business

and investment community that the city is open for business," says Kadri Nassiep, the City of Cape Town's executive director for energy.

The city's move to become more independent has seen it investing in its own small-scale generation, buying electricity from Independent Power Producers (IPPs), and running a wheeling pilot program, which will eventually allow IPPs to sell electricity over its grid directly to businesses.

Promising signs

There are signs that the city's commitment to providing a constant supply of electricity is starting to come into the decision-making of some businesses, says Nassiep.

"One only has to look at the number of energy-intensive data centres that already have and are in the process of establishing sites within the city supply boundary," he notes.

Nassiep says that

more power players coming into the market opens the way for lower electricity tariffs. For now, however, providing a constant supply is the top priority.

"We would like to think that it would lead to lower tariffs if the supply of energy is more diversified and the sole reliance on Eskom is reduced. But the first prize would be just to have a stable and consistent supply of energy to sell."

The wheeling tariff

Though the City of Cape Town is setting itself up to benefit from a deregulated energy market, allowing IPPs to sell directly to businesses could diminish the revenue it earns from selling electricity to consumers.

Nassiep says the city looks at the issue holistically. Firstly, it gets revenue for allowing wheeling over its grid and also earns a Use-of System revenue.

Secondly, it means whatever amount is wheeled will be energy that it does not have to

purchase from Eskom.

Nassiep also points out that the city's objective is to be "revenue and cost neutral." This means that its wheeling income "will not enhance revenues" and that it might even see the city lose some revenue.

Prepared and unprepared

Although the City of Cape Town has invested a lot in becoming energy-independent, many other municipalities and large metros have not kept pace.

According to the 2023 South African Local Government Association's (SALGA) Status of Embedded Generation (EG) in South African Municipalities report, only 43% of the 165 municipal distributors allowed for EG on their network.

This means South Africa could soon easily become divided between metros that offer energy security and lower tariffs and those that don't.



## 25 air compressors and 26 000 cfm within 4 days, another successful Emergency Support hire solution from Rand Air

WEDNESDAY 24 January, 2024 was a usual busy day at Rand Air with machine hires going in and out of the yard in Jet Park, Johannesburg, when a frantic call came in from a prominent platinum mine near Rustenburg in the North West Province, urgently requesting 12 000 cfm (cubic feet per minute) of compressed air to keep their underground mining operations going.

The mine had experienced a breakdown of their air compressor, subsequently halting production. The compressor supplies critical air to power pneumatic equipment underground.

Understanding that every hour of down time incurs significant losses for the mine, the proficient Rand Air team, coordinated by Yolande

Schmidt, internal sales, immediately flew into action. Sixteen high pressure oil-injected diesel compressors of varying sizes allocated to the project, were inspected by the service team and transported to site where they were connected to the mine's main air supply line by a Rand Air service technician. Within 24 hours the units were fully operational, constricting the amount of downtime.

Tshepo Mashaba, external sales at Rand Air, points out that the air has to travel a great distance from the surface to reach the underground equipment so it is absolutely critical to correctly spec the compressors to eliminate potential pressure drops and loss in air flow. "Hence we provided a combination of 800 cfm,

1 000 cfm and 1 200 cfm machines to meet these requirements. Our service technician also visited the mine site daily to ensure that all sixteen compressors were running smoothly."

On 28 January, having suffered yet another breakdown, the mine reached out to Rand Air, requesting a further 14 000 cfm in order to maintain production.

"Undeterred by the fact that it was a Sunday, the well-oiled Rand Air team did not miss a beat," says Schmidt.

"It so happened that we had just recently received a consignment of brand new PTS916 air compressors. We got nine of these fresh-off-the-container 1600 cfm units to site and operational for our mine customer within a 24 hour turnaround time."

## MATTEI Compressors - Industrial reliability and sustainability while combating climate change

MATTEI boasts more than a century of experience, focusing on research and technological innovation since 1919. They made their mark in the compressed air history with its exclusive rotary vane technology because they believe it is the most efficient and reliable solution.

"Compressors are very energy-intensive machines, so you have to work where you can to improve their performance..."

Mattei is one of the few compressor manufacturers in the world versus assembling companies that are very common in the compressor industry.

The compressors are manufactured with care, attention to detail

and with utmost pride. The company's values are based on the cornerstone of sustainability, they are committed to reduce greenhouse gas emissions and to combat climate change.

"We have an ambitious goal for the next 100 years: to see Mattei become a world leader in the design and manufacture of energy-efficient compressors and to make a significant contribution to safeguarding the planet's health." Says Giulio and Silvia Contaldi - Mattei Group CEO and CFO.

Designing its eco-friendly compressors equipped with patented technology they focus on sustainability and energy-savings. Mattei strive to provide the most advanced compressor solutions in the Industrial, Oil & Gas and Renewable

energy sectors.

Mattei compressors will operate efficiently for long periods of time in critical environments, providing quality air, because of the different configurations of the compressors. The compressor is the only one that improves on efficiency over time.

Mattei is a force to be reckoned with. Raising the bar on lifecycle costs, reduction in negative environmental impact and eco-sustainability in the planetary battle against global warming.

Our compressors are easy to handle, robust and versatile, delivering unique, rugged and reliable energy efficient solutions that deliver unrivalled performance. The Mattei users have access to technology that is

more than just energy saving and reliability, it also offers the user tailor-made solutions to meet special needs. Compressors ranging from 1,5kW to 250kW.

When your company requires safety and reliability, Mattei compressors is the right machine for your job, engineered to slash energy costs.

"Compressors are very energy-intensive machines, so you have to work where you can to improve their performance in order make them more energy efficient. Replacing all traditional compressors with our vane compressors would result in a significant reduction in electricity consumption, with a consequent net reduction in CO<sub>2</sub> emissions," says Giulio Contaldi CEO Mattei Group.

## MATTEI breaking boundaries in terms of energy-efficiency... RVD 30-55i and RVX 55-90i

Savings in energy-consumption, reduction in negative environmental impact, improvements in our safety and fighting the battle against global-warming.

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# SEW-EURODRIVE builds support, trust into Africa

COMPANIES in various sectors across Africa are wanting to harness the power of modern advancements in drive technology – and SEW-EURODRIVE is there with the solutions and the support.

“Many operations around the continent are still using conventional technology, but are looking for ways to improve efficiencies and productivity,” says Jonathan McKey, national sales and marketing manager at SEW-EURODRIVE.

“They are also want-

ing to reduce their carbon footprint and energy costs, and we have the solutions for them.”

In fact, the company is driving a concerted strategy to bring these solutions closer to customers – through extending their local in-country presence. Having expanded and upgraded their facility in Aeroton near Johannesburg, SEW-EURODRIVE now boasts entities in Zambia, the Democratic Republic of Congo (DRC) and Kenya. The office in Tanzania

has been thriving for ten years already.

“This year, we are setting up additional resources in Botswana, Zimbabwe, Eswatini and Mozambique,” says SEW-EURODRIVE’s Tebogo Moloi, in charge of business development in Africa.

“Our philosophy is to build local businesses on the strength of local expertise and market knowledge, bringing us closer to customers with enhanced offerings of technology and services.”

With the local representatives being well qualified and experienced in their markets, SEW-EURODRIVE supports them the necessary facilities and stockholding, as well as specialised training. Moloi highlights that site visits from their teams to customers can become both more frequent and more valuable.

“From our in-country bases, we are closer to customer sites and can deliver high value technical support when requested during our visits,” he says.

“Regular engagement means that we build our relationships of trust with customers, by seeing their working environment and understanding their needs and challenges.”

McKey explains that SEW-EURODRIVE is actively diversifying its offerings in Africa to meet each market’s specific requirements. Having established a firm base in South Africa over the decades as geared motor specialists, it has grown into after-sales service and



*Historically SEW-EURODRIVE has been known as a geared motor specialist, but has grown extensively into after-sales service and industrial gear (IG) units.*

industrial gear (IG) units.

“Given the large installed base of geared motors and IG units in Africa, we

can now also service and repair competitor products – by leveraging our growing technical capability around the continent,” he says.

## Compressed air quality is a neglected topic - SUTO iTEC



COMPRESSED air quality is a frequently neglected topic. But contaminated compressed air is worse.

When compressed air quality is critical two products offer solutions to these air quality problems, SUTO iTEC

and the CDK range of refrigeration air dryers. A broad range of instrumentation From SUTO iTEC is focused

on compressed air and gas monitoring for volume, pressure, power consumption and compressed air quality. This wide variety of compressed air flow monitoring equipment for most airline sizes.

Adding a S331 data logger, SUTO provides plant operators and managers instant access to all the parameters, flow, pressure, dew point, temperature, power consumption, oil vapour content as well as a particle content. These SUTO iTEC products give an instant overview of any production line’s consumption and quality parameters, consumption and compressed air quality results simple.

### Air leaks

Artic Driers international, sole distributor for SUTO iTEC, offers an Ultrasonic leak detection solution. The reporting software provides immediate data on the cost of c/air wastage, giving volume of air wasted to the atmosphere. Reports are provided in PDF and Excel format that allow you to plan rectification programs. Artic offers this for sale, or hire.

### Compressed Air Quality

The SUTO iTEC S600 certified mobile Air Quality System measures dew point, airborne particles sizes

along with oil vapour carry over.

The S600 creates a PDF report, and rates test results against the ISO standard without any input requirements from an operator. Air quality reports are generated before Artic leaves your site. This is exceptionally useful for QA and facility managers.

### CDK Air Dryers

Artic offers the range of CDK Refrigeration Air Dryers from DIT Thailand. The build standards and specifications are to high standards, the stainless steel plate - plate heat exchangers provides constant dew points under a broad range of flows.

### CDK Superior Construction Material Selection

Larger models have multiple heat exchangers, in these units, the inlet and outlet pipe galleries are also manufactured from Stainless Steel, making it perfect for oil free compressors. Oil free Compressors generate condensates with a low PH values that soon corrode any mild steel pipework even dryer headers. The inlet and outlet of a single exchanger on smaller CDK dryers is also S/Steel.

### Accurate Controls

CDK dryers have comprehensive instrumentation and control, with the ability to monitor all parameters. Such as Inlet compression air temperatures, dew point temperatures, air/gas temperatures, and ambient, to mention a few of the controllers’ features.

### Power Outages creating re-start headaches

CDK dryers re-start automatically on resumption of power, via an adjustable re-start time. The dew point set point is also adjustable from the controller. These features amongst many, are password protected to prevent unauthorised changes to the dryers’ settings.

### Huge range of filter casings

Artic provides a huge range of imported & locally produced air filter housings that contains different grades of filter elements to suit any requirements. Locally produced filter casings are SANS pressure coded & are coated to resist interior & exterior corrosion.

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## Less maintenance effort thanks to advanced vacuum generation - Busch Vacuum Solutions

*Higher quality, less maintenance and lower costs – two standard vacuum systems from Busch Vacuum Solutions prove that everything is possible at the Hermsdorf porcelain factory in Thuringia. There, they are used for extruder degassing.*



INDUSTRIAL ceramics have been produced in Hermsdorf, near Jena, since 1890.

In the past, high-voltage insulators; now, ceramic honeycomb bodies for heat exchangers, ventilation and emission control systems.

They have always kept up with the times, developing innovative materials, products and state-of-the-art production processes to do so. Just like the two new SIMPLEX vacuum systems from Busch that are used to degas the ceramic mass.

In 2021, these replaced four oil-lubricated rotary vane vacuum pumps and have been providing four extrusion lines with the required vacuum ever since. More than 100 employees currently work in the historic halls of the porcelain factory.

### 1 600 holes, no air bubbles

The strand of square-shaped ceramic, still damp, slides smoothly out of the screw press.

But after 1,50 metres, the race is over. Clever hands then cut off the front piece and place it on a large rack to dry. They do this continuously in three shifts.

After around nine days, when the mass only contains one percent residual moisture, the honeycombs are fired in an oven at 1 200 degrees. 1 600 small holes run through them lengthwise like honeycomb cells, separated only by fine walls, all precise and symmetrical.

To ensure that this remains the case after the combustion process, the mass must not contain any air pockets.

These would expand with the heat in the oven and cause the entire honeycomb body to burst. For this reason, the mass must be degassed beforehand with SIMPLEX vacuum systems from Busch.

At the heart of each control cabinet and vacuum vessel is a MINK MV Synchro dry claw vacuum pump. What other vacuum pumps see as a challenge, namely handling very moist, paste-like masses, they can master with ease. This is precisely why they have been developed for extruder degassing.

### No muddy matter

The previously used oil-lubricated rotary vane vacuum pumps did not cope as well with the process conditions. "The oil quickly became an emulsion with the condensed water vapor. They were noisy, they stank, and the filters were permanently clogged. This resulted in excessive wear and pump failure. Once a month we had to change the filters and oil, which was a lovely muddy job," says Christian Ferber, MD of Porzellanfabrik Hermsdorf GmbH.

The new SIMPLEX VO vacuum systems from Busch are completely different. They do not require oil in the compression chamber and are virtually maintenance-free, quiet and frequency controlled.

While the previous

pumps were constantly running and had to be manually controlled by means of false air valves, the new vacuum systems from Busch automatically adapt to the required vacuum level and switch off when no vacuum is required.

"We initially used a Busch loaner system for testing purposes and were immediately impressed. We are still completely satisfied with our own SIMPLEX systems today. In terms of maintenance, the new systems really make things much easier," says Ferber.

### From Hermsdorf to the world

Two energy-saving, extremely low-maintenance dry standard systems that replace four old, energy- and maintenance-intensive oil-lubricated pumps: "Thanks to the good advice we received from Busch, we have saved 10 000 kWh per year. Since installation, the two vacuum systems have been running absolutely trouble-free. There's no comparison with the predecessor pumps at all," says Christian Ferber.

