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# ISLAND VIEW PRECINCT STANDS TO BOOM

**T**HE Island View Precinct could receive a R60 billion investment injection by the beneficiaries of the Minister of Transport's Directive 79 which extends their fuel storage leases at Island View for 25 years. The potential investment boom is according to a submission to the joint portfolio committee, which heard arguments both for and against the directive being upheld before reporting back to parliament.

The committee is assessing whether the minister followed due process when issuing the directive. The alternative is to initiate the normal Transnet National Ports Authority (TNPA) open tender process.

The Portfolio Committee on Trade, Industry and Competition presented the multi-portfolio draft Island View Precinct (IVP) report in a virtual session on 27 February 2026. The purpose of which is to assess whether the outcome of the directive would achieve or undermine national transformation objectives and ensure national security of fuel supplies piped from the IVP. The committee's purpose was to oversee whether statutory powers had been exercised lawfully and were in the national interest.

The minister's directive, issued in September 2025, has been vehemently opposed by the Minister of Mineral and Petroleum Resources, and representatives of black fuel traders who presented their transformation argument to the committee.

The minister provided TNPA a deadline of 31 March 2026 to conclude the 25-year lease agreements with the ten beneficiaries: Sasol Oil, Sapref (on behalf of Shell downstream and bp Sothern Africa), TotalEnergies South Africa, Astron Energy, Engen South Africa (part of the Vivo group), Vopak, Bidvest, Unico Tec H&R South Africa and Chemoleo/AECI Ltd.

## BENEFICIARIES' CASES

Many of the ten beneficiaries are



*The Island View Precinct at the Port of Durban is South Africa's most important petrochemical and fuels logistics hub.*

operating on month-to-month leases, with uncertainty restraining further investment. The draft IVP report captures the companies' cases put forward to the joint committee, explaining how they were contributing to transformation and the positive impact the extended leases would have on their businesses, enhance security of fuel supply and the country's economy.

## VITOL AND ENGEN

In mid-February, Reuters reported that a consortium including Zurich-based energy traders Vitol, plans to build a US\$3 billion Liquefied Natural Gas (LNG) terminal and a Gas-to-Power (GtP) plant at the Port of Durban. News of this project is possibly linked to Engen's submission to the committee's IVP report.

Vivo Energy is Vitol's primary retail and distribution arm in Africa. It operates under the Shell brand in many African markets, but primarily through Engen locally.

In South Africa, Vitol (via Vivo Energy) acquired a 74% stake in Engen in 2024. To align with B-BBEE regulations, Phembani Group (founded by Phuthuma Nhleko) remains a 21% shareholder, and

a 5% Employee Share Ownership Plan (ESOP) was created in 2025, making the business 26% owned by historically disadvantaged parties.

Engen was merged with Vivo Energy, the downstream giant that operates over 3,900 service stations, to create one of the largest energy distribution businesses on the continent.

In its submission to the committee, Engen highlighted several long-standing investment initiatives. Following the shutdown of its Durban refinery in 2020, it undertook a significant transformation to convert the site into an import-based storage and distribution facility. This transition had increased the strategic importance of the IVP both for the company and for the broader industry as it now serves as a critical gateway for the importation and the inland distribution of refined product, according to the submission.

The draft report says that Engen has committed to invest more than R9 billion to convert former refinery infrastructure into import storage facilities pending the lease tenure being secured. This includes tank conversions, capacity reinstatement, environmental remediation and upgrading of infrastructure to

ensure long-term safe and compliant operations. It emphasised that this infrastructure would be operated in accordance with the Petroleum Pipelines Act and relevant Nersa frameworks, allowing for third-party access where capacity was available. It also stated that it was not merely proposing investment but had already committed substantial capital to strengthening South Africa's fuel import and storage capability.

## LNG TERMINAL

The Reuters article quotes details of the Durban project from a document sent to lawmakers and an unnamed Vitol spokesperson. Another member of the consortium, Acwa Power, which has extensive involvement in renewable energy projects in South Africa, appears to be media-shy.

Vitol is the world's largest independent energy trader, a well-connected global player that can demonstrably deliver the full package – from fuel sourcing to terminal operation, power generation as well as wholesale and retail distribution.

Vitol Tank Terminals International (VTTI) operates a network of terminals on five continents, includ-

ing the Burgan Cape Terminal (BCT) in South Africa which the company co-founded and built as a green-field project through VTTI. VTTI owns 70% of BCT, with local BEE partners (Thebe Investment Corp and Jicaro) owning the rest. VTTI is owned by the Australian IFM Global Infrastructure Fund, Vitol Group and the Abu Dhabi National Oil Company (ABNOC).

An LNG terminal at Durban would be the province's second after the Zululand Energy Terminal (ZET), a joint venture between Vopak Terminal Durban and Transnet Pipelines, which got the go-ahead in January 2024.

## GAS-TO-POWER

Vitol operates power plants through VPI, an owner-operator model, focused on flexible and renewable energy. As of 2026, VPI operates a fleet with a combined capacity of approximately 3.5 GW, primarily in the United Kingdom and Ireland.

The company is wholly-owned by Vitol but operates projects in Ireland and Germany as joint ventures.

Reuters quotes Vivo Energy and Engen South Africa as saying that they were "advancing the development and investment into a 1,000 - 1,800 MW CCGT power generation plant with associated LNG importation infrastructure.

There is no mention of offtakers and, although eThekweni has been granted permission to generate its own electricity, it has not yet initiated a procurement process for GtP energy.

Although it was granted permission to procure 300 MW of GtP energy independently of Eskom in August 2025 when the Minister of Electricity and Energy issued a Section 34 Ministerial Determination, eThekweni Municipality says no procurement decisions have been concluded regarding any specific proposed development at the Port of Durban.

# Transnet invites private sector involvement in RBDBT project

**T**RANSNET has issued a Request for Qualification for a private partner to participate in a project at the Richards Bay Dry Bulk Terminal (RBDBT).

The Richards Bay Dry Bulk Terminal is a critical export gateway for South Africa's bulk commodities, particularly chrome and magnetite. Through the Private Sector Participation (PSP) process, Transnet seeks to leverage private sector expertise and capital to improve

operational efficiency and reliability, while supporting future capacity growth and retaining strategic oversight of the asset.

According to Transnet, this project could provide opportunities in areas such as supplier development, local participation and community upliftment, particularly within the Richards Bay region.

The RFQ is the first phase of the partner selection process, and invites interested par-

ties to demonstrate their technical capability, operational experience, financial capacity, and compliance with Transnet's requirements. Interested parties are also required to outline measurable plans to drive community upliftment through this PSP project. Selected respondents move to the Request for Proposal (RFP) phase.

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# New Durban packaging plant a condition of settlement

ONE of the settlement conditions concluded between the Competition Tribunal of South Africa and Wilmar SA, is that the group will establish a packaging plant in Durban, with an estimated capital investment of R47 million.

R45 million of this investment represents an agreed 'public service' foreign direct investment commitment.

According to a media statement from the Competition Commission, the new plant will be used to package the company's own products. The construction of the packaging plant will be completed within 12-15 months after the settlement agreement is signed. R10 million is due to be spent on construction materials and services, 35% of this expenditure will be directed to suppliers who are Level 1 B-BBEE compliant and 50% + 1 black-owned, according to the Commission.

The Competition Commission said it welcomed the Competition Tribunal's order, issued on 18 February 2026, confirming the settlement agreement concluded between the Commission and Wilmar SA (Pty) Ltd.

It said the settlement ends a 10-year litigation between the Commission and Wilmar over



allegations of price fixing in respect of edible oils and baking fats. On 2 December 2016, the Commission initiated a complaint against DH Brothers Industries t/a the Willowton Group, Wilmar, FR Waring Holdings, Africa Sun Oil Refineries, Epic Foods, Sea Lake Investments and Unity Food Products for allegedly engaging in price fixing and/or fixing of trading conditions in the market for the supply of edible oils, including baking fats and margarine in South Africa.

The allegations against the respondents are that they agreed on price increases for edible oils, including baking fats and margarine as well as the timing for such increases.

According to the Commission, the settlement with Wilmar follows similar settlements concluded by the Commission with Willowton Group and Sea Lake. The investigation against Africa Sun Oil Refineries and Epic Foods is

ongoing. The investigation against FR Waring Holdings (Pty) Ltd has since been stopped.

Wilmar has agreed to settle the complaint with the Commission without admission of liability and has agreed to pay a settlement amount of R1 million and has made public interest commitments amounting to R49.5 million over a period of five years and R45 million on foreign direct investment. The public interest commitments will be dispersed as follows:

## EDUCATION INITIATIVES

Wilmar will establish a Bursary Fund to the value R25 million over a period of five years to financially support historically disadvantaged and underprivileged students pursuing tertiary education in the food and agro-processing field. The recipients of such bursaries shall comprise, at a minimum, 50% female students. The Bursary Fund will also provide learnership and apprenticeship programs to historically disadvantaged and underprivileged candidates.