And thanks to the new vacuum solution from Busch, 80 000 to 90 000 high-quality honeycomb bodies in various shapes and sizes leave the traditional plant in Hermsdorf every month.

They ensure efficient heat recovery and clean air in ventilation systems of passive houses or afterburning plants on large container ships and cruise ships worldwide.

## Verderair e-PURE now ATEX certified

VERDERAIR Liquids' e-PURE has received its ATEX certification, making it a reliable and safe pump for use in hazardous environments.

ATEX certification is given to equipment that has gone through rigorous testing outlined by European Union directives. Products that have received this certification are considered safe in explosive atmospheres.

The Verderair e-PURE, a fully electric driven pump, is designed with better flow and energy efficiency, resulting in reduced energy costs, maintenance, and longer lifetime.

With its new certification, the e-PURE is now able to transfer fluids in potentially explosive environments without any concerns. Upgrade to the Verderair e-PURE for a safer and more efficient



pumping solution.

### Your benefits:

- Reduced energy costs
- Reduced maintenance
- Longer lifetime
- Now also for use in hazardous environments

### Horizontal Fluid Flow Diaphragm Pumps

In e-PURE diaphragm

pumps the fluid moves through the pump horizontally.

The electric drive ensures the reciprocating movement of the diaphragms so that the diaphragm chambers are alternately filled and pressed.

This pump design utilises flapper valves instead of ball valves, a reduced number of flow bends and moving parts resulting in less friction losses.

The speed of the fluid and the energy efficiency of these pumps is therefore optimal. High speed low stroke technology enables low pulsation.

**The Verderair e-PURE is available in 3 models:**

VA-EP30: max. flow 30 l/min  
VA-EP50: max. flow 50 l/min  
VA-EP100: max. flow 100 l/min

For more than 60 years Verder Liquids has been the pump manufacturer of choice for customers from many industries on all continents.

The company brings with it the process understanding, the technological expertise and the market insight to develop pumping solutions which rank among the best in the world.

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## Emerson launches compact valve position indicator engineered for quick and easy commissioning

*TopWorx DVR Switchbox is a compact, high quality and durable valve positioner that provides reliable open/close valve position feedback.*

EMERSON announced its new TopWorx™ DVR Switchbox, an entry-level addition to the DV Series of valve position indicators.

It combines a durable resin enclosure, compact size and a patented cam design that provides water and wastewater systems, food and beverage production lines and industrial utilities a reliable valve position feedback tool.

The TopWorx DVR Switchbox uses a low-profile indication to provide easy-to-read local position feedback.

This is vital real-time data that helps technicians and plant operators keep processes on target. Engineered for



TopWorx DVR Switchbox.

harsh environments, it features stainless-steel components to provide a reliable, corrosion-resistant valve indication solution to keep customer processes running smoothly.

Clear and highly reliable feedback of valve position helps process industry plants, plat-

forms and pipelines operate with peak efficiency and safety without taking up additional production line footprint.

The TopWorx DVR Switchbox cam design enables swift position configuration for faster, easier installation and maintenance.

For many process industry applications, the TopWorx DVR provides a compact and versatile design well suited for confined spaces.

In addition, its enclosure has an ultraviolet (UV) F1 rating, providing UV resistance that ensures the DVR performs reliably over the long term in outdoor conditions.

The TopWorx DVR Switchbox is one more offering in the TopWorx valve intelligence and proximity sensing portfolio from Emerson, designed to help process industry plants manage and control operations more intelligently and efficiently under the most demanding conditions.

## Supplying jetting equipment for the full market spectrum

HIGH-PRESSURE jetting and vacuuming equipment is used for a wide range of industrial cleaning applications, such as high pressure cleaning, sewer and stormwater line maintenance as well as vacuum cleaning of industrial wet and dry materials.

Werner Pumps, leading manufacturer of high-pressure jetting equipment in South Africa, has worked to be a one-stop shop servicing the entire spectrum of customers requiring high-pressure jetting equipment, with a complete offering, from small portable high-pressure washers through to large truck-mounted units

### Trailers, trolleys and skids

Though Werner Pumps is best known for providing 100% locally manufactured jetting and vacuum trucks to the southern African market, the company has a proud history of catering to smaller businesses, with its range of Werner Pumps skid-, trolley- and trailer-mounted high pressure cleaning equipment.

These units are an ideal solution for cleaning domestic sewer lines, as well as water sandblasting and pressure cleaning.

The high-pressure jetting pumps are available in diesel or electric models with a wide range of specifications available to meet all high-pressure application requirements.

"We have been manufacturing high-quality

equipment since 1988 and can cater for a wide range of customer specifications and applications, tailoring what we supply to meet every customer's particular needs," says Sebastian Werner, MD of Werner Pumps.

### Accessories and nozzles

The company also offers an extensive range of accessories for the waste water, construction and engineering industries as the sole agent for HAAS Abwassertechnik in South Africa. These include pipe stoppers, testing sets for house connections, rehabilitation packers, lifting bags, leak sealing bags, sealing wedges, leak-sealing bandages and rubber-moulded parts.

HAAS products are manufactured in Germany and the company is recognised as leading producer of sewer testing technology, which it supplies globally.

Werner Pumps has also partnered with Enz Technik AG to supply Swiss-manufactured nozzle solutions.

"We stock a comprehensive range of Enz nozzles that are compatible with our 100% locally manufactured jetting equipment, as well as other models available in the South African market," says Werner.

"We know that there are various challenges jetting equipment operators may come up against, from tree roots to debris, and concrete inflow. We also know that having the right

nozzle for the jetting job is half the battle won."

Nozzles available through Werner Pumps include the rotapuls, bulldog, pointed nozzles, grenade bomb, ejector nozzle, pipe cleaning nozzles, chain flail heads, cross-jet nozzles, impact cutter heads, spinning nozzles and bulldozer nozzles.

Werner Pumps also supplies hoses, fittings, hose crimpers and safety tripods. "We really try to offer anything and everything our customers might need in their operations, and to manufacture as much as possible in-house," says Werner.

"We back our products with a repair and servicing fleet, rental trucks, operator training, and ISO9001 certification. We're always looking for what more we can do to keep our customers coming back, and helping them to grow their businesses, which in turn grows ours."

Werner South Africa Pumps & Equipment (Pty) Ltd. has been designing, manufacturing, supplying and maintaining specialist high-pressure jetting equipment for 30 years. Aside from its in-house manufacturing capabilities, Werner Pumps specialises in the supply and maintenance of high-pressure jetting equipment, German high-pressure pumps, high-pressure sewer cleaning hoses, Swiss-engineered Nozzles by ENZ, and high-pressure guns, lances and cleaning equipment.

## IPR grows its offering to make customers more productive

HAVING built its reputation as a responsive and reliable partner in the field of dewatering, heavy duty slurry pump and dredging, IPR is now well positioned to provide customers with all they need.

MD Lee Vine says that the company's success is a combination of quality global brands and solid home-grown expertise. This allows IPR not only to represent and market the highest quality of equipment, but also to specify optimal solu-

tions and design customised products that support customers' efficient operation.

"Our professionalism over the years has led us into partnerships with the world's leading pump manufacturers," says Vine. "Among these collaborations is our role as master distributor for Atlas Copco dewatering pumps in southern Africa, as well as our agency across sub-Saharan Africa for the Toyo range of specialised heavy duty

submersible slurry pumps."

These brands, he explains, are today the core of a comprehensive rental fleet that drives IPR's vision of becoming the leading player in dewatering and heavy duty slurry pumping.

The IPR fleet has everything a customer needs – from electrical submersible pumps to diesel-driven pump sets – for a quick and sustainable response. Its success to date has also been underpinned

by its design expertise and modern workshop facilities.

"Our understanding of our customers' challenges, combined with our technical prowess, has allowed us to locally develop and manufacture the innovative SlurrySucker dredging system, for instance," he says. Designed to safely and efficiently cleaning settlement dams or process ponds, the SlurrySucker can remove up to 60 dry tonnes per hour.

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## ENERGYValves EXPANDS ITS PRODUCT RANGE

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# WoSA and DHL showcases positive work it is doing to improve the lives and communities in the Cape winelands

South Africa is the largest producer of Fairtrade wines in the world.



Picture credit: WoSA

WINES of South Africa (WoSA), and partner DHL, worked with Fairtrade Africa at ProWein 2024, to highlight importance of Fairtrade wines and the positive work the organisation is doing to improve the communities pf in the Cape winelands, by delivering seminars on the subject.

Fairtrade wine ensures producers in developing countries receive fair prices for their products, promoting sustainable development and improving livelihoods through fair labour conditions, environmental sustainability, and community development initiatives.

South Africa is the largest producer of Fairtrade wines and WoSA says with the industry's commitment to sustainability, both social and environmental, this is an important story to communicate.

The ProWein 2024 trade fair took place in Düsseldorf, Germany from 10-12 March and welcomed wine experts from all over the world from the retail and catering sectors. The focus was on around 5

400 exhibitors from 65 countries.

Over the course of the show, six seminars were held focusing on the stories of South African brands that carry the Fairtrade mark.

Presentations were given by Van Loveren, Stellenbosch Vineyards, Perdeberg Cellar, Du Toitskloof Wines, Org de Rac Organic Wine Estate And Koopmanskloof Vineyards.

**How it started**

Fairtrade - the organisation that sets labour standards - first certified wine in 2003. Its involvement in this sector stemmed from concern around the labour conditions of workers on large wine estates, as well as the difficulty faced by smallholder wine growers in developing countries to earn a decent living.

Vineyards that are Fairtrade certified receive at least the Fairtrade Minimum Price when they sell their wine (grapes) to a trader on Fairtrade terms. This protects against sudden price shifts and enables pro-

ducers to plan beyond the next planting and harvesting cycle. The Fairtrade Minimum Price for wine (grapes) varies depending on the cost of living and business in each origin area and on its cultivation method (it is higher for organic than for conventional cultivation).

The Fairtrade Premium - extra funds paid on top of the sales price - enables small-scale farmers and vineyard workers to invest in social, economic and environmental improvements.

Fairtrade has rigid health and safety standards to protect producers' well-being as well as that of nearby communities and ecosystems.

For instance, Fairtrade bans the use of some highly toxic agro-chemicals that are often sprayed in vineyards and prescribes rules for the safe application of less toxic ones.

Fairtrade also fosters workers' abilities to form or join independent trade unions and enter into collective agreements with vineyard owners.

# Efficient tank cleaning increases uptime, lowers costs

By Diane Silcock

VESSEL cleaning is fundamental in a multitude of industries ranging from brewing, chemical processing to food production. An expert in this area specialising in industry-leading spray technology is Monitor Engineering, sole agent in southern Africa for Spraying Systems Co.

MD Grant Orsmond says, "Our experience with tank cleaning is far-ranging. We've solved thousands of application problems in dozens of industries. For more than 70 years we've been helping breweries, food, beverage, pharmaceutical, paper, chemical, transportation companies, and more, clean tanks faster and more thoroughly. We encourage our customers to tell us about their tank cleaning or washing operations and we provide an optimal solution that saves them water, chemicals and time."

**Thoroughly understanding tank cleaning**

Anthony Wood, an expert at Spray Systems Co involved in the development and design of the company's tank cleaning product line, says, "Most people appreciate the benefits of automated tank cleaning - less cleaning time, reduced chemical and water use and improved worker safety. However, when it comes to comparing equipment options and techniques to optimise performance, a general understanding isn't enough. You need to dig deeper to ensure you're using the best equipment available for your operation and getting the best results."

"When evaluating tank cleaning equipment, one important consideration is impact, which is the amount of force the cleaning liquid applies to the tank sur-



Fluid Driven Turbine montage.

face. If we look at the effect that flow rate and pressure have on impact, operating at lower flow rates conserves energy, water and chemicals, while increasing flow rate increases impact at a greater rate than increasing pressure. Doubling flow rate increases impact by as much as 100% while doubling pressure increases impact by just 40%."

tor to take into account as once the recommended distance is exceeded, the impact will be reduced.

**Ways to shorten cleaning time**

How best to reduce cleaning time, so that tanks can be returned to service, is very much application dependent and considerations are: increasing impact by

consulting the experts and dealing with such issues immediately.

**Fermenter cleaning time halved**

Wood cites a case study where the cleaning time of a fermenter was reduced from 45 minutes to 20 minutes. The tank cleaning nozzle operating at 40 psi (2.8 bar) wasn't able to provide effective cleaning in one cycle. A second cycle was required, extending the cleaning time and increasing the use of water and chemicals. The solution was a fluid-driven tank cleaner with a two-nozzle hub operating at 90 psi (6.2 bar) which provided thorough cleaning of the fermenter in less than half the time previously required.

"Our experts are on hand to assist customers reduce maintenance time, lower costs, and increase system uptime. We additionally offer customers a valued-added service of a no charge sustainability assessment with our report advising how to save water, chemicals and time by optimising their tank cleaning processes," concludes Orsmond.

"Most people appreciate the benefits of automated tank cleaning - less cleaning time, reduced chemical and water use and improved worker safety."

He cautions that purchase decisions on impact alone would not be wise as not all nozzles are equal. Those that produce the same type of pattern, such as a solid stream, will perform differently depending on how they are designed and machined. He says that the difference in nozzle efficiency from different manufacturers can be as high as 20% and therefore recommends looking for nozzles with 98% to 99% efficiency rating. Spray distance is another important fac-

increasing flow and/or pressure; increasing temperature of the cleaning liquid; adjusting chemical/water concentration; repositioning the tank cleaning equipment in the tank; using multiple tank cleaners instead of a single unit; and use of a more efficient tank cleaner. Stripping and clogging are problems that need to be addressed as these can lead to contamination and unnecessary downtime/loss of production time, costly repairs and rebuilds. These problems can be avoided by



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Brewery facility.

# Local alcoholic beverages industry is pumping with promise

**Eddie Le Roux,  
hygienic pump  
specialist for Verder  
Pumps South Africa**

THE South African alcoholic beverages industry is brimming with opportunity. Forecasts anticipate that revenue at home generated solely by

sales in local super-markets and convenience - in the alcoholic beverages market segment will amount to \$10,34-million in 2024 and is expected to grow annually by 11,44% (CAGR 2024-2028).

This growth is spurred by an increased number of social drinkers and the trickling impact social trends will continue to have on changing consumer preferences. From demand for premium alcoholic drinks to artisanal gins, low-alcohol and craft beers, the market is deliciously full of locally made drinks to suit every taste.

With this positive outlook of future market growth, local producers are turning their attentions to rethinking and restructuring their plans from post-pandemic recovery of 24-months ago, where maintaining business continuity and sustainability in a far more competitive and changed-consumer market has become more the order of the day.

For mass, micro-and artisanal producers, this has placed a clean, lean and flexible

production process at the heart of a successful operation.

Processes need to be reliable and repeatable to accommodate; perishable ingredients, storage, short-lead times for retail clients and, of course, maintain impeccable standards of hygiene throughout production processes to guarantee product quality and the signature taste of each product with every sip.

To produce high-quality products consistently, and reduce waste throughout the production process, requires machines and equipment that are 100% fit-for-purpose, all while allowing for optimum production performance.

So, at the heart of maintaining the highest hygiene standards across production lines lie the careful selection of equipment. And fit-for-purpose hygienic pumping solutions that have been designed and built to eliminate any risk of contaminants during production are necessary for producers who want to stay ahead of the variety trends.

For example, throughout the production process, there are many areas where hygienic pumps with a modular design can be integrated, allowing for streamlined disassembly, cleanability and reassembly.

With this in mind, the pumping solution should be selected based on specifications such as:

- Reduced product losses due to leaks or product damage because of how well the pumps seals
- Cleanability and the solutions ability to perform optimally while still handling the products with care and meeting today's clean in place (CIP) and sterilisation in place (SIP) hygiene standards
- Cost effectiveness through proven operational efficiency
- Lower total cost of ownership (TCO), due to longer life-cycle of the pump and flexibility to replace ancillary equipment such as parts or pipes for example
- Ease of disassembly and reassembly for access for maintenance, as required

For producers looking to leverage local market disruption posed by shifting consumer trends and turn this into opportunities, processes must be reliable, repeatable and error-free.

And integrating the right equipment is critical to achieving this, sustainably. While the technical aspects of selecting the right pumping solutions for specific applications can be complex, it is an important purchase decision as continued and sustainable optimum production performance is dependent on the longevity of the equipment.

Producers, therefore, should look to a trusted and reputable brand that can offer not only a wide range of pumping solutions but solutions that are long-lasting, cost-effective and efficient – because they are 100% fit-for-purpose for the application.



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# Climate conditions problematic for grain producers

*Grain SA warns that large grain producing areas are 'already irreversibly' damaged.*

THE recent weather conditions that prevailed in the winter grain regions and current conditions in the summer grain regions have a significant economic impact on grain producers.

The winter grain production season faced several challenges with excessive rain in certain areas resulting in losses in yields and placing financial pressure on producers in affected areas.

In stark contrast to the winter grain production regions, the summer grain production regions are currently experiencing major challenges with drought conditions.

The extreme heat and dry conditions caused the harvest to deteriorate much faster than initially expected.

"We have seen large areas where the damage is already irreversible," stated Tobias Doyer, Grain SA CEO.

"We have seen irrigated maize which is also experiencing challenges due to load shedding as well as the heat conditions.

These challenges are experienced at a time where margins on crops such as maize are already low due to international supplies and international price pressure.

This makes the



**Tobias Doyer, Grain SA CEO.**

recovery period of individual producers very difficult in challenging production conditions.

Grain SA is very concerned about the impact of the drought and market conditions on grain producers. International competitors enjoy the benefits of subsidised, affordable comprehensive insurance, providing them with a competitive advantage.

Similar local systems could have substantially supported South African producers given the challenging production conditions.

Grain SA continuously monitors the production conditions and publishes a qualitative production overview (<https://bit.ly/3SPjSGs>).

"The National Crop Estimate Committee's first estimate, which was published at the

end of February, will be important to evaluate the national situation, but the reality is that there are currently several individual producers who are facing significant losses due to the drought and markets", according to Derek Mathews chairman of Grain SA and producer in one of the areas experiencing significant challenges.

Grain SA sympathises with grain producers on the current conditions and the damage being done to their crops. In addition, Grain SA will engage with the necessary role players and further suggest that producers who have already experienced significant challenges, contact their input financiers at an early stage to ensure that necessary changes can be made in time.

# Organic and Natural Products Expo hits Cape shores in April

THE Organic and Natural Products Expo is set to hit the shores of Cape Town for the first time, from 26 to 28 April 2024.

"Following the unprecedented impact of the 'bigger, better' 2023 Johannesburg show, an expo in Cape Town had to be the next step," says event organiser John Thomson.

More than 500 trade visitors have already registered and about 100 exhibitors are set to take part in one of the country's premier lifestyle shows, to be held at the International Convention Centre in Cape Town.

Show sponsor Standard Bank will host the SMME Showcase

Pavilion, to throw light on the business potential of SMMEs as innovators, entrepreneurs and real contributors to the economy. The Small Enterprise Development Agency (SEDA) has taken 28 stands as a show of support for SMME growth.

Many exhibitors from the Cape have already signed up, while others from Durban and Knysna have also registered.

The official Tourism, Trade and Investment Promotion Agency for the Western Cape (Wesgro) with interests in agro-processing, has shown support for the expo. "With Wesgro accounting for almost

half of the country's agricultural exports, its role in the Western Cape economy is highly valued and we are thrilled to have them on board," says Thomson. "We are strongly aligned in terms of agricultural beneficiation and marketing export-quality goods sourced from home-grown raw materials and our expo showcases these opportunities," Thomson adds.

The Organic and Natural Products Expo is endorsed by industry stakeholders such as The South African Organic Sector Organisation and the Health Products Association, among others.

# Glyphosate overuse in agriculture – the silent killer

**By Diane Silcock**

GLYPHOSATE, a toxic herbicide, introduced onto the market around five decades ago as a weed killer in agricultural farming, continues to attract much attention internationally.

Many environmental and agricultural, as well as health, organisations have called for an outright ban, with some countries having put in place total or partial bans, and for good reason.

Agricultural land is sprayed relentlessly, saturating and polluting the soil, the air and our waterways, adversely affecting the nutritional value of crops and the health of farmworkers and surrounding communities, animals, and aquatic life.

Research indicates that South Africa used an alarming 7 977 tons of Glyphosate in 2017 compared to the 3 721 tons in 2009, doubling its use in eight years, according to international market research company Kynetec.

This is likely due to the widespread adoption of genetically engineered crops that are resistant to the herbicide. Moreover, let's not forget that the herbicide has been in use for around 50 years.

Globally, the figures are even more staggering. The overall global application of Glyphosate, for all purposes – both agricultural and non-agricultural – increased more than 12 times in two decades, from about 67 000 tons in 1995 to 826 000 tons in 2014.

**A call to move from old technology to green technology**

"Glyphosate is old

technology," says Burt Rodrigues, CEO of Biodx, a company harnessing the power of biotechnology.

"It's a small molecule which, when formulated, can be toxic, taking up to 290 days to biodegrade. It gets through everything causing damage, much like microplastics. These conventional chemicals from the 50s to 70s have predominantly been hogging the market," says Rodrigues.

"The regulatory body in Europe is encouraging manufacturers to develop green technology which could be anything from 30% to 50% more effective, however, there is a problem with virtue signalling, resulting in their apathy to take incremental steps to adopt new technologies."

Rodrigues says: "The danger of using non-biodegradable products is the long-term impact it has on the land.

Normal farming practices mean farmland is given rest periods to recover before new planting begins. This is when insects and bugs normally do their work on the land, which is essential to regain its health and nutrients. That is, if there are no pesticides and herbicides lingering in the soil. Without bacterial processing, the planet becomes dead rock and you have nothing. With Glyphosate in the soil, this is exactly what happens."

**Glyphosate's threat to human health**

Farmworkers are continually exposed to toxic herbicides and pesticides, often without protective clothing or adequate training, and widespread illiteracy means that label warn-



**Burt Rodrigues, CEO of Biodx.**

ings go unnoticed.

Consumers are increasingly concerned about the nutritional value of food and are seeking organic alternatives and food supplements.

Yet, are they fully aware that what's on their dinner plate could be making them sick? Cereals, especially oats, wheat, sugar, maize, fruit and vegetables, even meat, contain traces of Glyphosate and other poisonous substances.

The International Agency for Research on Cancer (IARC) classified Glyphosate as probably carcinogenic to humans; the herbicide moved from a possible carcinogen (Group 2B) to a probable (Group 2A) carcinogen.

The Cancer Association of South Africa supports research indicating that Glyphosate could be responsible (among others) for endocrine disruption, increased risk of cancer, particularly non-Hodgkin's Lymphoma, and toxic changes to living cells. Other research links it to neurotoxicity, autism spectrum disorders in children exposed

from prenatal age, even Parkinson's disease.

CANSA advocates that planting of edible crops should only take place in soil which is totally free from any Glyphosate residue.

Sadly, this could take decades or even a lifetime, considering millions of litres of the herbicide has been sprayed liberally on agricultural land for around 50 years, plus the debate and push to ban it, rages on.

Regenerative South African farmer, Angus McIntosh, says, "Chemical-based agriculture is a modern aberration which really took hold post World War I and has since then captured academia and media to the extent that it is deemed conventional agriculture. The solution is to go back and embrace regenerative agriculture."

With today's modern technology and the research available, there is ample reason to switch to alternative solutions that will protect our environment, human and animal health. Let's work with nature, not against it.

# Icon brand status for Bull Brand

BULL Brand has again been voted as an Icon Brand in the authoritative Ask Afrika Icon Brands 2023/2024 survey which recognises South Africa's most loved and trusted brands.

Bull Brand was also voted the country's favourite canned meat brand.

The Icon Brands survey is the largest of its kind in South Africa and covers 18 sectors,

hundreds of brand categories and thousands of brands. A total of 52 brands achieved Icon status.

Over 24 700 consumers took part in the survey, representing 28.6 million adult consumers.

Acquired by RFG Holdings in 2013, Bull Brand has been an integral part of South African households for the past 67 years. Bull Brand is the market leader

in canned meat products with a 68% market share.

Bull Brand's 'Stand Strong, Stand Proud' brand proposition not only resonates with adult consumers.

In the most recent Sunday Times GenNext survey of over 7 000 South Africans aged 8 to 24, Bull Brand was voted among the country's coolest brands in the food category.

RFG Foods, the maker of Bull Brand, is an internationally recognised food producer that is home to market leading brands such as Rhodes Quality, Squish, Hinds and Pakco.

RFG Foods also makes canned fruit, jam, vegetable and meat products, fresh ready made meals, pies and pastries, dairy products, and juice and purees.



# Leading the market in boiler burner solutions: pioneers of safety in the industry

**COMBUSTION TECHNOLOGY**, a leader in oil and gas burners and boiler installations and services in the Southern Hemisphere is known for delivering cutting-edge, highly efficient solutions.

The company has long earned a reputation for excellence in product quality, sales, installations, and after-sales service.

As a registered permit holder status for oil and gas burner sales, installation, and commissioning, that adheres strictly to SANS 329 and SANS 13577 standards, it stands apart in an industry where safety standards are paramount.

As exclusive distributors for renowned brands such as Riello Burners, BONO Boilers, I.VAR Boilers, Unical Boilers, Limpsfield Burners, and Autoflame Combustion Management Systems, Combustion Technology ensures that clients receive nothing short of exceptional products and support.

Recognising the utmost priority of safety within our industry, Combustion Technology emphasises the necessity for all commissioning and service technicians to be SAQCC Gas Registered Practitioners, adhering strictly to the Pressure Equipment Regulations (PER).

The absence of registered practitioners can carry severe consequences, including the risk of catastrophic events such as boiler plant explosions. By steadfastly adhering to the requirements of SANS 329, Combustion Technology not only provides reassurance for clients but also ensures accountability and minimises the risks linked with non-compliance.

Moreover, all of Combustion Technology's oil and gas burners and components are approved and registered by SAGA (South African Gas Association), further underlining their commitment to safety and quality. Combustion Technology's team maintains the highest quality standards through rigorous training and dedication. This proactive approach demonstrates their ongoing engagement and contributions to the industry.

In terms of product offerings, Combustion Technology provides a comprehensive range of boilers, including steam boilers, hot water



boilers, thermal oil boilers, fire tube boilers, water tube boilers, diathermic oil heaters, and biomass boilers.

Their burner solutions encompass industrial burners, gas, oil, dual fuel, hydrogen and biogas burners, with options for single, two-stage, and modulating operation.

As exclusive distributors of Autoflame Management Software, they offer advanced burner and boiler controls, including digital combustion controls for all makes retrofitted on all makes and of boilers and burners. This allows remote emissions monitoring and management equipment, as well as flame safeguard controls (also registered by SAGA).

With their cutting-edge micro-modulating systems, Combustion Technology provides optimised combustion solutions that significantly contribute to reducing emissions and promoting sustainability:

- **Enhanced Efficiency:** Achieve a 7-12% reduction in fuel consumption compared to traditional linkage systems.
- **Cost Savings:** Experience lower maintenance expenses thanks to the precise positioning system.
- **Emission Reduction:** Autoflame systems can decrease CO<sub>2</sub> emissions by up to 10%.
- **Integrated Automation & Safety Features:** Benefit from fully automated flame safeguard, valve proving system, VSD control, scheduling, sequencing, and other automatic settings already integrated into the systems.