School infrastructure development

Wilmar will spend R14.5 million towards School Infrastructure Development. R7.25

million of this amount will be allocated specifically for the eradication of pit latrines at rural schools and the remaining R7.25 million will be allocated to building new schools and the refurbishment of existing schools.

## ESD FUND

Wilmar will establish and administer an Enterprise and Supplier Development (ESD) Fund to the value of R15 million for a period of at least three years following its establishment. The ESD Fund will be for business incubation initiatives, including the provision of capital to support the establishment and expansion of small, medium and micro enterprises (SMMEs) and businesses owned by historically disadvantaged persons (HDPs). Beneficiaries will be integrated into Wilmar's supply chain, with a guaranteed commercial engagement with Wilmar for a minimum period of twelve months. In addition to financial support, the initiative shall offer a comprehensive suite of developmental interventions, including structured mentorship, regulatory compliance training and IT enablement, according to the Commission.

## Partnership supports KZN agricultural producers

AGRIMARK, the agricultural retail division of the JSE-listed speciality retailer KAL Group, is expanding its value proposition in the Southern and Midlands regions of KwaZulu-Natal with the introduction of Agrimark Mechanisation units, strengthening support to its farming customers through an enhanced mechanisation offering integrated into its existing branch network. The development is enabled through a new strategic partnership with Smith Power Equipment, the exclusive importer and distributor of Kubota and DeutzFahr agricultural machinery in southern Africa.

The first Agrimark Mechanisation branch will open at Agrimark Mooi River on 2 March 2026, with a second branch planned for Nottingham Road later in the year. Both operations are located on existing Agrimark premises, offering customers a single, integrated destination for agricultural inputs, equipment, parts and service support.

While Agrimark already offers mechanisa-

tion solutions in the Western Cape, the KZN launch marks the first rollout of Agrimark Mechanisation outside the Western Cape. The initiative builds on Agrimark's established presence in the Southern and Midlands regions of KZN and responds to evolving customer needs for dependable, fit-for-purpose equipment backed by strong local aftersales support.

"This is about deepening how we serve our customers, not expanding our footprint," says Arno Abeln, managing director of Agrimark. "Our customers in KZN already rely on Agrimark as a trusted agricultural partner. Agrimark Mechanisation strengthens that relationship by bringing equipment, parts and service support into the same, familiar environment, aligned to the way our customers want to do business."

The partnership with Smith Power Equipment introduces Kubota and DeutzFahr tractors and farming equipment to Agrimark customers in KZN. Both brands are globally



recognised for durability, engineering quality and performance across diverse farming conditions, making them well suited to the varied agricultural operations found across the province. Kubota's compact to midrange tractor offering supports mixedfarming and livestock operations, while DeutzFahr's highhorsepower range is designed for largescale commercial and rowcrop farming. Together, they provide a single mechanisation platform capable of meeting a wide spectrum of farm requirements. The customer relationship remains Agrimarkled, reinforcing trust, continuity and accountability, while Smith Power Equipment

provides the distribution, technical training and OEM support that underpin service reliability and equipment performance.

"Our collaboration with Agrimark brings together two organisations that place longterm customer value at the centre of their strategy," says David Kelder, managing director of Smith Power Equipment. "Agrimark has deep roots in the agricultural communities it serves, and our role is to enable that relationship with proven mechanisation brands, strong parts availability and technical expertise that farmers can rely on."

Dedicated workshop facilities have been established at the Mooi River branch, with trained technicians on site from launch day to ensure responsive aftersales support and minimal downtime during critical farming periods.

"By expanding the depth of our offering in KwaZuluNatal, we are better positioned to support productivity, efficiency and longterm sustainability across our customers' farming operations," Abeln concludes.

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# Budget 2026 delivers SME relief

**S**OUTH Africa's 2026 National Budget has delivered targeted relief for small and medium-sized enterprises (SMEs), including a significant increase in the Value Added Tax (VAT) registration threshold, alongside enhanced capital gains tax exemptions for qualifying business owners, according to Standard Bank South Africa.

In his Budget Speech, Minister of Finance Enoch Godongwana announced that the VAT registration threshold will increase to R2.3 million, responding directly to concerns that compliance costs have not kept pace with the rising cost of doing business. The measure follows this month's State of the Nation Address (SONA) pronouncements on SME support and provides practical regulatory and cash-flow relief for growing enterprises.

The Budget gives practical effect to aspects of this month's SONA, particularly in reducing compliance pressure for SMEs and reinforcing regional trade integration. While SONA set out ambitious growth and funding commitments for the sector,

the Budget signals early delivery through regulatory relief and trade enablement measures.

Minister Godongwana further confirmed that:

- The capital gains tax exemption on the sale of a small business for older persons will increase from R1.8 million to R2.7 million; and
- The qualifying business value cap rises from R10 million to R15 million.

Simone Cooper, head of business and commercial banking at Standard Bank South Africa, says the VAT threshold increase is a tangible intervention for growing businesses.

"For many SMEs, compliance costs can be disproportionate to turnover. The increase in the VAT registration threshold to R2.3 million is a welcome and practical measure. This adjustment creates breathing room for entrepreneurs to reinvest



Simone Cooper, head of business and commercial banking at Standard Bank South Africa.

in growth, strengthen resilience and focus on expansion rather than administration."

## REGIONAL INTEGRATION

Beyond SME compliance relief, the Budget reinforces South Africa's commitment to regional integration.

Minister Godongwana emphasised that a key policy objective is to ensure that the financial sector supports regional integration and the implementation of the Africa Continental Free Trade Agreement (AfCFTA). He also confirmed that National Treasury will ease certain cross-border capital flow restrictions to improve competitiveness and position South Africa as a hub for investment into the continent.

Among the most advanced public-private partnership initiatives are

six border post projects aimed at easing congestion and lifting regional trade flows, while logistics reforms seek to dismantle rail and port bottlenecks that have constrained exports and raised the cost of doing business.

Cooper notes that these measures reinforce work already underway in the private sector.

"We have long supported clients operating across Africa in alignment with the AfCFTA. The Budget's focus on regional integration, capital flow flexibility and improved trade infrastructure reinforces this trajectory. As Business & Commercial Banking, we are present in 15 markets across Africa, as well as in Jersey and the Isle of Man. We continue to support businesses expanding across borders through integrated trade, payments and working capital solutions."

## INFRASTRUCTURE

The Budget places significant emphasis on infrastructure investment, with public-sector spending

expected to exceed R1 trillion over the medium term. This includes allocations across state-owned companies, provinces and municipalities, with transport and logistics representing the largest share.

These commitments, alongside energy transmission reforms and water infrastructure investment, are aimed at removing structural bottlenecks that have weighed on economic growth.

Minister Godongwana confirmed that government debt will stabilise for the first time in 17 years and begin to decline over the medium term, reinforcing fiscal credibility and investor confidence. Economic growth is projected at 1.6% for 2026.

"Targeted SME relief improves short-term viability, but sustained growth will depend on reliable infrastructure, efficient payments systems, strong trade corridors, and continued access to finance. While the 2026 Budget provides important building blocks, the focus now shifts to implementation," concludes Cooper.

# Important element missing in Budget 2026 for the metals and engineering sector

**I**N a post-Budget briefing to members, Seifsa CEO Tafadzwa Chibanguza focused on the elements most relevant to the metals and engineering sector.

He said the first and most important observation is that the macroeconomic "green shoots"

that Seifsa has consistently referenced are now clearly visible. "Budget 2026 confirms that fiscal stabilisation is no longer theoretical — it is evident in the data.

He said the Budget reinforces a critical principle: fiscal discipline, while often difficult, ultimately creates the space for pro-growth

flexibility.

"At the same time, structural expenditure pressures remain significant, with the majority of spending still directed toward the social wage."

## METALS AND ENGINEERING SECTOR

Chibanguza said Budget 2026 reflects continued momentum in the infrastructure reform architecture, which remains central to industrial demand. Key proposals highlighted include:

- Progress is being made on the Credit Guarantee Vehicle to de-risk infrastructure projects, with operationalisation anticipated within the year. This is a material step toward unlocking investment and crowding in private capital.
- The Budget Facility for Infrastructure now has 63 projects under consideration, ranging from social infrastructure to large-scale strategic projects.
- The issuance of an infrastructure bond, which raised R11.8 billion last year, demonstrates growing

sophistication in infrastructure financing mechanisms.

- Treasury has prudently taken advantage of improved investor appetite by increasing issuance. This confidence dividend must, however, be carefully managed to ensure that confidence-driven borrowing does not undermine the hard-won debt stabilisation trajectory.

## CONCERN

A notable concern is the absence of a structured update on the finalisation of Public Procurement Act regulations, according to Chibanguza. "While amendments are referenced in supporting documentation, there is no clear sequencing, timeline or implementation commitment.

"This omission is material. Public procurement is the primary interface between state infrastructure expenditure and domestic industry. Regulatory certainty is fundamental to localisation frameworks, design enforcement and long-term capital allocation decisions in manu-

facturing. Infrastructure reform without procurement clarity weakens the industrial multiplier.

"From Seifsa's perspective, this remains an area requiring urgent policy clarity and decisive communication," he said.