Combustion Technology's unwavering dedication to innovation, quality, and safety has cemented its position as the go-to provider for Boiler Burner solutions for over 37 years.

With a focus on delivering modern, highly efficient solutions while adhering to the highest safety standards, the company continues to lead the industry into a brighter, safer future.

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# How top companies ensure sustainable water and savings

*Water Sustainability has become good business - how do companies get it right?*

WHEN a drought forced the Tennessee Valley Authority to reduce its hydropower generation, it lost in the region of \$300-million. And when a Coca-Cola plant in India started to compete with local farmers for water resources, it eventually shut down.

The most important detail from both these examples is that they occurred over 15 years ago, and there have since been more examples of how competition for water is a growing risk for businesses.

Yet the picture is not entirely gloomy, says Chetan Mistry, strategy and marketing manager at Xylem Africa.

“The silver lining of water stress is that we’ve been generally passive at it and leaving a lot of opportunities on the table. The growing problems with water is not a reckoning but instead a call to start doing more. And since water has not received the same level of diligence and planning as other

resources, companies can get results much faster with minimal interventions.”

## Use cases of water stewardship

Water management is becoming a cornerstone consideration for healthy ESG strategies, and more investors and market analysts look for a positive water attitude in companies. Numerous companies are living up to these ideals, making interventions that also align with their growth strategies.

3M, the global manufacturing conglomerate, set a goal to reduce its water use by a quarter and return clean water to the environment. It relies on water purification systems to reduce its pollution footprint and recycles water to improve resilience.

The vehicle giant Ford has been on a mission to reduce its water consumption. An average car requires almost 150 000 litres of water to manufacture — by reducing that demand

“The silver lining of water stress is that we’ve been generally passive at it and leaving a lot of opportunities on the table. The growing problems with water is not a reckoning but instead a call to start doing more.”

by 70%, Ford has saved more than 41-billion litres of water through its water-management plans.

High-tech firms are also very water conscious: Meta, the owner of Facebook, WhatsApp, and Instagram, uses thousands of litres to cool its data centres.

The company adopted a policy to return more water than it uses by 2030 and has already shrunk the water usage at some of its data centres by more than 70%.

UK municipalities are investing in water recycling schemes to battle water scarcity. China is bullish on developing eco-friendly wastewater sites in rural areas that maintain hygiene standards while keeping the surrounding environment clean.

And water technology leader Xylem has reduced its water use by 26% since 2019.

“If you consider how many parts of your business needs water, it’s not something you’d

leave to chance. Saving water is very attainable once you commit to a working strategy, based on water management and aligned with your resilience and growth plans,” says Mistry.

“It’s not a sacrifice to manage water. It’s an investment that boosts efficiency, cost management, and sustainability.”

Water scarcity is arguably the most significant emerging risk to businesses and communities. Fortunately, numerous water conservation and management tactics can reverse the tide. At the very least, they help prepare us for when water becomes even scarcer.

“This is not new territory—we’ve worked with many public and private organisations across the world to develop water systems that recycle, revive and make their operations more resilient. Water sustainability has become good business—and it’s easier to get right than ever before.



Chetan Mistry, strategy and marketing manager at Xylem Africa.

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## Taking the pressure out of water pressure measurement

WATER treatment systems in metropolitan areas demand careful monitoring and management processes across sprawling networks.

Process automation through the use of pressure transmitters can be a major aid to the personnel in charge of ensuring the operation of the many moving parts that make up a water treatment system.

Companies choosing VEGA for their process automation know that the company offers more than precise and reliable pressure sensors and instrumentation.

Water treatment companies understood the benefits of using pressure sensors throughout their treatment facilities.

In theory, these instruments would allow them to easily automate their processes so that they would have more time to work on more pressing matters.

Not all instrumentation is created equal, and by receiving inaccurate readings, companies face major difficulties and delays, costing thousands of rands worth of equipment damage and severe process delays.

Using sensors from various manufacturers can be challenging as it might work on a tech-

nical level. In practice, it can prove to be a headache.

One of the biggest issues faced is the end-user experience, as the different devices each have a unique way of configuration and setup and the knowledge gained on learning to operate and calibrate each sensor typically wasn't transferable to using another.

Another hurdle could be obtaining support for each of these devices.

In some cases, water treatment facilities are left to their own devices when configuring and troubleshooting are to be done.

VEGA clients found that standardizing their pressure devices to a single manufacturer simplifies the operation of the water treatment plants significantly.

VEGA offers invaluable support to their clients, touring facilities and finding custom solutions for their unique challenges and needs. It's not just the time investment, VEGA sensors offer unparalleled ease of configuration, precision and reliability.

VEGA has introduced sensors equipped with Bluetooth connectivity, which allows operators to wirelessly monitor, set up and adjust them



VEGADIF 85 universal pressure transmitters.

through the VEGA Tools App.

This App is available for download in the Google Play store as well as the Apple App Store.

Using the VEGADIF 85 universal pressure transmitters to handle influent and effluent flow metering in locations throughout systems, water treatment facilities can obtain high-precision measurement value detection. The VEGADIF 85 is highly reliable through the integrated overload diaphragm, and functions as a multivariable sensor through integrated measurement of absolute reliable pressure.

VEGABAR 38 pressure sensors can be utilized to meas-

ure levels on tanks and chemical feed & fill systems, making it easier for system operators to view the pressure status thanks to the sensor's innovative, configurable colour LED light ring and on-site operation with its VDMA menu structure. This sensor offers easy integration into control systems through IO-Link communication.

The VEGABAR 82 pressure transmitters measure at the inlets and outlets on vaults. This unique sensor offers an abrasion-resistant ceramic measuring cell, ensuring reliable operation in the toughest process conditions.

It provides reliable measurement down to the last drop through the smallest measuring ranges with high accuracy. This in turn can enable massive cost savings on maintenance costs.

VEGAWELL 51 is suitable for continuous level measurement in deep wells/ reservoirs and rivers, with a maximum cable length of 1000m. The robust ceramic measuring cell offers maximum overload and vacuum resistance, making it a highly reliable addition to any water treatment and distribution facility's process automation arsenal.

VEGA offers true benefits of process automation to companies operating in the water and wastewater industries. VEGA's proven mix of precise, reliable instruments and commitment to customer support means that plant operators are empowered by process automation instead of struggling with usability or maintenance, freeing them to focus on their other responsibilities.

By doing that, VEGA takes the pressure out of pressure measurement.

## City of Cape Town awards Tygerberg and Bellville campuses for efficient water management

THE City of Cape Town recently awarded a 5-star and 3-star rating to the Tygerberg and Bellville campuses for effective water management to ensure compliance with the Institution's water licensing conditions.

Implementing water strategies at the Tygerberg campus resulted in a 40% reduction in potable water consumption. The Bellville campus used water from the adjacent deep lake to supply water to the desalination plant, which resulted in a substantial reduction of potable water with minimal supply from the city of Cape Town's grid.

water projects and initiatives and implemented them across the institution, including the Tygerberg and Bellville campuses. This included upgrading bulk infrastructure, boreholes at Tygerberg, a new deep lake system at the Bellville campus, changing shower heads, taps, and toilet cisterns from twelve to six liters, and implementing greywater systems.

Gafieldien said all these initiatives enabled them to reduce potable water consumption, with the added benefit of reducing the municipal bill, while building resilience in the insti-

ter lake projects at the Bellville campus. SU was allowed to pump water from the 52-meter-deep lake. We used this 12-degree water to supply water to three areas on the campus. Firstly, in the HVAC plant; secondly, in the filtration plant; and thirdly, to irrigate the landscape.

Raw water from the lake is filtered in the filtration plant (reversed osmoses), which supplies all campus buildings."

John confirmed that this system produces an estimated 2 051 kl per month, equivalent to one Olympic pool of drinking water. According to him, this campus should theoretically not use potable water from the municipality. However, it is impossible due to the impact of load-shedding, as it reverts to the municipal water supply.

Gafieldien said that by adopting its environmental sustainability plan in 2022, SU is now on a new sustainable trajectory for carbon neutrality by 2030 and net zero by 2050.

Green building award

Furthermore, the Green Buildings Council of South Africa (GBCSA) certified our Biomedical Research Institute (BMRI) building with a 4-star rating as a newly built green building. The BMRI was SU's first building to receive this certification from the GBCSA.

The GBCSA rating system includes energy efficiency, water, and waste management, using green materials and construction methods, indoor air quality, transport, land use, emissions, innovation, and productivity.

"Buildings consume 75 percent of the utilities and are the largest contributor to the institutions' emissions and carbon footprint. Therefore, we focus on improving how we measure and report on the performance of our extensive portfolio of +450 buildings. We also ensure our buildings are much greener and reduce the impact on the environment and our planet," said Gafieldien.

**"Our Environmental Sustainability Plan stipulates that we must reduce the impact on the earth's finite resources — energy and water. One of these strategies is the Water Optimization Strategy..."**

These water solutions resulted from work done more than a decade ago at Facilities Management when a cross-functional team developed the Green Business Plan, which detailed specific targets for various environmental sustainability elements. It has since evolved into the institution's 2022 Environmental Sustainability Plan.

"Our Environmental Sustainability Plan stipulates that we must reduce the impact on the earth's finite resources — energy and water. One of these strategies is the Water Optimization Strategy," said SUFM's Director of Property Services, Nadeem Gafieldien.

"While implementing these strategies in 2018, the Western Cape experienced the worst droughts. With Day Zero looming, we managed to fast-track our water optimization strategy. We turned this crisis into an opportunity by implementing these strategies, requiring changes in our systems to make future environmental crises."

Gafieldien said they developed several

tution's water systems by optimising and diversifying this finite resource."

"While this represented certain advantages, it also came with specific legislation and regulatory requirements. This legislation requires regular testing, management, reporting, and audits on the water quality as stipulated in the water licenses," said Gafieldien.

SU's environmental sustainability manager, John de Wet, confirmed that the Tygerberg campus's water consumption is 11 638 kl monthly, which equates to six Olympic pools.

An estimated 9 514 kl, or the equivalent of five pools, is supplied by the municipality, and 2 124 kl, or one pool, comes from the Tygerberg campus from boreholes drilled in 2016. This initiative resulted in a 20% reduction in potable water supplied by the City of Cape Town and made us more resilient.

De Wet said the Bellville campus has a 50-meter-deep quarry; all rain and stormwater are collected in this lake.

"In 2018, SU implemented the deep-wa-

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# Using data to increase access to water for shared prosperity in Africa

**By Satyajit Dwivedi, regional director, EMEAP, energy utilities, mining & metals, public sector, SAS**

DATA will play an invaluable role in helping public and private sector stakeholders across Africa identify ways to increase access to water for all while managing this commodity.

From climate and weather forecasting to water monitoring, measuring, demand forecasting, and predictive maintenance on infrastructure, understanding data becomes a key tool in accomplishing water access.

“Leveraging cloud based artificial intelligence (AI) technology with sensor data and drone camera feeds presents a promising avenue for mitigating various flood-related risks”

Take disaster management as an example. Flood risks in urban areas pose significant challenges, leading to severe losses in terms of human lives, infrastructure, vehicles, and biodiversity. These events can cause widespread devastation, disrupting communities and economies.

The impact extends beyond immediate damage to buildings and roads, affecting ecosystems and natural habitats as well. Addressing flood risk in cities requires comprehensive strategies that prioritise both human safety and environmental resilience, emphasising the importance of proactive planning, infrastructure improvements, and sustainable development practices.

Leveraging cloud-based artificial intelligence (AI) technology with sensor data and drone camera feeds presents a promising avenue for mitigating various flood-related risks. By facilitating efficient flood response management, this approach enables municipalities to better address the challenges posed by flooding.

Solar-powered sensors and drones, coupled with cloud-based predictive analytics, offer real-time spatial situational awareness, allowing authorities to monitor flood severity and hazard indicators promptly. Critical data, including damage extent, flood depth, flooding arrival time, flooding duration, sediment or contamination

load, water height, and flow rates, are transmitted back to the cloud via cellular communications.

This telemetry and video feed are then integrated with weather data and predictive

models are built that decides a specific response, enhancing the overall flood monitoring and response capabilities.

Machine learning and AI techniques can forecast potential flooding

incidents, identify risk zones, attach risk scores to properties, infrastructure, and vehicles, and notify response teams proactively.