## CONCLUSION

Chibanguza concluded the briefing note by saying: "Budget 2026 confirms that South Africa's macroeconomic foundation is materially stronger than in recent years. Fiscal consolidation has yielded measurable dividends, and the infrastructure financing architecture is improving.

"For the metals and engineering sector, the priority now is execution. The opportunity lies in converting macro credibility into industrial opportunity through disciplined infrastructure delivery, procurement certainty and sustained structural reform.

"Seifsa will continue to engage constructively to ensure that this moment of stabilisation translates into durable industrial growth."


# City commits to maintain South Durban Basin infrastructure

**A** high-level meeting with industries in the South Durban Basin, particularly Prospecton, resolved to urgently address infrastructure deficiencies, according to an eThekweni Municipality release on 23 February 2026. City manager Musa Mbhele, speaking at Toyota South Africa Motors, acknowledged

concerns over water interruptions, traffic challenges, and odour issues affecting productivity. Industry leaders pledged support and stressed transparent communication for effective planning.


Mbhele, joined by senior executives, committed to resolving issues within months, noting R500 million


already invested in upgrades. He highlighted progress: 90% of electrical infrastructure replaced, restored road markings, canal maintenance, and pump station upgrades. Mbhele emphasised collaboration, trust, and strong partnerships as vital for city growth.



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# Flagship logistics development signals confidence in KZN property fundamentals

**D**URING a February media briefing, Growthpoint Properties announced the launch of a R392 million, 36,830 sqm multi-tenanted logistics park, Tecoma Park, in the rapidly emerging Cornubia Town economic hub in KwaZulu-Natal.

South Africa's largest primary JSE-listed REIT said the major new development reinforces the company's continued investment in the logistics sector and reflects its disciplined capital allocation strategy, with a clear preference for investment in the country's stronger-performing coastal metros.

Growthpoint's KwaZulu-Natal property portfolio is one of the largest and most diversified in the region. Valued at R8.6 billion, it spans 560,000 sqm of gross lettable area across more than 50 logistics, office, retail and healthcare assets.

Estienne de Klerk, SA CEO of Growthpoint Properties, says: "KwaZulu-Natal remains a core investment region for Growthpoint. Our portfolio in the province consistently delivers exceptionally high occupancy levels, underpinned by sustained tenant demand across all sectors, which gives us the confidence to keep deploying capital in the province in line with our strategy."

Growthpoint's domestic strategy is to increase portfolio weighting towards sectors and regions expected to deliver better growth over the longer term. For sectors, it is specifically targeting logistics and retail property and, when it comes to regions, it is focusing on its portfolio



A sod turning ceremony marked the start of development at Growthpoint Properties' Tecoma Park, from left: Jason Reeves, head asset management: Logistics and Industrial Portfolio of Growthpoint Properties, Kobus Blom, KwaZulu-Natal regional development manager of Growthpoint Properties, Estienne de Klerk, SA CEO of Growthpoint Properties and Greg Worst, KwaZulu-Natal regional head of Growthpoint Properties

of in key coastal metros, including in KwaZulu-Natal and the Western Cape.

According to Growthpoint, including Tecoma Park, Growthpoint is currently investing around R1.5 billion in various developments and value-add redevelopment projects in the region, which are already underway or will commence soon. This includes the R800 million purpose-built student accommodation development adjacent to the Howard College Campus of the University of KwaZulu-Natal on Durban's Berea.

Greg Worst, Growthpoint's KwaZulu-Natal regional head, says: "KwaZulu-Natal continues to demon-

strate robust property fundamentals, particularly in key nodes offering strong connectivity and long-term growth potential. Demand is driven by the ports, airport and logistics infrastructure, as well as growing consumer markets. From a regional perspective, we continue to see strong tenant demand for well-located, modern space."

Scheduled for completion in 2027, Tecoma Park will deliver premium A-grade logistics space strategically positioned within Cornubia Town, next to Cornubia Mall and just 12 km from King Shaka International Airport and 21 km from Durban Harbour. The location offers direct

access to major arterial routes, surrounding industrial precincts and key transport infrastructure, enabling fast and reliable movement of goods across the region and beyond.

Jason Reeves, Growthpoint's head of asset management for logistics and industrial property, says: "The Tecoma Park development responds directly to escalating demand for modern logistics and warehousing facilities in KwaZulu-Natal, amid a well-documented shortage of suitably sized,

high-specification units. It is set to become a flagship industrial asset in our portfolio, aligned with our strategy of investing in modern, well-located logistics properties."

The development will comprise eight flexible units ranging in size from 2,790 sqm to 5,264 sqm with the ability to combine adjoining units creating larger units up to 10,000 sqm in response to tenant needs and to accommodate a broad range of logistics and warehousing users. Featuring contemporary industrial architecture suited to high-performance operations, the units will offer generous internal heights and efficient loading configurations

with both dockleveller and ongrade access.

Each unit will include an integrated office component, modern façade treatments, cantilevered canopies over loading doors and high-quality internal finishes. The park's masterplan ensures clear separation between industrial operations, vehicle movement and office activity, maximising efficiency and on-site safety. Dedicated truck circulation routes, optimised yard depths and well-planned staff and visitor access points will support smooth traffic flow across the precinct.

## SUSTAINABILITY

As with all Growthpoint's developments, sustainability is embedded in the design. Solar PV will be installed across the roofs of the units and elegantly screened. Green features include energy-efficient lighting systems, hot-water heat pumps and building forms that maximise natural light to reduce energy consumption. The park will be set within landscaped green spaces that enhance the overall working environment.

As a future-focused logistics destination, Tecoma Park will provide modern, efficient and environmentally responsible facilities tailored to the evolving needs of next-generation occupiers.

"This development reflects our confidence in logistics assets that are well-located, future-ready and demand-led, and our conviction in KwaZulu-Natal's property fundamentals," concludes De Klerk.

## SA's crisis: Is our infrastructure turnaround possible?

**O**PINION | LEADING political parties in South Africa have announced the establishment of 'war rooms' or similar emergency structures to address local government issues ahead of the upcoming municipal elections, with water supply and rural infrastructure as top priorities.

Bani Kgosana (pictured), chief revenue officer at Pragma, says the North West province demonstrates a classic example of asset management failure: municipalities struggle to deliver water to residents despite adequate water levels in dams. The problem is poor water reticulation infrastructure (the pipes, pumps, and distribution systems that should transport water from dams to taps).

The ANC's new war room has identified water reticulation and rural road infrastructure as top priorities for immediate intervention. When water systems collapse, and the electricity supply becomes unreliable, it's not about service deliv-

ery but fundamental human rights. Neglect infrastructure long enough, and rebuilding costs will vastly exceed routine repairs.

The medium-term budget policy statement delivered by Finance Minister Enoch Godongwana in November outlined three strategic priorities that have gained traction: professionalising the public service, stabilising government debt, and investing in growth-driving infrastructure. What makes this approach notable is its origin. These weren't demands imposed by external stakeholders but emerged from the government's own strategic planning.

The market responded positively. S&P Global Ratings upgraded South Africa's credit outlook before any major projects had broken ground, suggesting that credible planning can restore confidence even ahead of visible results.

Beyond the headlines, something fundamental is shifting.

Municipalities are moving away from crisis management toward systematic lifecycle planning. Asset registers are being established, maintenance schedules formalised, and infrastructure policies codified. This represents a key transition that could prove more valuable than any single capital injection.

Eskom's trajectory over the past year offers proof of concept. As operational reliability improved, the utility shifted from consuming resources to generating them. The return to profitability wasn't achieved through magic but through disciplined, scheduled maintenance. When assets function as designed, they create value rather than drain it.

However, execution remains the critical challenge. Request For Proposal (RFP) documents often reveal a gap between intention



and expertise. Specifications are written by officials who understand the problem but lack the technical grounding to define solutions effectively. Procurement processes default to selecting the lowest

bidder rather than the most capable provider. And in too many cases, commitments are postponed to the next budget cycle as debt constraints limit immediate action.

This creates both a problem and an opportunity. South Africa has developed world-class asset management capabilities. Pragma, a leader in enterprise asset management, has proven local solutions now deployed in 46 countries. The challenge is ensuring these capabilities are applied where they're needed most.

Public-Private Partnerships

(PPPs) offer a practical path forward. During the pandemic, Pragma delivered free training to Eskom personnel, covering maintenance fundamentals, failure analysis, and project preparation. Similar initiatives have helped municipalities improve asset data quality and define appropriate service levels across all three spheres of government.

Modern enterprise asset management platforms like Pragma's On Key software can coordinate maintenance workflows, allocate resources efficiently, and ensure work quality through systematic oversight. For contracted services, digital systems can match jobs to the nearest qualified provider, reducing response times while minimising administrative overhead.

The infrastructure and technical knowledge exist, and the political commitment has been articulated. What this year will test is whether political will can be converted into sustained action.



# Municipal road study looks beyond potholes to systems solution

THE rainy season in most of South Africa has once again exposed the dire state of municipal road networks across the country. From metros to small towns, potholes are multiplying and growing rapidly, disrupting mobility, damaging vehicles, increasing accident risks and fuelling public frustration.

Yet potholes themselves are not the real problem, says The Institute of Municipal

Engineering of Southern Africa (Imesa). They are the most visible symptom of road maintenance delays and underinvestment. "The greatest challenge is not filling potholes, but convincing decision makers that the sound operation and maintenance of existing assets should be prioritised over investment in new infrastructure."

The South African road network of over

750 000km is the tenth longest in the world. Municipalities manage over 256,000 km of this network, and an estimated 131,000 km is unproclaimed. The road replacement cost is estimated at R2 trillion. Given the extent of the network to be managed, it is critical for municipalities to prioritise road maintenance. Imesa warns that neglect will result in the ongoing deterioration of assets and a huge knock to the

economy that will be compounded with the inflated costs of reconstruction over time.

Citing the findings of an important research paper that was shared with the more than 700 engineers and municipal officials who attended the 2025 Imesa Conference, the institute states that delaying road maintenance is a false economy. The longer such maintenance is left undone, the higher the eventual cost to restore the road to an acceptable condition. The paper's authors, Ashiel Rampersad, Melusi Nkosi, Obey Manganyi and Jabulani Vincent Mashinini from the Council for Scientific and Industrial Research's (CSIR) Smart Mobility cluster, set out to understand the readiness of municipalities to manage an ageing local road network, given their internal and external challenges.

## MISSING SYSTEMS

Some of their findings were concerning, but Imesa notes that recognising the issues and planning the way forward is the first step towards improving service delivery. The authors found that 59% of municipalities are unaware of their road network conditions, primarily due to missing assessment systems. A limited number of municipalities have appropriate systems and policies in place to manage their road network, and the consequences of the widespread underfunding of road condition maintenance are seldom assessed by roads authorities.

The writers reviewed 41 municipal Integrated Development Plans (IDPs) to understand how their road assets are prioritised. They noted that local governments should be able to leverage their existing knowledge, skills and resources to meet their goals effectively. Achieving this requires stronger institutional capacity to manage operations and service delivery. However, most municipalities currently lack the capability to consistently produce reliable and transparent performance reports, highlighting significant institutional weaknesses. Less than half of municipalities have road asset management, infrastructure or transport plans.

Municipalities, on average, spend more on newly constructed roads as opposed to maintenance of existing roads, Smith et al. found. They noted that this trend highlights the widespread underinvestment in infrastructure prioritisation.

A concept framework for road infrastructure management developed by the writers was shared with Imesa Conference attendees. As potholes continue to rile road users and test municipalities around the country, Imesa urges municipal engineers to use this powerful tool at their disposal.

## MORE THAN 'FIXING POTHoles'

"The shortage of skills is also recognised as a major threat to local roads infrastructure management, so the education, knowledge sharing and professional development offered by Imesa is vital. Since 1961, the institute has been committed to the pursuit of excellence in all facets of infrastructure, offering a platform for the exchange of ideas and viewpoints on all aspects of municipal engineering with the aim of expanding the knowledge and best practices are invited to be part of this community.

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# Sensors at the core of sophisticated flood warning system

**T**O create the world's most sophisticated flood monitoring and forecasting system, the US State of Iowa's Flood Centre (IFC) uses more than 200 Senix ToughSonic 30 and ToughSonic 50 ultrasonic sensors to measure water levels in streams across the state. Data collected from the sensors is automatically sent to the Iowa Flood Information System (IFIS), where real-time information is integrated into an advanced hydrological model. System data and river stage hydrographs are shared with the public and emergency management officials.

With easy online access to water-level data from sensors, Iowa residents and state agencies can get reliable, real-time information to manage flooding in their areas.

## ULTRASONIC SENSORS

Sharing the case study, South African distributor of Senix sensors, Instrotech, says the IFC needed a reliable, cost-effective way to obtain accurate, real-time stream-level readings. Project engineer Daniel Ceynar decided to try Senix ultrasonic sensors because they had been used for years for water level measurement in the hydrology research labs at IHR Hydroscience & Engineering at The University of Iowa. The University of Iowa has long been a world leader in hydrological research.

Senix ultrasonic sensors were selected because they are designed to integrate easily with other equipment, including the system's

cellular modems, solar panels, on-board clock, and other components. Senix sensors were also chosen for their ruggedness, programmability, and Senix's excellent engineering support. "Senix sensors and the Senix technical team have been pivotal to the success of this project," Ceynar said, noting that the IFC and Senix worked closely to design a special threaded collar for the ToughSonic 50 so it could be mounted to the IFC stream gauge enclosure using the same threading as the ToughSonic 30. That ToughSonic 50 rear mount model has since become a standard product for Senix.

The sensors are programmed to measure at intervals of 5 minutes to 1 hour, using a boxcar average of a preset number of individual measurements. The system sleeps until it's commanded to wake up to take measurement data and send it to the IFIS. Sensor data is provided via RS-485 serial communication.



*The world's most sophisticated flood monitoring and forecasting system, the US State of Iowa's Flood Centre (IFC), uses more than 200 Senix ToughSonic 30 and ToughSonic 50 ultrasonic sensors to measure water levels in streams across the state.*

The entire IFIS flood warning system depends on the ruggedness and reliability of the Senix ToughSonic sensors and the IFC system. The sensors are potted in water-tight steel housings and operate over a humidity range of 0-100% at temperatures from -40 to +70°C.

After assembly in the IFC lab, each stream gauge is submerged for 3 days to verify its water-tightness. This testing has proven useful. In the field, numerous sensors were submerged by flash flooding, and once the flood waters subsided, the sensors resumed sending accurate stream level data without requiring any repairs.

"Once installed, the IFC stream gauges are practically 100% maintenance-free," Ceynar said. "Most stream gauge sites have not been re-visited since they were installed, 4+ years ago."

## REAL-TIME WATER LEVELS

The sensors have provided the IFC and the people of Iowa with critical data for flood forecasting and managing the aftermath of flooding. "The system – stream gauges and other Hydromet data – is routed through the IFIS where it is regularly used by all levels of government, law enforcement and the general public," Ceynar said. "We've had first-hand experience working with our local emergency management coordinator during floods in 2013 and 2014, where we participated in the daily briefings using IFIS." The stream gauges identify where the flood crest is located and tracks it as it approaches sensitive roads, bridges, and towns.

Before the system was in place, it was common for emergency personnel to be dispatched to assess the flooding in threatened locations. But with stream gauges collecting data in real time, emergency responders can focus on helping people instead of tracking flood waters.

## A MODEL FOR THE WORLD

Ceynar and his colleagues have been contacted by officials from other states and from countries as far away as Australia. The Washington State Department of Transportation is also evaluating the stream gauges.

# Precision test and measurement equipment range in SA

**C**OMBINING a technically led and digitally enabled approach with an exceptional team of experts, global product and service solutions provider, RS, has launched its own brand RS Pro. The company says the growing demand for precision and efficiency led it to launch the brand to provide a complete portfolio of test and measurement equipment engineered to meet the highest standards of performance, safety, and value.

With more than 1,500 products and over 300 new additions, the RS Pro test and measurement range is designed to meet the diverse needs of professionals across maintenance, manufacturing, and laboratory environments.

## RANGE FOR EVERY APPLICATION

The RS Pro portfolio covers all areas of test and measurement, including:

- Handheld instruments: electrical test equipment, multimeters, and thermal imaging cameras.
- Bench equipment: oscilloscopes, bench power supplies, and signal generators.
- Environmental testing: data loggers, sound level meters, hygrometers, and thermometers.
- Laboratory equipment: ultrasonic cleaners, microscopes, pipettes, and lab bottles.
- To complement this range, RS Pro also offers a variety of accessories, including test leads, oscilloscope

probes, test connectors, batteries, and cable assemblies.

RS Pro test and measurement products undergo rigorous testing and approval by RS Pro test and design laboratories, ensuring uncompromising quality and safety. According to the company, this commitment to excellence is reflected by an exceptionally low return rate of just 0.04%, highlighting the reliability and long-term durability of the range.

Many instruments are available in calibrated versions, with calibration and re-calibration services offered to ensure consistent accuracy throughout the product's lifespan.

## SUPPORTING SA'S INDUSTRIAL GROWTH

Erick Wessels, sales director at RS South Africa, said that "test and measurement is essential for maintaining accuracy, efficiency, and safety across South Africa's industrial sectors. RS Pro offers professionals reliable, high-quality solutions that meet international standards while delivering strong value and performance."

## ACCURACY, EFFICIENCY, AND RELIABILITY

Whether for everyday monitoring, preventive maintenance, energy management, or environmental control, test and measurement equipment is essential for operational excellence and safety compliance.



## Ultrasonic flow meters

### Working Principle of the Ultrasonic Flow Meter

The working principle of the SU series ultrasonic flow meter is based on the transit-time differential method. This method involves sending ultrasonic pulses between two transducers placed on the exterior of the pipe. When a pulse is transmitted in the direction of the flow, it travels faster compared to a pulse sent against the direction of the flow. By measuring the difference in transit time between these two pulses, the flow rate of the medium can be accurately determined.