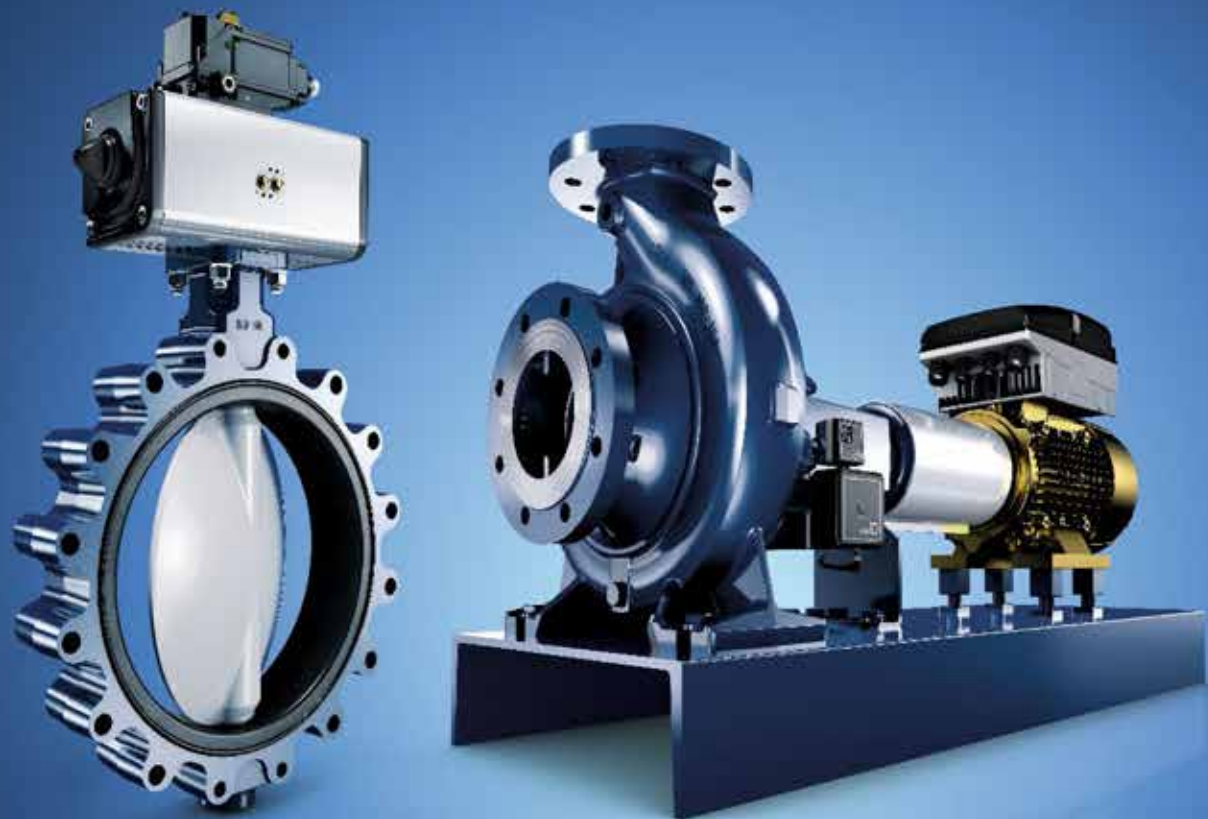
This data can be incorporated into a mobile application inte-

grating real-time decisioning with historical data, alert notifications, predictive summaries, and key statistics, aiding municipalities and local city administration in optimising their action plans.



Satyajit Dwivedi, regional director, EMEAP, energy utilities, mining & metals, public sector, SAS.

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# If you do not measure, you cannot fix

IN the face of escalating water scarcity and sanitation challenges, South Africa has embarked on a critical journey towards sustainability and efficiency in water use.

The National Water Resource Strategy Third Edition (NWRS3) for 2023 delineates a comprehensive plan aimed at securing the country's water future for the next 10 years.

Amidst this strategic framework, the integration of advanced technologies such as Hexing Group's ZLINK ultrasonic water metre emerges as a pivotal solution, promising to revolutionise water management and conservation efforts.

The NWRS3 addresses these challenges head-on, proposing a holistic approach that encompasses improved water resource planning, enhanced infrastructure maintenance, and the promotion of water conservation and demand management (WCDM) practices.

At the heart of effective water management is the ability to measure water use accurately and efficiently. This is where Hexing Group's ZLINK ultrasonic water metre comes into play.

Leveraging cutting-edge ultrasonic technology, the ZLINK metre offers unparalleled accuracy in water measurement, ensuring that every drop is accounted for. This precision is crucial for identifying leaks, reducing water loss, and promoting responsible water use among consumers and industries alike.

Moreover, the ZLINK metre's smart capabilities align perfectly with the NWRS3's emphasis on adopting innovative technologies to enhance water resource management. Its real-time data monitoring and analysis features enable water utilities to make informed decisions, optimise water distribution, and respond promptly to emerging issues.

This level of efficiency and responsiveness is essential for South Africa to achieve its water conservation goals and ensure sustainable water supply for all communities.

The integration of Hexing's ZLINK ultrasonic water metre into South Africa's water management systems represents a synergy between policy and technology.

By providing accurate, real-time data on water usage, the ZLINK metre empowers stakeholders at all levels to make evidence-based decisions, fostering a culture of sustainability and efficiency. This technological solution not only supports the objectives outlined in the NWRS3 but also sets a precedent for how innovation can address some of the most pressing environmental challenges of our time.

In conclusion, as South Africa navigates the complexities of water scarcity and strives to meet the ambitious goals set forth in the NWRS3, the adoption of advanced technologies like the ZLINK ultrasonic water metre by Hexing Group is not just beneficial—it's imperative.

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# Eastgate Shopping Centre harvests rainwater to boost sustainability

IN a step that sets an example for South Africa as a water-scarce country, Eastgate Shopping Centre has contracted Concor to install a rain harvesting and water treatment facility.

This will also make use of groundwater, ensuring optimal use of available water and reducing the centre's

reliance on municipal supply.

The new facility comprises two segmented steel tanks capable of storing about 200 000l of water. Rainwater runoff from the roof top parking area – which currently runs into the city's stormwater drains – will be piped into these tanks.

This will be supplied

by groundwater resources under the centre which will be pumped up and stored. These tanks are linked by a 300m water line to the centre's existing buffer tank. Working in a live shopping centre environment, the water pipe has to be run through a busy parking area and across a public road, requiring careful

planning and traffic management.

The tanks will hold over 200 000l, demanding a firm foundation. In preparation for this work, test pits were excavated to ascertain the presence of services, piping or ducting – as accurate as-built plans were not available.

Concor considers

these kinds of processes as vital to risk mitigation at every step of a project. In addition to uncovering various services, the test pits also revealed a concrete crane base some 500 mm in depth, which had to be removed before foundation works could begin.

In this case, geological conditions called

for the use of twelve 130 mm micro-piles to ensure the stability of the tanks, following which raft foundations were cast over a 5m by 10m area. Construction of the foundations and the tanks is in close proximity to an existing LPG gas chamber that serves tenants such as restaurants in the centre. This requires special

attention to health and safety procedures, including regulated permissions and certain restrictions on the use of electrical equipment in the area.

The project includes the installation of filtration and treatment facilities, ensuring that the water is potable for use throughout the centre.

## City invests R49,2-million in new Treated Effluent Pump Station

THE City of Cape Town's Water and Sanitation Directorate started construction on the Treated Effluent Re-use (TER) Scottsdene Pump Station, aimed to expand the accessibility of treated effluent.

Treated effluent is a viable alternative water source for non-potable purposes, which can significantly reduce the demand on drinking water supply.

Situated at Scottsdene Wastewater Treatment Works (WWTW), this pump station and filtration facility project was initiated in September 2023.

The first phase of work is scheduled for completion by February 2025. When completed, the pump station will be capable of supplying six megalitres per day (million litres per day) of treated effluent to the Scottsdene treated effluent network, extending about 3,6km currently, with a planned extension to 14km starting in July 2024.

Treated effluent undergoes a thorough treatment process at WWTWs to eliminate contaminants, rendering it suitable for safe discharge back into the environment. A portion of this treated effluent undergoes filtration before being distributed to customers for re-use.

The city produces treated effluent from nine WWTWs through a network of treated effluent pipes, 31 draw-off points, and nine collection points across the city. This resource serves various industries, including construction and irrigation for sports grounds, parks, schools, and golf courses.



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## Don't get burned: the benefits of a bespoke fire response system

ACCORDING to a 2022 report by insurance giant Allianz Global, fires led the most expensive losses for South African businesses over a five year period – more than 60% of the value of all claims.\*

That's why the MD of Intellisec, Denzil Steyn, believes that a suitable fire detection system installed by a certified company is essential for large corporations, warehouses or shopping centres.

"A fire that goes undetected can quickly result in significant damage to your property and assets; and while you may be insured, your factory or warehouse will likely have to close for repairs for an indefinite period and that can be incredibly expensive," he said.

But just having a fire detection system may not guarantee an insurance pay-out. If the system isn't properly specified for your structure, your insurance company can deny the claim. Legally, any occupied building taller than 30 metres (approx. 10 floors) or a floor that exceeds 5 000m<sup>2</sup> in size is required to have a fire detection system.

Plus, compliance is only met if your system meets certain criteria. Specifically, it must be designed, installed and maintained by competent persons conforming to SANS 10139, i.e., technicians trained and certified by the South African Qualification & Certification Committee (SAQCC) or Fire

Detection Industry Association (FDIA).

Further to this, the system must be serviced every six months in order to remain compliant. All of this is a good reason to work with a company that specialises in fire detection systems – and can meet all legal requirements.

Every business has different needs, which is why Intellisec works on a case by case basis to create bespoke, turnkey systems that meet specific requirements.

This can involve a combination of various detection devices – all controlled by a central fire panel – depending on the nature of your business. The object is to remove the element of human error as far as possible.

## The essential steps inspecting fire extinguishers

FIRE extinguishers are an essential part of your business because they will make the difference between life and death in a fire.

An easily accessible fire extinguisher can allow rapid response to minimize the harmful effects of a fire on the health of employees and thus limit material losses and production stoppages of affected businesses.

This is why carrying out a rigorous control of them is essential. To ensure safety in the event of a fire, it is recommended to carry out an annual inspection of fire extinguishers and to train employees in carrying out risk analysis so that they can take ownership of the steps and apply them to the day-to-day.

### Annual inspection of fire extinguishers

First of all, it is necessary to carry out an

annual inspection and mandatory to carry out a monthly check of fire extinguishers. In addition to a visual inspection at least once a year, it is important to turn fire extinguishers upside down to decompress the powder they contain.

Thus, the contracted company verifies that no extinguisher is damaged from the outside, thus being able to determine if a hydrostatic test is necessary. This test consists of verifying the solidity as well as the hermetic properties of tubes and pipes under internal water pressure.

### Training of workers

Then, it is your duty to inform the workers of the company so that everyone performs summary analyses throughout the year.

Here is a list of steps to pass on to employees:

- Keep a register including each inspection carried out as well as the list of items checked or to be checked;
- Make sure at all times that access to the fire extinguishers is not obstructed and that they are easy to access;
- Make sure the fire extinguisher is in good condition. More specifically, that all the parts useful for the proper functioning of the extinguisher are in place and that the container is not damaged;
- Allow yourself to shake the extinguisher to make sure the powder inside does not harden.

To ensure the proper functioning of the extinguishers, it is necessary to carry out preventive maintenance

every six years for powder extinguishers and five years for water extinguishers, type K, CO<sub>2</sub>.

Remember that a fire extinguisher should normally be changed after use, but can also be recharged by a professional who will do the full inspection beforehand.

Focusing on an inspection means ensuring the quality of the supervision of your safety within the company. To learn more about the procedures to put in place to prevent fires, consult our page to prevent fires, we must recognise the risks.

Brady protection Incendie SA is an established company based in Johannesburg, South Africa, committed to the preservation of life and property through installations, maintenance, upgrades and service of fire detection & fire sup-

## Safeguarding your investment: The first trademarked cylinders by AST

AT Alien System Technologies (AST), our commitment to delivering products of exceptional quality and reliability extends to trademarking the design of our Pyroshield® cylinders. Ensuring the safety of your organisation, buildings, and personal well-being is our enduring commitment, spanning the entire lifespan of our products.

### The Safeguarding Trademarked Cylinders

AST goes a step further in protecting your

investment by being the first company to have received a get-up trademark on the Pyroshield cylinders. This not only represents a commitment to quality but also serves as a recognition of the unique and distinctive features that set our products apart in the industry.

### Expertise, Compliance, and Peace of Mind

**1. Emphasising the Role of Trained Technicians:** Expertise: Our trained technicians bring specialised knowledge and skills crucial for the

correct installation of AST's fire extinguishing and detection systems. Their expertise guarantees installations that adhere to Original Equipment Manufacturer (OEM) design specifications and industry best practices.

**Warranty Compliance:** AST mandates that installations, commissioning and service maintenance be conducted solely by certified fire technicians to maintain warranty coverage. Opting for certified professionals safeguards your investment, providing a safety

net in case of equipment malfunction.

**Insurance Requirements:** Certain insurance policies stipulate installations by certified technicians. Choosing certified professionals ensures compliance with insurance requirements, mitigating the risk of coverage being repudiated during a claim.

**2. Importance of Proper Inspection and Refilling:** As the first company to get a get-up trademark on their IG55 fire extinguishing cylinders in South Africa, AST stresses

that beyond installation, the proper inspection and refilling of Pyroshield® bottles are equally crucial. We highly recommend to our clients, and systems end-users to entrust this task to AST-trained technicians to mitigate potential risks associated with incorrect procedures.

**Impersonation Warning:** It has come to our attention that certain unscrupulous companies may attempt to impersonate AST. We strongly caution our clients against such impersonation attempts and emphasise the importance of verifying the credentials of any company claiming to represent AST.

**Cylinders Filling Protocol:** For optimal safety and performance, AST recommends that cylinders be filled only by an AST-trained fire technician or by AST themselves. This ensures that the stringent quality and safety standards are maintained throughout the entire process.

### Verify AST Accreditation

To verify the accreditation of an installer or integrator claiming to represent AST or to request a copy of our trademark registration document, please contact us directly: Call: 011 949 1157 (Sales)

### WHO IF FILLING YOUR PYROSHIELD® SYSTEM?



Email: support@astaf-rica.com

**The Cost of Cutting Corners:** While the lure of short-term financial gains may make non-approved fire engineering firms seem enticing, the potential long-term consequences far outweigh these immediate benefits. At AST, we strongly urge our valued clients to prioritise certified technicians for installation, inspection, and refilling.

**Your Safety Depends on Your Choices:** Neglecting these critical steps could lead to disaster precisely when you rely on your fire detection or suppression system the most. Your safety, the protection of your assets, and your peace of mind hinge on making the right choices in safeguarding your AST Fire equipment.

### Conclusion

In conclusion, choosing non-approved fire engineering firms to handle AST Fire equipment poses significant risks. We emphasise the importance of certified technicians for installation, inspection, and refilling to maintain reliability, warranty compliance, and adherence to insurance requirements.

As you make decisions regarding your fire protection systems, remember: your safety and peace of mind depend on the choices you make today. Opt for the expertise and commitment of AST-trained technicians to ensure that your AST Fire equipment, with trademarked cylinders, performs at its highest level when you need it the most.

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# Polarium South Africa achieves 100% renewable energy milestone

POLARIUM South Africa is proud to announce its complete transition to 100% solar-powered operations, a significant milestone in our commitment to sustainability and to take climate action.

In June 2023, Polarium South Africa took a step forward by installing a 171kWp Solar PV system. This initiative aligns with Polarium's goal to transition all global operations to 100% renewable energy sources by 2026, thereby reducing its carbon footprint and embracing environmentally friendly practices across its operations.

“We are proud to lead by example and pave the way for others to follow suit by covering all our energy consumption with renewable sources...”

“Prior to implementing the PV system, we prioritised features like natural lighting, insulated ceilings, more efficient inverter air-conditioning and energy-efficient LED lighting to first optimise our energy consumption and to reduce waste before installing renewables.” says Etienne Gerber, GM of Polarium South Africa

The installation not only meets Polarium's current energy needs but also positions the company for future growth by utilising the maximum PV capacity allowed by the City of Cape Town. Polarium has also collaborated with local authorities to secure approval for exporting surplus energy back into the grid, contributing to South Africa's shift towards cleaner energy sources.

“This agreement is essential for Polarium to claim renewable energy in our greenhouse gas accounting. With this development, we can cover all our energy consumption on-site using renewable energy, setting a precedent for sustainable business practices in the region. We are proud to lead by example and pave the way for others to follow suit by covering all our energy consumption with renewable sources and contributing surplus energy to the grid,” says Erika Sun-

dell, senior climate and sustainability manager at Polarium

Polarium's commitment to renewable energy is crucial in a country where coal dominates power generation. By diversifying the energy mix and reducing carbon emissions, Polarium's solar-powered operations play a vital role in

supporting South Africa's climate goals.

As South Africa aims for net-zero emissions by 2050, Polarium remains steadfast in its support of the country's climate objectives and to drive positive change in the energy sector.

This milestone follows Polarium Vietnam's recent achieve-

ment, where we became the very first in DEEP C Industrial Park, Hai Phong, Vietnam, to power an entire facility with 100% renewable energy in September 2023.

Polarium is a leading energy storage developer. We make energy storage and optimization solutions built on lithium-ion battery

technology for businesses within telecom, commercial, industrial and residential facilities across the world.

Polarium was founded in 2015 with the goal of providing safe, smart and sustainable energy storage solutions will be key to empower the transition to a truly, sustainable energy future.

We are an impact business contributing to the sustainable energy transformation by enabling renewables, electrification and intermittent power supply.


Its cutting-edge and easily adaptable modular battery technology enables us to be in the forefront of developing state-of-the-art sus-

tainable energy storage and optimisation solutions.

Polarium is a fast growing, entrepreneurial company headquartered in Stockholm, with production in Mexico, South Africa and Vietnam, customers across the world from Ghana to Svalbard and ~500 employees.

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# Enhancing rail travel experience: The role of EC fans and drive concepts



ebm-papst blog post

IN a world where mobility is paramount, the landscape of transportation is rapidly evolving. As energy and raw material prices continue to rise, rail transport emerges as a compelling solution, offering efficiency, sustainability, and reliability.

“By creating a pleasant climate within these spaces, we ensure that travellers are refreshed and rejuvenated.”

At the forefront of this transformation, ebm-papst stands as a key player, revolutionizing rail technology with our innovative

EC fans and drive concepts.

With a steadfast commitment to excellence, we strive to make rail journeys more than just a means of reaching a destination; we aim to make them pleasant, comfortable, and safe experiences for both passengers and staff alike.

Central to this mission are our energy-efficient EC fans, meticulously designed to optimize ventilation systems in both passenger compartments and driver’s cabs.

By creating a pleasant climate within these spaces, we ensure that travellers are refreshed and rejuvenated.

Furthermore, our modern drive systems

guarantee smooth and silent operation of train doors, enhancing safety and convenience for all onboard.

But our contributions to rail technology extend far beyond ventilation and door systems. From windshield wipers to boarding aids, our innovative solutions play a vital role in enhancing every aspect of the rail travel experience.

With a focus on sustainability and efficiency, our products not only meet but exceed industry standards, ensuring that rail operators and passengers alike reap the benefits of our cutting-edge technology.

As we continue to innovate and push the boundaries of rail technology, we invite you to join us on this journey towards a more sustainable and enjoyable future of rail travel.

Together, let us redefine the standards of comfort, efficiency, and safety in the transportation sector, one journey at a time.

With ebm-papst, the future of rail travel is brighter than ever before.

# Efficient filtration in heavy-duty off-road vehicles

BMG Fluid Technology’s technical solutions comprise a wide range of fluid power components and systems, supported by the team’s broad expertise to ensure fluids - including air, oil, fuel and hydraulic oil – all operate within the required cleanliness standards.

BMG – a distributor of the Fleetguard filter brand, which is manufactured by Cummins Filtration - supplies and supports a comprehensive range of Fleetguard filters, especially designed for the transport sector, including heavy-duty off-road applications.

“As with any mechanical system, wear and tear is a certainty in hydraulic systems. Components that rely on specified tolerances can lose efficiency or sustain damage through poor filtration and leakage. In fact, particulate and water contamination is responsible for between 80-90% of all hydraulic system failures,” explains Hanli Schutte, product specialist filtration, BMG.

“Effective filtration is even more important in tough environments, which demands greater efficiency from equipment to increase hydraulic performance.

“Because filtration



BMG – a distributor of the Fleetguard filter brand, which is manufactured by Cummins Filtration - supplies and supports a comprehensive range of Fleetguard filters, especially designed for the transport sector, including heavy-duty off-road applications.

“Effective filtration is even more important in tough environments, which demands greater efficiency from equipment to increase hydraulic performance.”

is an effective defense against wear and tear of engines when contaminants are present, it is critical that effective filters are used to ensure optimum

engine performance, reduced environmental impact, increasing efficiency by extending the service life of mobile equipment, protecting the owner’s

investment. Without effective filtration, premature equipment failure is likely to occur, resulting in unnecessary downtime of equipment and costly replacement of parts.

“Cummins Filtration - known as a leader in the design and manufacture of diesel engines, filters, coolants and fuel additives for heavy-duty diesel engines – adds muscle to the Fleetguard brand.”

OEMs, distributors and the end user have the assurance of effective filtration that meets high emission standards, protected by a superior warranty from the point of purchase through the recommended life of the product.

BMG’s Fleetguard range includes over 8 300 products, including air, lube, fuel and hydraulic filters. These filters are engineered to meet or exceed OEM specifications, ensuring maximum life of every engine or system.

BMG’s fluid technology services also include solutions for bulk fuel and industrial filtration systems, hydraulics and pneumatics, lubrication, hydraulic hose and fittings, as well as instrumentation, pumps and industrial valves.

Through the company’s specialist skills - and a dependable stockholding of components, BMG is able to meet high demand from customers for dependable services, throughout the African continent.

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# Dovetail develops specialised software solutions for the supply chain industry

THE e-commerce market in South Africa is projected to exceed R400-billion by 2025, with over 1 billion transactions each year.

As eCommerce giants and small-to-medium enterprises flood the online marketplace, the need for strong delivery software is at an all-time high.

But how would you know which eCommerce delivery software is the best for your business?

## What are eCommerce Delivery Software?

eCommerce software, refers to a suite of digital tools and platforms. They are designed to deliver products purchased from online stores to customers' homes as smoothly and efficiently as possible.

Key features of these types of software typically include optimised routes, driver management, customer communication, proof of delivery, integration with third-party logistics (3PL) providers and delivery confirmation.

## How to Choose eCommerce Delivery Software

When it comes to choosing the perfect eCommerce delivery software, it's essential to streamline operations and improve customer satisfaction.

### 1. Understanding Your Business Needs

To choose the right eCommerce delivery software, it's crucial to understand your business's unique requirements and objectives. Knowing your business size, product range, target market, and growth plans will help you find the best delivery software solutions.

### 2. Tracking and Transparency

In today's digital age, transparency, and real-time tracking are crucial for an exceptional customer experience. Choose delivery software with robust tracking capabilities that provide real-time visibility into order status for you and your customers.

From fulfilment to last-mile delivery, tracking features empower you to monitor shipments, anticipate delays, and proactively communicate with customers.

### 3. Scalability and Flexibility

The software you choose should adapt and grow with your business.

Whether you face a surge in orders during peak seasons or expand your product line, the

delivery software should seamlessly handle these changes without disruptions.

### 4. Cost-Efficiency and ROI

When considering investing in premium

delivery software, it's important to consider its cost efficiency and return on investment (ROI). Look beyond the initial price and consider how the software can scale with your business. Consider the potential

cost savings that can come from improved efficiency and streamlined operations.

### 5. Customer Experience and Satisfaction

The delivery software you choose significantly

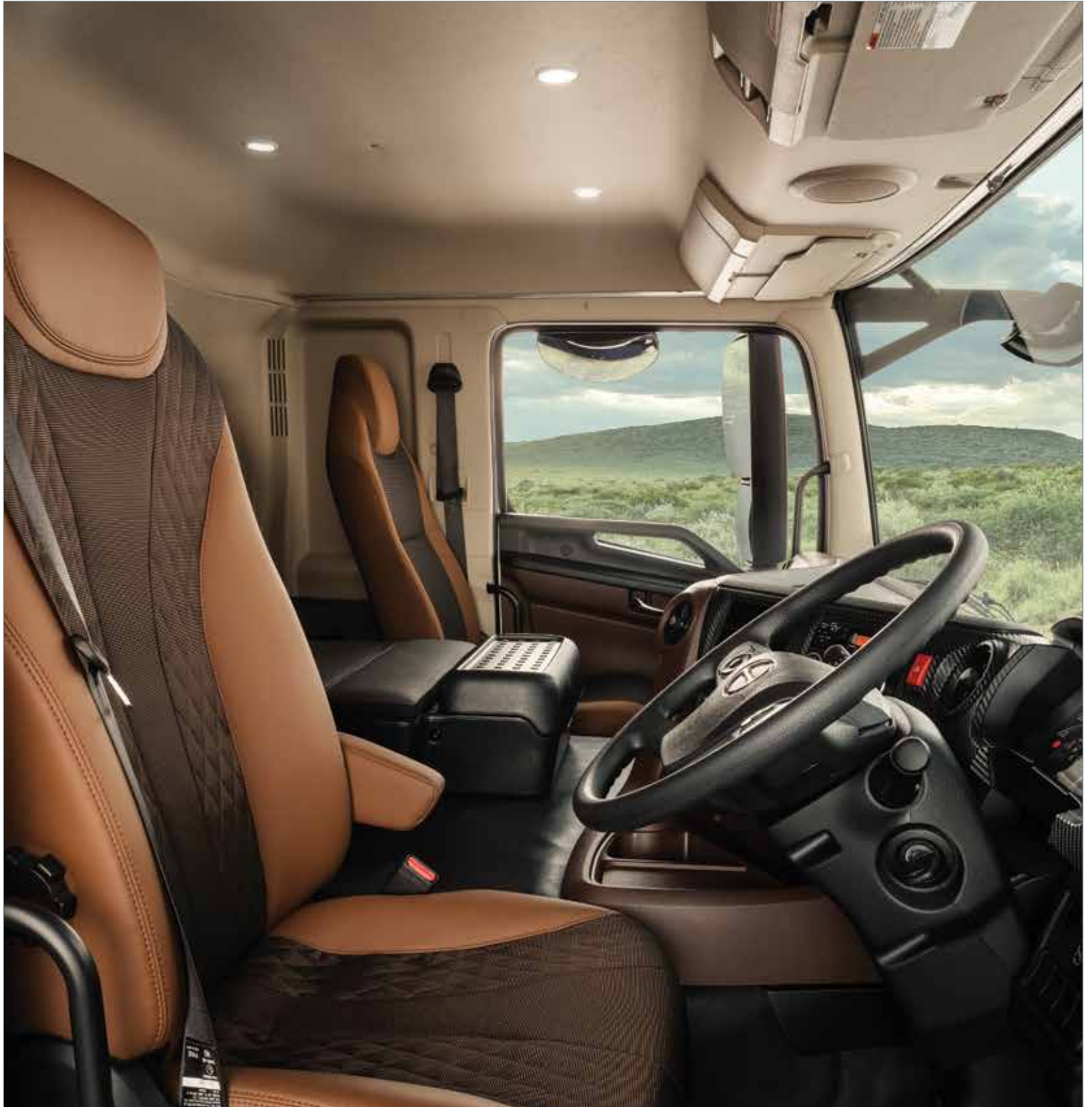
impacts the entire customer journey, from placing an order to receiving it. It's important to select solutions that prioritise customer-centric features like the ability to choose delivery dates, multiple

delivery options, and easy returns processes.

### 6. Integration Capabilities

Efficiency in logistics relies on smooth integration between different systems and platforms.

Your chosen eCommerce delivery software should integrate seamlessly with your existing eCommerce platform, inventory management systems, payment gateways, and other essential tools.



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*We're all business.*



## Synergy between conveyor systems and process engineering adds value to raw materials

*Adding value to raw materials is one definition of process engineering. This is something that Facet Engineering has been doing for over 30 years, offering value to its clients through expertly-designed conveyor systems and complete process engineering plants.*



**J3852 Anderson Layout.**

**By Diane Silcock**

THE company's extensive range of conveyors that they design and manufacture, along with their vast experience in handling and moving products, enables them to offer a multitude of solutions to a broad spectrum of industries.