### Versatility and Applicability

The SU series can measure a wide range of flow rates and is compatible with various pipe materials and sizes, enhancing its versatility and applicability across different industrial applications.



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# Keeping critical infrastructure switched on with reliable MV supply

**M**ANY sectors across South Africa and the broader region depend on mission-critical facilities to deliver uninterrupted services. Hospitals, data centres, and large industrial operations cannot afford downtime, and their performance relies heavily on stable and resilient Medium Voltage (MV) electrical systems. Ensuring that these facilities operate without disruption requires equipment that can support changing energy demands, tolerate grid instability, and offer strong protection and monitoring capabilities.

### MEETING DEMANDS

A mission-critical facility is defined by its need for maximum uptime and minimal room for error. Rhett Kelly, design and development manager at Actom MV Switchgear, explains that MV switchgear serves as the backbone of the electrical network: "It provides the switching capability needed for operational flexibility and protects upstream equipment by interrupting downstream faults and isolating them from the healthy network. Monitoring and protection systems ensure that operators have full real-time visibility of network conditions both onsite and remotely via SCADA (Supervisory Control and Data Acquisition)."

To meet the varied needs of hospitals, data centres, and industrial plants, Actom offers a wide range

of switchgear solutions with various configurations, insulation technologies, and bus-bar options. All solutions are designed and type-tested to both local and international standards, ensuring they meet the performance and safety requirements demanded by high-reliability environments.

### ROBUST DESIGN

Reliability in MV systems is achieved through both technology and endurance. It is important for switchgear to employ modern maintenance-free interruption technologies and durable operating mechanisms that have been tested by internationally recognised facilities for extended electrical and mechanical endurance, i.e. classified as E2 and M2, respectively, in accordance with IEC 62271-100. This testing ensures resilient electrical and mechanical performance over long periods, reducing maintenance requirements and supporting continuous operation.

While grid instability and rapid load fluctuations remain ongoing challenges across the region, MV switchgear is designed to tolerate the voltage and current variations typically associated with these conditions. This resilience helps operators maintain stability even when external



factors are unpredictable.

### REAL-WORLD OUTAGE SUPPORT

Beyond the physical equipment, long-term support plays a vital role in maintaining supply continuity. Avrielle Cape, aftersales manager at Actom MV Switchgear, highlights the importance of rapid response capability. "Effective outage management requires established rapid-response protocols, qualified technical personnel, and local availability of critical spares to ensure minimal service interruption. Network operators and

switchgear service providers typically maintain 24-hour support capabilities and implement structured maintenance schedules and/or condition-based maintenance to identify and address potential failure points before they escalate."

"It is important to work with a company that operates a dedicated services division with multiple regional branches," says services manager, Marius Lombard. "Providing customers with true 24/7 technical support and access to specialists in the maintenance, inspection, and life-cycle management of MV switchgear installations is vital. Proactive and condition-based maintenance strategies, ensure early identification

of wear, degradation, and operational risks before they progress into costly failures. By combining field expertise, structured maintenance programmes, and access to OEM-level technical resources, a services division plays a critical role in safeguarding network reliability and extending the asset life of customer installations.

"When unplanned outages occur, coordinated field service teams can expedite restoration through on-site fault assessment, component replacement, and system recommissioning. Importantly, holding essential inventory and adhering to

stringent response times are key to restoring network integrity and maintaining supply continuity across power distribution systems," says Lombard.

### TECHNOLOGY ENHANCES RESILIENCE

Digitalisation is reshaping how operators manage electrical infrastructure. By integrating online condition-monitoring systems into MV switchgear, such as temperature and partial discharge monitoring, early warnings can be provided to help prevent failures. Features like infrared windows allow technicians to conduct inspections safely while equipment remains energised. These tools support a shift from time-based maintenance to predictive, condition-based strategies, improving both safety and efficiency.

As global environmental standards evolve, so too must MV switchgear technology. New product ranges that eliminate reliance on fluorinated gases such as SF<sub>6</sub>, including solid dielectric insulated switchgear (SIS), must be continuously developed in line with international regulations. With SF<sub>6</sub>-free solutions extending up to 40.5 kV, 3150 A (4000A at 17.5kV), and 40 kA, Actom aims to ensure that mission-critical facilities can meet rising energy demands while adapting to a rapidly changing power landscape.

## Revolutionising industrial substations

**A**T mines, process plants, and manufacturing facilities, substations are not afterthoughts. They are the site's heartbeat, forming part of core infrastructure and managing the power supply to critical equipment, such as the motors driving conveyors, pumps, and processing machinery.

During construction, substations

often emerge as late-stage bottlenecks that stall otherwise well-managed projects. When diverse teams converge – from design houses and consulting engineers to equipment vendors and construction crews – the risk of confusion and delay rises sharply. Misaligned technical standards, fragmented communication, and procurement holdups ripple

through to testing and commissioning, amplifying risk exposure and operational strain.

Gerhardt van Rooyen, projects manager at WEG Africa, notes that these problems often escalate during the construction and commissioning phases.

"Typically, on-site construction begins with a brick-and-mortar substation building. Once completed, all the equipment is installed, followed by extensive interconnecting cabling and testing. It's at this stage that delays often set in. Multiple disciplines need access at the same time, schedules overlap, and frustrations inevitably start to build," says Van Rooyen.

### SUBSTATIONS DEPLOYED FASTER, SMARTER

This conventional approach now has a better alternative: the WEG E-house.

E-houses are modular, prefabricated units manufactured and fully tested at WEG's South African facilities. Each E-house is designed, assembled, fitted with equipment sourced from WEG and other vendors, and tested to client and International Electrotechnical Commission (IEC) benchmarks. Once completed, the E-houses are shipped to the site for



rapid installation and commissioning, drastically shortening project timelines.

WEG has helped numerous projects avoid the above bottlenecks through modular, factory-built substations. In one recent project, the WEG E-house team reduced substation construction, deployment, and commissioning to under a year; not just for one substation but seven, including a central control room powering a complete gold concentrator plant.

### A STARTUP MINDSET

E-house innovation helped create the momentum, yet their entrepreneurial mindset toward solving clients' challenges deserves much of the credit.

"Multiple contractors trying to all be in the same space can create complete chaos. E-houses relieve the customer of that pressure. It's a one-stop

integrated solution provider. We take on all the risks as a single contractor," says Tyrone Willemse, senior manager at WEG Africa.

He adds that skilled design, manufacturing, procurement, and logistics teams are important, but the real differentiator lies in the team's "can-do" approach: "It's important to have an entrepreneurial spirit when delivering new concepts like fully integrated E-houses. We treat ourselves like a startup. We take nothing for granted. We're always learning, and there's no job too big or too small for any of us."

Professionalism, risk awareness, and adaptability are vital to a substation project's success, beginning long before construction. WEG's collaboration with site owners, consulting engineers, and design houses defines specifications, standards, and procurement requirements early in the project lifecycle. When the substation phase begins, contractors step into the client's world, taking full ownership and responsibility.

E-houses represent a significant leap forward over traditional substation models, significantly reducing delays in construction, deployment, and testing. Despite inevitable challenges, the team behind WEG's E-houses remains committed, guided by a startup spirit of ownership and innovation.



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# Regulator blocks packaging company's R128m acquisition

THE Competition Commission has officially prohibited the proposed R128 million acquisition of Premier Plastics by JSE-listed packaging giant Transpaco, citing concerns over market concentration and reduced competition in the retail sector.

The deal, first announced in late 2025, was intended to bolster Transpaco's presence in the

fast-moving consumer goods (FMCG) market, particularly within Gauteng. Premier Plastics, a 35-year-old manufacturer based in Tshwane, is a key supplier of retail plastic carrier bags. Transpaco had initially viewed the acquisition as a "closely aligned" strategic fit that would enhance its service capabilities through Premier's experienced management and established manu-



facturing facilities.

However, the Competition Commission ruled in late February that the merger would likely result in a substantial lessening of competition. Regulators expressed concern that absorbing a significant independent player like Premier Plastics would grant Transpaco a dominant position, potentially leading to higher prices for smaller retailers and, ulti-

mately, consumers.

In a statement to shareholders via SENS, Transpaco confirmed it had been notified of the decision and is currently "working through the Commission's response and considering all available options," including a potential appeal to the Competition Tribunal.

# Making the shift to sustainable packaging - real examples

RS South Africa is aligning with a global drive to reduce plastic waste as part of the "Plastic Out" programme led by the RS Group. The initiative forms a key pillar of the Group's 2030 ESG action plan, which aims to reduce emissions, minimise waste, and transform packaging across its international operations and value chain.

As customer expectations around sustainability continue to rise, RS is rethinking how packaging is designed, sourced and used, ensuring that environmental responsibility goes hand in hand with operational efficiency and product protection. For South African customers, this global programme provides access to proven, scalable approaches to more sustainable packaging that support their own ESG ambitions.

Across RS Group's international distribution network, several major packaging innovations have already been implemented. These initiatives

serve as global best-practice examples that inform packaging strategy across all regions, including South Africa. Examples of global best practice include the following:

One of the most significant milestones in the company's "Plastic Out" programme has been the introduction of bio-based polymer carriers for electronics distribution from RS Group's Corby site in the UK. Developed in partnership with Chestnut Biopolymers Ltd., the material is produced by fermenting sugars and blending them using patented technology to deliver strength and durability without generating microplastic waste.

Since mid-2025, more than 100 000 biopolymer units have been deployed, replacing approximately 80% of conventional polypropylene packaging at the site. This marked the first time a bio-based carrier had been implemented at scale within RS Group. It demonstrates that sustain-

able alternatives can meet the performance demands of electronics distribution while significantly reducing single-use plastic.

Another major step forward has been the introduction of paper-based sealing tape at RS Group's Bad Hersfeld and Beauvais distribution centres in Europe. Developed in partnership with Tesa, the FSC-certified tape allows cartons to be recycled without the need to remove plastic sealing, improving recyclability while maintaining operational efficiency and a high-quality unboxing experience.

Following successful adoption, the paper tape solution is being rolled out more widely across the Group's EMEA distribution network, supporting the long-term ambition to eliminate unnecessary plastic from packaging operations.



RS Group has also replaced traditional plastic infill materials with paper-based alternatives across applicable packing areas in the UK. The initiative has removed an estimated 15 tonnes of plastic, while maintaining packaging integrity and ensuring products arrive safely and securely.

The paper infill contains 50% recycled content, is FSC certified and has been designed to integrate seamlessly into existing packing processes, reinforcing the principle that sustainability improvements should not compromise reliability or service quality.

While these initiatives have been implemented in other regions, they play a critical role in shaping RS South Africa's approach to sustainable packaging. By drawing on global experience and proven solutions, RS

South Africa can assess how similar principles can be applied locally, considering market needs, operational requirements and national sustainability priorities.

"Sustainable packaging is no longer optional, it's essential. At RS South Africa, we are accelerating this transition by implementing solutions that have already demonstrated success globally, ensuring our customers can rely on packaging that is both responsible and efficient," says De Wet Joubert, Operations and strategic projects director at RS South Africa.

The "Plastic Out" programme highlights the impact of collaboration across teams, regions and supply-chain partners in driving meaningful progress on sustainability. For RS South Africa, alignment with this global strategy ensures local customers benefit from innovation, expertise and continuous improvement as packaging solutions evolve.

# End-of-line marking and inspection solutions in food production

FOOD manufacturers today face increasing pressure to deliver consistent quality, full traceability, and absolute compliance with labelling and weight regulations. At the same time, production environments are becoming more automated, faster, and more demanding.

A strong example of how advanced inspection technology supports these goals can be seen at Block House Butchery in Hamburg, Germany – a long-established meat producer that has invested in comprehensive end-of-line quality systems from Wipotec.

USS Pactech supplies and supports these types of inspection and checkweighing solutions in South Africa, helping local producers achieve the same level of process control and consumer trust.

Block House Butchery has relied on Wipotec technology for almost 15 years as part of its end-of-line production strategy.

According to Jörg Jablonski, managing director for production and technology, the goal is not only to ensure quality, but also to document

controlled processes throughout production.

This includes checkweighing, foreign body detection, X-ray inspection, and integrated marking and verification – all supported through centralised data collection and reporting.

While metal detection is considered a basic requirement in food production, Block House has taken inspection further by incorporating X-ray scanning technology.

This allows the detection of non-metallic foreign bodies such as bone fragments, cartilage and dense spice inclusions.

X-ray inspection provides an added layer of protection for both consumers and brand reputation, helping prevent costly recalls and quality incidents.

End-of-line control is not only about weight and contamination – correct labelling is equally critical.

In this case study, Block House implemented the Wipotec Traceable Quality System (TQS) to manage product marking and verification, combining printing, camera inspection, transport coordination and cen-

tralised control.

This integrated approach reduces operator error and improves efficiency compared to separate stand-alone systems.

To support audits, reporting, and continuous improvement, Block House connects its inspection systems through Comscale software.

This provides central documentation, real-time access to production data and traceability for compliance and quality management.

As Jablonski notes, seamless documentation is particularly valuable during audits and long-term process optimisation.

This case study demonstrates how modern food manufacturers can strengthen quality assurance through fully integrated end-of-line inspection, weighing, and marking systems.

USS Pactech supports local food and FMCG producers with access to advanced solutions such as: dynamic checkweighers; metal detection; X-ray inspection; marking and verification systems and production data integration.

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# Young engineers drive sector's circular economy breakthroughs

**S**OUTH Africa's pulp and paper sector has been opening doors for a growing cohort of young women who apply science and engineering to making the circular bioeconomy a reality.

Over the past 15 years, the Master's in Engineering bursary and research programme, established by the Paper Manufacturers Association of South Africa (Pamsa), has seen several young women pursue postgraduate studies in chemical engineering, wood science and related disciplines.

"As a sector centred on the renew-

ability of wood-derived products such as cellulose, paper, packaging and tissue, our students' research projects enable our members to improve efficiencies and close the loop in the manufacturing process," says Jane Molony, executive director of Pamsa.

The range of research projects is vast – from putting process by-products and waste streams such as lignin, sludge and even food waste to higher value use – to optimising water and energy efficiency.

"One of our earlier students is Sonja Boshoff (pictured), who graduated

from the programme in 2015. She is a thriving process engineer in an all-female team at Mpact that is passionate about incorporating innovative technologies and practices to ensure both sustainability and profitability," says Molony.

## BIOETHANOL

Boshoff was instrumental in kick-starting the early research that ultimately led to a bioethanol production project using sludge from the pulp and paper industry. "Paper sludge is

rich in organic material such as cellulose, making it a promising feedstock for bioethanol production," Boshoff explains. Bioethanol serves as a platform chemical in the production of industrial chemicals, bio-based plastics and even sustainable aviation fuel.

"The launch of a bioethanol demonstration plant in 2024 marked the culmination of more than a decade of research by Stellenbosch University's Department of Chemical Engineering and its Bioresource Engineering research group, which Boshoff was part of," notes Molony.

Upon completion of her master's project, Boshoff moved on to the Mpact Innovation Centre in Stellenbosch where she did further research on alternative technologies for the recovery of energy from waste.

## LIGNIN

Leane de Beer, who completed her MSc in Chemical Engineering at North-West University in 2020, explored a more cost-effective purification method for liginosulphonate, a lignin-derived by-product of the pulping process. Her work focused on converting what is typically a low-value material into higher-value applications, supporting the circular bioeconomy and reducing reliance on fossil-based inputs. Further work on lignin is ongoing at the Sappi Technology Centre and Naude is now progressing in her career as a chemical engineer, working on environmental projects, life cycle assessments, simulation modelling and water management plans.

A junior process engineer at Mpact, Mahlogonolo Mafela looked into how to optimise energy usage in the paper manufacturing process by researching different levels of vacuum pressure and time to get the optimal dryness of pulp during the formation of paper. She explains that when the mixture is exposed to the vacuum, water can be removed; much like squeezing a sponge filled with water. "We are basically using a vacuum to squeeze as much water as possible, so I wanted to reduce the energy consumption required by the vacuum pressure process but still optimise water removal," says Mafela.

Kelly Campbell, who holds a BEng in Chemical Engineering and is completing her MEng at Stellenbosch University, is focusing on food waste fermentation for ethanol production. Her work responds to the growing challenge of organic waste destined for landfill.

Instead of going to landfill, this



waste could be converted into ethanol through fermentation," Campbell explains. "That diversion reduces landfill emissions and creates a high-value product with potential in the chemical and transport sectors." Campbell is currently working at Mpact as an engineer-in-training.

Lerato Tau will be graduating with her master's at the University of Pretoria this year. "For my project I used thermogravimetric analysis (TGA) to measure how certain materials used in the papermaking process behave when heated. Her project sought to study the make-up and thermal stability of feedstocks, process materials and final paper products.

"In simple terms, I'm heating up paper materials and watching how they lose weight as they get hotter," Tau explains. "Different components break down at different temperatures, which shows up as patterns on a graph. This tells me exactly what the material is made of – how much hemicellulose, cellulose, lignin and char it contains."

The beauty of her method is its efficiency. Traditional laboratory tests to analyse paper materials can take three days and require dangerous chemicals. Tau's heat-based approach delivers the same information in about six hours, making it safer, faster and more practical for the industry.

Another example of the circular bioeconomy in action is the work of Gabriela Carzola, now a process engineer in training at an engineering firm. Her master's project through Stellenbosch University, which recently earned her a distinction, explored methods to convert papermaking reject material into a slow-release fertiliser for trees in commercial forestry plantations.

"The work of these incredible women demonstrates how our sector is driven by sustainability and innovation," Molony concludes.

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# Custom installation solves Durban effluent pump challenge

**H**IGH-performance processing operations and wastewater management are critical. "When an effluent's chemical make-up is highly corrosive, and it is generated in fluctuating intermittent volumes, these are the critical variables we work with to custom design a system that we know will work reliably," says Stephen Cutting, Flygt Sales at Natal Pump Services.