Most of the conveying applications are in a process environment of some description, often forming part of the automation of these plants, highlighting the importance and synergy of conveying and process expertise.

"When it comes to process engineering plants," says CEO Colin Fairweather, "Facet Engineering specialises mainly in the Agri-food sector, although many

of the principles can be applied to related industries. A good example is shown in the 3D model rendering of a recently installed mixing/blending plant which we designed and manufactured. This rendering, as generated in our design office using CAD software, shows the raw material intake system via the 1 tonne bulk bag and 50 kg bag manual feed.

The pre-determined product recipe is then conveyed up into a ribbon blender ready for homogeneous mixing. Once mixed, the final product is fed into a buffer hopper which in turn then regulates the flow into a Z-type bucket elevator, taking the product to the packing station. This process of feeding into the hopper, frees the

ribbon blender thereby ensuring it is ready for the next mix, and the process is repeated."

Fairweather continues to explain that this system can be extended to include a bulk intake system into multiple raw ingredient bins. With the inclusions of a feed auger and bucket elevator, a recipe or combination of several ingredients can be presented to the ribbon blender for mixing. This can then be taken one step further to finished product bins, and then onto the packing station or bulk truck outfeed.

Typically, this process can be used for the mixing or blending of a multitude of dry powdered products, spices, a variety of chemicals, additives, organic fertilisers, granules, meal, grains, flours, and ani-

mal feeds.

All equipment is manufactured in-house plus they do the structural design and manufacture of any steel supports, platforms, bins and hoppers, where required. Once delivered, the installation team manages all on-site work, including electrical set-up, working to the highest industry safety standards.

Commissioning of plant and equipment is part of their service offering undertaking calibration and testing to ensure that the plant runs optimally and that production capacities are achieved. After-sales service and spares also form part of their offering.

"We recognise the importance of continuously adding value and we constantly strive to innovate, improve, and develop new products in our range, thus ensuring that we always meet the exact requirements of our customers and exceed their expectations," concludes Fairweather.

*For further information on one of the many process engineering plants they offer or individual machines, contact Facet Engineering +27 11 769 1168 or view their website: [www.facetengineering.co.za](http://www.facetengineering.co.za)*

## Materials handling industry looks to increased automation for improved efficiency and quality - Shumani Industrial Equipment



THE fact that the bulk of materials-handling equipment in South Africa is imported means that the industry will eventually fall in line with the global trend of increasing automation.

This is according to Shumani Industrial Equipment director Victor Nemukula.

"There is a constant flow of new technology into the local materials-handling industry, in line with international trends. The growing requirement for efficiency and cost-effectiveness is a key driver in the uptake of automation," Nemukula highlights.

Other factors are increased health-and-safety and the reduction of human errors, thereby boosting overall quality.

Advanced equipment such as self-driving vehi-

cles (SDVs) and the Internet of Things are two core technologies at the vanguard of automation in the materials-handling industry.

Automation begins with how materials are received, stored, and transported from the instant they enter a warehouse.

Technological developments in this industry are critical, as manufacturers are under constant pressure to carry out tasks faster and cheaper, without compromising on quality.

Simultaneously this has to be balanced by the fact that any new technology introduced must have a sound return on investment.

Shumani Industrial Equipment is a 51% black-owned and managed industrial equipment sup-

plier. It offers a 'one-stop' solution for forklifts and materials handling, cleaning, access, and compact construction equipment, as well as engines, generators, agricultural equipment, and compressed air solutions.

"Our vision is to be the leading black-owned and managed 'one-stop' supplier of world-class industrial and construction equipment in Southern Africa. We are driven by our long-term commitment to providing our customers with ideal products for their unique requirements, supported by unparalleled after sales service to ensure maximum uptime and quick return on investment," Shumani Industrial Equipment national key accounts manager Allesha Maniram concludes.

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- Process plants for the cleaning, grading, sorting, packing of grain, cereals, beans, and animal feed.
- Maize samp/grits plants.

**CONTACT OUR DESIGN OFFICE FOR MORE INFORMATION:**

**Tel:** +27 (0)11 769 1168

**WhatsApp:** +27(0) 83 267 2281

**Email:** [sales@facetengineering.co.za](mailto:sales@facetengineering.co.za) | [faceteng@global.co.za](mailto:faceteng@global.co.za)

**Website:** [www.facetengineering.co.za](http://www.facetengineering.co.za)



## MAN automates production logistics with Magazino



MUNICH-based robotics company Magazino, which belongs to Jungheinrich, has won the MAN site in Nuremberg as a fleet customer for the SOTO robot.

The SOTO mobile robot automates material supply between the warehouse and assembly line, transporting small load carriers (SLCs) completely autonomously.

*"The SOTO robot combines these elementary logistical process steps in a single, fully autonomous solution..."*

Following a one-year pilot project, the entire small load carrier supply process for engine assembly and future battery production will be automated with twelve SOTO robots starting in autumn of this year.

Magazino and MAN have been working together closely and in an application-oriented manner in the field of logistics automation since 2019 and have already pooled their specific expertise during the development phase of the SOTO robots.

The functionality of the robots was extensively tested and optimised in live operation during a one-year pilot phase. Based on this positive trial, the MAN site in Nuremberg decided to deploy a fleet of twelve SOTO robots for the complete automation of small parts logistics.

Simon Becker, project manager at MAN, says: "The introduction of SOTO marks a further step towards the future of logistics in the latest development of our plant in Nuremberg. Thanks to SOTO, the provisioning process with small load carriers is now also fully automated."

Becker adds: "These robots are, therefore, also exemplary for the ongoing digitalisation

and automation of our plant logistics and thus contribute to our overarching strategy. It is impressive to see how efficiently and harmoniously humans and robots can work together. The decision to introduce the SOTO robots is the result of many years of trustful cooperation with Magazino, which reflects our commitment to technological excellence and continuous improvement."

Markus Ruder, Magazino's project manager for the joint project with MAN, describes the target process as follows: "The SOTO robots pick up the small load carriers independently at the automated miniload warehouse and each robot brings up to 18 containers at a time to the individual assembly lines. They work in the same environment as humans and other mobile robots."

"At the assembly line, the SOTO robots place the containers, which currently weigh 12kg, directly onto the shelves. The worker can then conveniently access the individual parts for assembly on the opposite side of the rack. The SOTO robot also picks up empties autonomously and takes them to the central collection point," Ruder says.

The plant in Nuremberg uses standard container formats by the VDA standard, the German Association of the Automotive Industry. The robot's adaptive gripper automatically adjusts to the corresponding container size and, like humans, also flexibly moves to different heights of the transfer racks.

The robot uses machine-readable codes on the shelves and labels on the containers for identification. It receives the transport orders directly from the

warehouse management system.

While assembly lines in the manufacturing industry are highly automated today, replenishment in the vast majority of warehouses still takes place manually. Previous solutions, such as tugger trains or simple automated guided vehicles (AGVs), do not fully automate the process, as manual labour is required for loading and unloading.

At MAN's Nuremberg site, the small load carriers are already automatically de-palletised after delivery and stored in the automated miniload warehouse.

With SOTO, MAN is now automating the "last mile" in the small load carrier provision process with the aim that the first human action in the process is the transfer of the empty small load carriers from the full load chute to the empties chute of the rack by the assembly workers, from where the robot collects the small load carriers again.

The SOTO robot combines these elementary logistical process steps in a single, fully autonomous solution: picking up small load carriers of different sizes from a warehouse, autonomous transport of several small load carriers from source to sink and delivery to flow racks close to the line at different heights.

Its capabilities include collecting empties and rotating small load carriers. In existing environments, the robot works safely in the same area as humans.

These capabilities clearly set the SOTO robot apart from the market environment and enable genuine end-to-end automation in material supply with small load carriers for the first time.

## Correct tension, installation and maintenance improves safety and extends belt life

BMG's Power Transmission division has the solution to avoid dangers during installation and maintenance procedures in many industries.

An easy-to-operate rotation device from Gates enhances safety for operators during installation and maintenance processes.

"BMG takes great care during product selection to ensure we are able to offer our customers the latest safety equipment designed to enhance safety onsite, optimise productivity, minimise downtime and extend the service life of every system," explains Carlo Beukes, BMG's power transmission division, business unit manager.

"Included in BMG's extensive range of safety products is our

handy Gates Belt Installation + Rotation Device - BIRD™ - that has been developed to prevent an operator's fingers and hands from getting caught in pinch points during routine installation and maintenance. While a drive is shut down and locked out, the BIRD device facilitates safe installation and rotational inspection of the drive.

"Prior to the launch of this safety device – operators would need to pull on the belt or grab the edges of the pulley or sprocket to turn the drive during installation or inspection of the drive. Regardless of the care taken, this procedure is dangerous – a split second can lead to a hand or finger being pulled into a pinch point, causing devastating in-



*BMG's handy Gates Belt Installation + Rotation Device - BIRD™ has been developed to prevent an operator's fingers and hands from getting caught in pinch points during routine installation and maintenance.*

juries and costly downtime.

"Apart from focusing on safety, our commitment to customers in all sectors is to also concentrate on Return on Investment (RoI). We encourage our customers to implement a preventative maintenance pro-

gramme across belt drive systems—especially on drives operating under heavy loads, extreme temperatures, high speeds and on critical equipment – to ensure more uptime of production and to extend service life of equipment and components."



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**B-BBEE**  
EMPOWERING AFRICA



# BHBW adds Motrec to line-up

HYSTER and Yale dealer BHBW South Africa has strengthened its offering to the materials handling market with the addition of a third global brand, Motrec, to its line-up.

BHBW announced its partnership with Motrec International, a leader in electric industrial vehicle manufacturing, towards the end of last year.

As the official distributor of Motrec products in southern Africa, BHBW now offers a wide range of innovative electric utility vehicles to businesses across the region, in addition to Hyster and Yale lift trucks and warehouse equipment.

Motrec International, headquartered in Sherbrooke, Canada, is renowned for its cutting-edge solutions in the electric vehicle industry.



The Motrec range features cutting-edge industrial electric vehicles including tow trucks, burden and people carriers, and stock chasers.

to enhance operational efficiency, reduce environmental impact and improve overall productivity.

Motrec sales director, Marc Breton, expressed his enthusiasm for the

top-notch customer service align perfectly with our vision. This partnership will empower businesses with access to our state-of-the-art electric vehicles, promoting sustainability and productivity in the region.

BHBW CEO Mark Hughes said: "We believe that our partnership with Motrec International is a game-changer for the southern African market. Motrec's innovative electric vehicles are a perfect fit for the region's growing demand for sustainable solutions. With Motrec's exceptional product lineup and our commitment to cus-

tomor satisfaction, we are confident that we will provide southern African businesses with unparalleled choices for their materials handling needs."

### Yale lift trucks

BHBW last year also introduced Yale lift trucks to the South African market following its appointment by Hyster-Yale Group as a dual Hyster and Yale dealer.

BHBW, which has more than 90 years' experience in materials handling as a Hyster dealer, now also offers the full line of Yale counterbalance forklift trucks and warehouse equipment to South African customers.

The Yale line-up includes warehouse equipment ranging from small pallet trucks to very narrow aisle turret trucks, working up to 18,3 m high, electric, diesel, LP-gas and dual-fuel powered and internal combustion engine counterbalance lift trucks, with lifting capacities up to 16 tonnes, and customer-specific solutions.

Yale Lift Truck Technologies is a leading global materials handling brand, with equipment manufactured in 12 production facilities worldwide. The company was rebranded to Yale Lift Truck Technologies in 2023 to reflect its focus on providing technology-enabled solutions in warehousing and intralogistics in particular.

"Yale is a powerful brand with a proven track record, and a perfect fit for BHBW with its customer-driven focus on product and service excellence," said Hughes. "In partnership with Yale Lift Truck Technologies, we look forward to unlocking the potential of the Yale brand in the local market and growing our customer base."

For more information, please visit [www.bhbw.co.za](http://www.bhbw.co.za), contact BHBW South Africa on 010 023 8700, or email [info@bhbw.co.za](mailto:info@bhbw.co.za).

## Rent or buy: that is the new Material Handling Equipment question

LEASING, rather than buying capital assets that depreciate is increasingly making more and more business sense. And nowhere is the trend of renting equipment becoming more noticeable as a smart move in an uncertain economy than in the material handling equipment market.

More companies are shifting away from buying Material Handling Equipment outright to signing rental agreements. While there was a time when purchasing for cash was king, renting is now the more popular choice with about 65% of deals favouring rental and the balance opting for outright purchase.

Bianca Smit, national operations manager at CFAO Equipment SA, says some companies that were historically cash customers have swung to renting material handling equipment as they want to "pay for use, not for ownership".

"These companies don't want their material handling equipment to become a liability. To avoid having to decide how to dispose of equipment after its useful life, they rather rent," says Smit.

Smit says a small business that moves goods occasionally will do bet-

ter to buy a machine for cash, as the useful life of the asset will far exceed the general five-year cycle due to low utilisation. But a company that wants to retain its cash for its core business would do well to rent material handling equipment especially if the warehouse or factory demands goods to be moved around all the time.

The capital required to buy equipment makes rental an easier choice as there are far lower upfront costs. A purchase converts your fluid cash into a fixed asset. This can weaken your company's financial position and banks or investors can view this negatively.

On the other hand, the flexibility that rental offers, where you are not saddled with a depreciating asset forever, is more suited to South Africa's economic volatility. In addition, as a company's needs change and expand, the option of moving from a diesel-powered forklift to electric is easily available.

One of the benefits of renting is that the uptime of a customer's fleet remains uninterrupted if there is a major breakdown, as a replacement machine will be made available from the short term rental fleet.