The company recently successfully installed a specialised wastewater solution at an industrial site in Durban. The sump was engineered to receive intermittent drawdowns of highly corrosive effluent from the Equalisation (EQ), Upflow Anaerobic Sludge Blanket (UASB), and buffer tanks during scheduled maintenance activities. "These drawdowns create extreme



variations in inflow — from low background seepage to sudden high-volume discharge

events," explains Cutting.

He says managing these fluctuations efficiently was the primary design challenge.

At the core of Natal Pump Services' installation are two heavy-duty submersible pumps in special duplex stainless steel construction. Bissett says these particular pumps were selected for their capacity to handle high solids. Their cast duplex stainless steel construction provides the required robustness, and they are suitable for aggressive and corrosive effluent. Their ability to operate reliably under cyclical loading is another factor that favoured their selection.

The pumps are mounted on a guide rail

arrangement that allows safe removal for maintenance without entering the sump. "This is a critical safety consideration in the confined-space environment," says Bissett.

Because the sump receives periodic high-volume maintenance discharges, the control philosophy had to accommodate the following three conditions:

- Rapid level rise during tank drawdowns;
- Extended low-flow idle periods; and
- Energy optimisation during partial loading.

"Providing custom solutions for this type of challenging project is an opportunity to demonstrate the depth of our expertise," says Alan Bissett, director, Nataol Pump Services who has been providing pump solutions in KwaZulu-Natal for over 40 years.

# Smart joint access creates inspection-ready design

**P**ROGRESSIVE cavity pump solutions specialist, Seepex has introduced Smart Joint Access (SJA), a new inspection-friendly pump design developed for demanding industrial environments where uptime and reliability are critical. Integrated into the BN progressive cavity pump, SJA combines a compact footprint with direct visual access to both joints via a large opening in the suction housing. This enables efficient condition assessment while ensuring precise handling of shear-sensitive, abrasive, or corrosive media.



to achieve controlled fragmentation and maintain productivity. In these operations, deviations in pumping performance can lead to blast inconsistencies, rework, or delays.

Seepex BN pumps with SJA are designed to meet these operational demands. Quick and easy access to the joints supports reliable emulsion transfer and precise dosing, making the pump well-suited for blast hole loading and other critical chemical handling processes.

"Smart Joint Access enhances availability and operational efficiency for our customers," said Magalie Levray, global business development

manager mining at Seepex. "Operators gain direct access to the joints through the large inspection opening, reduce downtime, and rely on consistent, precise pumping of viscous, shear-sensitive, and abrasive emulsions. In rock blasting, where every borehole matters, this reliability is essential."

## INSPECTION-FRIENDLY DESIGN

Smart Joint Access is designed to simplify inspection routines and save time. The inspection opening in the suction housing provides direct visual access to both joints, supporting shorter inspection cycles and high operational reliability.

An equal-wall stator enables high-pressure capability within a compact footprint. The pump can be equipped with a compact hydraulic drive for truck-mounted mobile units or an electric drive for under-

ground or stationary installations. The low-displacement hydraulic option reduces oil requirements and contributes to a low total cost of ownership.

Seepex progressive cavity pump technology ensures stable, controlled flow and protects product integrity, even when handling highly abrasive or shear-sensitive emulsions. A wide range of materials is available, including stainless steel or steel housings, chrome-plated rotors, and stators in NBR, EPDM, or FKM, ensuring compatibility with a broad range of chemical emulsions.

Framework agreements support fast delivery and reliable availability, enabling standardised designs and fleet-wide rollouts with mini-

mal downtime.

## APPLICATIONS

BN pumps with Smart Joint Access are suitable for rock blasting, shotcrete, mine dewatering, tunnelling, civil works, dam construction, and other industrial processes requiring precise and reliable handling of chemical or abrasive media. In blasting operations, routine visual inspection of the joints combined with operational pressure testing is essential. Smart Joint Access allows operators to assess joint integrity quickly, supporting faster decision-making and continuous operation in uptime-critical environments.

## ROCK BLASTING

Rock blasting plays a central role in mining, tunnelling, and construction, requiring accurate and consistent loading of explosive emulsions

# Butterfly valves certified for hydrogen applications

**V**ALVE specialist Gemü has successfully had several butterfly valves certified in accordance with DIN EN 13774 and DVGW-CERT ZP4110. The test, conducted by the German Technical and Scientific Association for Gas and Water (DVGW), confirms that the valves are fully suitable for use with hydrogen in gaseous form.



The butterfly valves Gemü R480, R481, R487, R488 Victoria, as well as Gemü R470, R471, R477 and R478 Tugela, are suitable for

operation with hydrogen. The certification applies to all body configurations and pressure ratings.

This makes Gemü butterfly valves suitable for a multitude of industrial applications in the hydrogen sector. They are used in electrolysis, PPE and fuel cell plants, as well as in distribution networks for isolating and controlling gas and liquid flows. They are also used in auxiliary processes such as treatment systems for cooling water, gas and water.

In power-to-liquid plants, they enable precise control of hydrogen, CO<sub>2</sub> and synthesis gas flows in reactor and supply circuits.

The certified series comply with all technical requirements for hydrogen applications, including a compact design, short switching times and suitability for a wide range of media.

With certification complete, Gemü butterfly valves are now available for all applications in which hydrogen is used in a gaseous state. Gemü says this means that customers can benefit from proven solutions for safely, reliably and efficiently operating hydrogen-based systems.

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# Dewatering trends shaping pump choices

AS African mines go deeper and rainfall patterns grow increasingly unpredictable, dewatering has moved beyond being a support function to become a strategic discipline. The choice between diesel-driven and electric submersible pumps is now influenced by evolving risk profiles, both underground and on surface, as well as by considerations around energy efficiency, maintenance and mobility.

On surface mines, the challenge is amplified by heavier storm bursts and the need to keep haul roads and pit floors stable. Short intense downpours can cause sudden pit-lake rises and flooding that demand rapid response. In these situations, high throughput diesel-driven pumps mounted on trailers or skids are often favoured, as they can be moved quickly to different locations without relying on fixed electrical infrastructure. The ability of auto-priming diesel pumps to handle fluctuating inflows without priming delays makes them indispensable for these unpredictable surface applications.

## MOBILITY

Mobility is a further consideration. Production teams require equipment that can follow the work, particularly in operations where water inflow points shift as pits expand. Diesel-driven solutions with built-in fuel tanks and controls reduce setup times and allow small teams to respond effectively. Pontoon-mounted units also provide reliable suction conditions despite fluctuating water levels, reducing the risk of



cavitation and protecting pump performance. With surface water often carrying abrasive silt and fines, durability is critical, making pumps with robust wear-resistant components an important investment.

## UNDERGROUND ENVIRONMENTS

Underground mines, however, face a different set of challenges. Longer declines, wetter stopes and tighter control over electricity usage are driving demand for efficient submersible pumps that can operate continuously and reliably. Rising energy costs mean that submersibles sized precisely to their duty offer significant advantages, especially when coupled with automated level controls and start/stop systems to reduce unnecessary run hours. The compact design of submersibles also

makes them well-suited to confined underground environments, eliminating the need for suction lines and reducing potential trip hazards.

In many cases, underground water is not only abundant but also dirty or chemically aggressive. Pumps must therefore be equipped with seals, cooling systems and materials that can handle abrasive fines and corrosive conditions without frequent retrieval for maintenance. Built-in motor protection, leakage sensors and durable cabling extend operational life and reduce downtime.

## APPLICATIONS

Choosing between diesel-driven and submersible pumps is ultimately a matter of application. Diesel-driven auto-priming pumps are ideal for emergency bypasses, stormwater management and pit-lake dewatering where mobility and independence from the grid are crucial. Submersibles, by contrast, excel in routine and continuous underground operations or fixed surface installations where reliable electrical power is available.

The decision is further influenced by total cost of ownership. While diesel pumps bring fuel and engine servicing costs, they eliminate the need for electrical infrastructure. Submersibles, meanwhile, generally offer lower energy costs and fewer moving parts but require correct protection systems and moni-

toring to achieve maximum lifespan.

Jordan Marsh, managing director of Integrated Pump Technology, stresses the importance of not treating dewatering as an afterthought. "The best dewatering outcomes come from pairing proven technology with a clear understanding of each mine's hydraulic realities," he explains. "That is why we supply world-class brands with long African track records – Grindex for electric submersibles and Godwin for diesel-driven auto-priming units - and the local application know-how to specify them correctly for reliable long-term performance supported by localised support across the region."

Specification errors can be costly. An undersized pump may result in flooding and lost production, while an oversized pump wastes energy and accelerates wear. Mines also operate in remote locations where logistical challenges mean that access to spares and technical support is critical.

Marsh highlights this as another reason why the supplier relationship is so important: "Mines need pumps that start every time, run to duty and keep running. Grindex submersible pumps and Godwin diesel-driven units have earned their reputations in Africa for exactly that – reliability in tough conditions. Our job is to combine these technologies with rapid support, correctly specified accessories and a spares pipeline that keeps risk low and output high."