Smit says that depending on the relationship between the company and the customer, rental equipment may be swapped under certain circumstances, such as when customers require a strategic shift from internal combustion to electric operated equipment. However, a cash buyer will be saddled with the equipment even if it is not fit for purpose.

"As a business that is cognisant of change in the market, the group offers short-and long-term rental agreements across our diverse range of material handling equipment. These vary from hourly or one-day short-term rentals up to 72-month long term rental agreements to tailor a handling solution to suit the customer," says Smit. For seasonal demands, CFAO Equipment SA offers a seasonal and short-term lease option.

"When there is high demand for equipment, such as during the December and Easter festive periods, you simply rent, without the bother of having equipment purchased for cash lying idle when there is low demand," says Smit.

# Handle more, from ship to store



As the exclusive dealer for leading global brands Hyster, Yale and Motrec, BHBW offers unequalled access to materials handling products and solutions that enhance productivity, reduce cost of ownership and elevate overall performance.

- Best-in-class lift trucks, warehouse equipment and electric industrial vehicles
- Unmatched choice, to optimise operations
- 24/7 service support, with an average response time of 4 hours countrywide
- Finance options including outright purchase, full maintenance lease and short-term rental



THE NEXT GENERATION  
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Don't import skills, grow them at home

*There is no doubt that South Africa faces a skills crisis, especially when it comes to digital knowledge that will revolutionise the world. Yet, sourcing international professionals to fill the local digital skills gap is not sustainable in the long run, writes Ursula Fear, Salesforce senior talent programme manager.*

THE list of critical skills South Africa needs to fill is long, and just some of those include skill sets in engineering, physics, chemistry, geology, and veterinary science.

The list of 142 desperately needed talents also highlights the need for filling positions for Chief Information Officers (CIOs), call centre managers, IT systems analysts, data scientists, software developers, and programmer analysts, among other Information and Communication Technology (ICT) roles.

The catalogue of needed talent, published by the Department of Home Affairs in a gazette in October last year, has a common thread throughout: most of them require qualifications in the science, technology, engineering and mathematics (STEM) fields of study. The fact that there is demand for ICT skills is not in question.

A new training approach

The resolution to address youth unemployment and the skills crisis lies in how we train youth before they enter the workplace. Professional ICT certifications are not enough to meet the rate of change needed in the workplace.

As a result, companies that hire young people with real life practical skills enables young people to be applicable and relevant with the appropriate digital skills.



The 2022 JCSE-IITPSA ICT Skills Survey, the latest available, noted that, in 2019, there were many stakeholder groups implementing solid skills development initiatives to improve the capability and employability of young people. However, the report said, only hundreds of candidates benefited instead of the thousands that need to go through these programmes.

Future demands

In the ICT sector, our biggest focus must be on the talent that South Africa urgently requires. Collectiv X published a list of demand-led digital skills which includes AI engineers, data scientists, automation

engineers, cloud engineers, and big data developers to name a few. This information is confirmed by the 2022 JCSE-IITPSA ICT Skills Survey, which lists similar jobs for the sector but also includes a need for cyber security, artificial intelligence (AI) specialists, forensic investigators, and app developers.

While we need AI specialists to help solve local technology challenges, we need to ensure that these specialists are empowered to implement rapidly, monitor, and ensure best security practices when it comes to AI. The world is moving towards one in which AI will be pervasively integrated into business systems and processes. With that comes an increased risk of cyber-attacks, and the future will require knowledgeable IT professionals who can implement solutions, especially if South Africa is to be globally competitive.

Yet, Salesforce research has indicated that more than 60% of full-time desk workers do not have the skills to use generative AI technology – even though most of them are convinced this knowledge will advance their careers.

As a result, training the next generation, as well as reskilling the current generation when it comes to AI, is a key component of the tech revolution.

We need to act urgently to mitigate the fact that we don't want to have too many certified yet unemployable young people entering the workforce.

Sigma Connected takes on the 1 000th graduate from the South African Impact Sourcing organisation Shadow Careers

A leading UK BPO provider is celebrating the success of a long-term partnership with a South African based organisation, which has helped secure jobs for hundreds of unemployed youths from socially and economically disadvantaged backgrounds. Sigma Connected Group, which is headquartered in Birmingham, UK and provides contact centre services for the utilities, retail, telecommunications, insurance and financial services sectors, has worked closely with South African careers provider Shadow Careers since 2020, placing hundreds of 18-34 year olds into permanent jobs at their offices in Cape Town.

In 2020, Sigma Connected took on the first ever graduate through Shadow Careers. And in 2023 they were honoured once again by hiring a group of graduates which included the 500th Shadow student. More recently, they celebrated another key milestone by employing the group with the 1 000th graduate amongst them.

To date, the company has employed 431 people through Shadow Careers in Cape Town, South Africa, with all working on Sigma Connected's international accounts, many of which are in the UK.

Shadow Careers was founded in 2020 with their first career creation centre setup in the township of Mitchells Plain, a previously marginalised community in Cape Town.

Through an Impact Sourcing approach, its aim is to help tackle high youth unemployment and create career opportunities for young people by training and upskilling them. Youth unemployment across South Africa currently stands at around 58%.

Gary Gilburd, chief executive of Sigma Connected Group said: "We are proud to be the first ever Shadow Careers partner



and we're delighted with our ongoing partnership with the team which has benefited us in South Africa in terms of engaged employees and our clients in the UK as they deliver complex voice solutions to their customers.

"The 1 000th graduate to come through the programme is a wonderful milestone and underlines just how successful Shadow Careers has been over the past three years. For us here at Sigma Connected, we want to create long term careers and also play our part in helping drive down youth unemployment where it really matters.

"We've put our heart and soul into understanding the difference Impact Sourcing can make, and in Shadow Careers, we've found an inspirational partner which compliments us perfectly. Everyone here is so proud of how we've helped to change hundreds of lives for the better.."

Franco Cotumaccio, CEO and co-founder of Shadow Careers said: "We are creating more opportunities for young people from disadvantaged backgrounds and supporting them with building sustainable careers. Together with one of our long-standing partners, Sigma Connected, I believe we are breaking barriers by creating pathways and enabling access to skills development and permanent employment.

"Our ambition for this year alone is to work with more partners like Sigma Connected and place a further 1 200 graduates into careers. Over the past three years, both ourselves and Sigma Connected have evolved and increased our understanding more about young people, their talent, and their potential. To see how quickly that can happen in a learning environment, and then in an international business operation, is amazing."

IN THE NEXT ISSUE:

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CAPE  
Business News

**Chairman:**  
Rudi Leitner  
rudi.leitner@hypenica.com  
**Publisher:**  
Robin Dunbar  
robin.dunbar@cbn.co.za  
**Editor:**  
Larry Claasen  
**Production Manager:**  
Elise Jacobs  
elise.jacobs@cbn.co.za  
**Sales & Marketing Director:**  
Robin Dunbar  
robin.dunbar@cbn.co.za  
**Sales Team:**  
Heather Ferreira  
heather.ferreira@cbn.co.za  
Shaun Austin  
shaun.austin@cbn.co.za  
**Client Liaison Officer:**  
nyameka@cbn.co.za  
**Cape Business News Enquiries**  
sales@cbn.co.za

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# SA Water Crisis: Luke the Dude makes his case

WELL, what do you know,” announced Luke as he hurried into the local Pub & Grill, “Pres Cyril Ramaphosa has appointed a Cabinet-level task team to sort out South Africa’s water crisis, hard at work as we speak.”

“That’s not news, that’s a joke!” interrupted Jon the Joker. “Old ANC trick: When the problem is serious, appoint a committee and move along – no problem.”

“Patience, Jon, patience,” exasperated Luke, “and stop stealing my line. As I was almost saying, Deputy President Paul Mashatile, no less, is leading the rescue team of five Cabinet ministers, including Cele at Police – crime is everywhere in Mzansi. Unlike water.

“And please note: No Anthony Turton, who knows more about the water crisis than the Cabinet combined.”

“What’s the point,” growled Big Ben, who doesn’t take kindly to digs at the ANC.

“Exactly!” agreed Luke the Dude to Ben’s surprise. “The only news here is that this is happening now instead of at least a decade

ago.”

“Why, what happened in 2014?” asked Miss Lily curiously.

“Ah, the right question, my dear,” charmed Luke, “allow me to take you there: “At the northern town of Brits, four people were killed in a protest about water.

“In Bloemfontein, schools were closed because they had no water and large parts of the city were dry. Its major supply dam was 90% silted up.

“Beaufort West survived on water trucked in and water delivered bottle by bottle by concerned travellers.

“The list goes on – while Water Affairs Minister Edna Molewa said most of the country’s water problems could easily be fixed.”

“But as we know, that did not happen. On the contrary,” frowned Miss Lily.

“Useless!” agreed Jon the Joker, “nothing changed.”

“Correct,” approved Luke. “So let me take you further back, to 2008. Currently a professor at the University of the Free

State, Dr Turton was then a researcher at the CSIR, preparing to deliver the keynote address at a CSIR conference on A Clean South Africa.

“In essence, he was going to say South Africa had no more surplus water ‘and all future economic development (and thus social wellbeing) will be constrained by this one fundamental fact that few have as yet grasped’.

“He identified three strategic challenges in detail: sustainability, human health and surviving climate change.”

“But he didn’t get to say any of that, did he Boyo?” smiled Colin the Golfer, who knows things.


“Indeed so,” nodded Luke academically. “The cadres in charge cancelled the keynote address when they saw its unflattering facts. When Turton answered media questions about the cancelled presentation, they fired him.

“So, here we are in 2024 and South Africa still has not dealt with her existential water crisis. Instead, we get another task team,”

## OPINION

### ON THE CONTRARY

The columnist is a  
journalist and editor  
based in Onrusrivier.  
His awards for  
journalistic excellence  
include the Mond and  
the Sanlam Awards.



Pieter Schoombee

concluded Luke.

“Useless,” muttered Bill the Beard, “a round please, Governor!”

“And now for today’s good news!” insisted The Prof from behind his pipe. “Elections are due next month. Please mark your diary for Wednesday, 29 May – and remind your family and friends. Every vote counts.”

With those wise words, we raised our glasses and sang Flower of Scotland. Yes, we do that a lot.

E-mail: noag@maxitec.co.za

## From crisis to cleanliness – CSI initiatives have the power to eliminate pit latrines in SA schools

By Robert Erasmus, MD at Sanitech

THE continued use of pit latrines presents grave risks in South Africa, particularly within school environments where the safety and well-being of children are compromised.

Recent government statistics from March 2023 reveal a staggering reality: out of 23 000 public schools, over 3 300 still rely on pit latrines, necessitating urgent action.

Private sector involvement through Corporate Social Investment (CSI) emerges as a critical player in tackling this pressing issue. In 2022, a substantial R10,9-billion was designated for CSI, with half of the funds directed to the education sector.

By reallocating a portion of these resources towards sanitation initiatives, companies could act as a powerful force for meaningful change, especially if invested in innovative solutions like the Khusela dry sanitation unit.

This advanced solution not only holds the potential to resolve the sanitation crisis in schools but also provides an avenue for businesses to elevate their Environmental, Social, and Governance (ESG) ratings simultaneously.

The private sector, with its focused CSI efforts, can target key areas for high-impact intervention. Schools, being the cornerstone of a child’s daily life, stand to benefit the most.

Imagine the profound difference proper sanitation facilities could make in the lives of students.

## Automation is not just about AI, its about enhancing business efficiency

By Raeford Liebenberg, manager at Silver Moon IT, a Galix company

The terms ‘automation’ and ‘Artificial Intelligence’ (AI) have become synonymous in recent times and are often used interchangeably.

This can make the concept of automation seem overwhelming to some businesses that are not yet in a stage of their digitalisation journey where AI would be practical or beneficial.

Though automation could involve the use of AI, they are not the same thing, and there are many ways that automation can help to improve business efficiency that do not involve the use of AI at all.

When it comes to leveraging the business benefits of automation across an organisation, a trusted IT partner can ensure automation is applied to the most appropriate areas for maximum return on investment.

It’s not always AI

Automation goes beyond AI to encompass many other areas. The point of automation is to introduce new efficiencies, not necessarily to replace people or processes, but to help improve business data, accuracy, decision-making, agility and more.

It can also help people to be more productive and allow businesses to focus on more strategic elements by taking over repetitive and mundane tasks; and it can reduce human error, with many associated benefits.

Robotics is a classic example of automation that has nothing to do with AI – and the same is true for many workflows and business processes. While AI can be used to augment certain elements if required, especially if there is a need for some sort of analytics, process automation can be easily implemented without AI for a cost-effective business solution.



Automation at the heart of a digital business

The first step in any digital journey is moving from storing documents digitally in the cloud. In the cloud, they can easily be accessed from anywhere by anyone who needs them, rather than these files existing on a server in the back room – or even in a filing cabinet in someone’s office.

For businesses that still use manual, paper-based processes, implementing AI straight off the bat is typically not the right solution.

There are, however, simple and cost-effective ways that automation and digitalisation could be used to enhance the business.

One example in South Africa is the offices of medical practitioners.

So many of them still use paper diaries for appointments, and people have to phone in to make an appointment, with receptionists checking books, writing and erasing names and details and requesting the same information every time.

Quick wins for ROI without massive spend

Rather than spending on fancy machinery or AI systems that promise to revolutionise business, these quick wins are fast and cost-effective ways to make everyday business easier and more efficient.

The key is to understand processes and how they can be simplified using digitalisation and automation to work better, faster, more accurately and more efficiently. While AI and data management can play a role in this, businesses can start so much simpler and see real benefits from the outset.

Not about replacing people

Businesses always need to balance automation with the people factor, and while many tasks can be replaced, we need to appreciate the human cost. Understanding what to automate and what not to can be a challenge, which is where a trusted IT partner can be invaluable.