Integrated Pump Technology's approach focuses on ensuring mines receive not only the right pump but the complete solution.

## Effective bolt tensioning for valves, pipes, pumps and engines

BMG's Nord-Lock bolting solutions include Boltight hydraulic bolt tensioning tools, which have been developed for use in all industries where critical bolting requires accurate and reliable tightening.

Boltight hydraulic bolt tensioning equipment - which can be used to tighten bolts simultaneously, ensuring even preload in industrial applications and extreme environments – is particularly useful for bolts on valves, pipes, pumps and engines.

"Advanced bolting technology in large machines and equipment eliminates the risk of loose or over-tightened bolts and is critical to ensuring optimum performance and safety in arduous conditions, like mines and quarries," says Maryna Werner, BMG's fasteners sales manager. "As bolts increase in size, so the load critically increases and operators are faced with the challenge of achieving the correct bolt elongation, to ensure bolt load accuracy.

"When tightening a bolt using traditional torque methods, it can be difficult and sometimes impossible, for the operator to achieve the correct bolt elongation, due to friction.

"Boltight hydraulic bolt tensioners – manufactured to stringent global quality and safety specifications – use high-pressure hydraulics and a pre-determined pressure to make on-site bolting jobs safer, faster and more efficient. These tools have been specially developed to axially stretch the bolt.

The nut is then rotated down the joint face, accurately locking in the bolt load.

"BMG offers a wide range of standard and customised bolt tensioning tools to optimise bolt tightening during the construction of new plants and equipment, or for maintenance operations. Boltight tools provide continuous performance, without the need for frequent maintenance and repair. In addition, the fast and efficient turnaround and reliability of these tensioners is vital to saving time on site and for the controlling of running costs."



The Boltight operating principle is based on the flow of hydraulic oil into the load cell. The load generated by the load cell is transferred into the puller, and the puller then transfers the load directly into the bolt. The nut lifts clear of the flange mating surface due to bolt stretch and the socket is used to turn the nut down, retaining the load.

Boltight tools are used extensively throughout the mining, marine and oil and gas industries, where reliable and accurate bolt tightening is critical to operational efficiency. Standard bolt tensioners are used on onshore and offshore pipeline flanges, compact flanges, heat exchangers, cranes, pumps, valves and for other critical bolting applications. Xtra load bolt tensioners are recommended for higher loads and for restricted space applications.

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# Responsible innovation will define the next era of SA manufacturing

**OPINION | MANUFACTURING**  
is standing at a pivotal moment. What was once defined by linear processes, manual production, and siloed data is now evolving into a world of digitally connected, intelligent ecosystems, says Tasneem Dajee (pictured), Sage Intacct presales manager, Sage AME.

The rise of smart factories powered by IoT, cloud, AI, and machine learning, is reshaping everything from operational efficiency to workforce expectations. However, whilst this trend towards sustainable, intelligent production is happening on the factory floor, the back office – which is the true heartbeat of the business – must evolve to support it.

As the sector navigates regulatory pressure, supply chain disruptions, and rising expectations from customers and communities, one message is clear: progress must be coupled with purpose. For manufacturers, the challenge is no longer just about production capacity; it is about integrating the "heartbeat" of the business, Accounting, HR, and Payroll, into the manufacturing process. This ensures that efficiency and sustainability are not just buzzwords, but measurable outcomes driven by robust financial

and people data.

Rising costs, unpredictable supply chains, and sporadic power cuts make efficiency a competitive necessity. The good news is that the same technologies transforming factories – smart sensors, seamless digital connections, AI, and cloud computing – can turn sustainability from a burden into a real advantage. Used wisely, it moves beyond ticking boxes, driving better business decisions powered by real-time information placing emphasis on outcomes for the bottom line and outcomes for the planet.

## THE NERVE CENTRE: FINANCE

In a traditional setup, the factory floor and the finance office often operate in isolation. In a smart factory, they must operate as one fluid organism. As smart factories' ecosystems scale, the finance office emerges as a crucial nerve centre for operational intelligence. Artificial Intelligence (AI) is accelerating that shift.

Modern cloud financial management systems, like Sage Intacct, act as the enabler of this transformation. They allow manufacturers to move beyond historical reporting to real-time decision intelligence. According

to recent industry studies:

- 86% of finance leaders have already adopted AI tools
- 79% believe the use of AI in finance will improve revenue growth

Tomorrow's manufacturing CFO will need live financial insights instead of lagging reports. They require the ability to track operational KPIs alongside financial metrics, predictive forecasting for risk management, and gain seamless visibility across supply, production, and workforce data. By utilising tools such as AP automation, General Ledger outlier detection, and intelligent time capture, the finance function will no longer simply interpret the numbers; it will direct the organisation toward smarter, more sustainable growth.

## THE HUMAN ELEMENT: HR AND PAYROLL

A smart factory is also a humane factory, one that protects workers, upholds rights, nurtures long-term capability, and keeps people at the heart of manufacturing even as technology automates repetitive tasks. As roles evolve in these data-rich environments, HR and payroll leaders will



be essential in shaping digital skills development, ethical AI frameworks and responsible automation, real-time workforce planning, accurate compliance across complex shift patterns, and strong

employee engagement. By integrating these systems, manufacturers protect workers' rights and optimise labour costs, ensuring the "people" function remains central to the business strategy.

## CONNECTED DATA: THE BACKBONE

The true power of the smart factory lies in interoperability. This is where API integrations become vital, linking the physical activity on the production line directly to finance and HR systems to streamline reporting processes.

Connected data sits at the core of intelligent, sustainable manufacturing, with seamless connectivity ensuring that machines, systems, and people operate from a single, shared version of the truth. API integrations make this possible, enabling real-time production monitoring, pre-

dictive maintenance, reduced downtime, and integrated financial, operational, and HR insights.

As a result, manufacturers can drive greater efficiency, cut waste, and measurably reduce their environmental impact. Data is becoming a resource as essential as any raw material. Those who harness it responsibly, with strong governance and transparency, will lead the next decade. Ultimately, connected data underpins smart factories that do more than perform better; they enable organisations to innovate with integrity.

## RESPONSIBLE INNOVATION MATTERS

Organisations like TIME Magazine now rank corporations based on their commitment to integrated, transparent strategies. This underlines a global truth: credibility matters, and credibility comes from data. Providing technology that enables responsible innovation knocks down barriers so everyone can thrive. It is about offering cloud financial management built for modern manufacturing. This delivers real-time data, insightful dashboards, and the ability to drive profitability.

# Logistics 4.0: How technology is re-engineering retail efficiency in SA

**OPINION | SOUTH AFRICA'S** logistics sector is undergoing its most significant reform in a decade. The long-awaited modernisation of ports, rail, and road infrastructure is finally gaining momentum, promising to unlock billions in economic potential. Yet the real revolution is happening inside the networks that connect every shelf, store, and customer, according to Arno Haigh, national logistics executive, the Spar Group. For retailers, logistics has evolved from a back-office function to a competitive differentiator. The winners will be those who use data and technology not just to deliver products, but to deliver predictability, speed, and trust.

## RESILIENCE

The past few years have tested every supply chain worldwide. Loadshedding, water shortages, fuel volatility, and global disruptions have forced South African retailers to rethink what resilience truly means.

At Spar, those lessons have become the blueprint for the company's next-generation logistics model, one designed for agility. Whether it's rerouting deliveries during power cuts, providing water to drought-affected communities, or mobilising trucks during national crises, our logistics teams have learned that flexibility is the heartbeat of reliability. We no longer plan for "what if". We

plan for "when".

## TECHNOLOGY

The logistics transformation at Spar is as much digital as it is physical. From forecasting and route optimisation to warehouse automation and last-mile delivery, technology is moving the efficiency needle faster than ever before.

We're deploying predictive analytics to improve accuracy in demand forecasting and replenishment. Real-time route optimisation tools cut kilometres travelled and fuel burned. Inside our distribution centres, automation and AI-driven dashboards are speeding up throughput, reducing handling costs, and enhancing visibility across every product movement.

Our most significant project, the integration of a new tech system across our national network, is redefining how information flows through the business. The next distribution centre, in the Eastern Cape, goes live in July 2026. Each subsequent rollout brings us closer to a fully connected logistics ecosystem where pricing, stock, and subsidy data are visible instantly to buyers, warehouse teams, and retailers alike.

Crucially, this is not an IT project; it's a business transformation project. Logistics sits at the centre of that change, ensuring data accuracy, product master-file integrity, and practical training through our "play-

pen" innovation model, where teams test new systems in real-time environments before full rollout.

## COMMUNITY

Spar's logistics model is distinctive as it serves both the Group and independent retailers across South Africa's diverse communities. Alignment between national priorities and local realities is essential.

That means responding when communities need us most, whether delivering water to drought-hit regions or moving donated goods to crisis zones. During Covid-19, our trucks reached every corner of the country. That same spirit of responsiveness defines how we approach every logistical challenge today.

This agility extends to our retailer partnerships. Each store may be independently owned, but they share a common logistics backbone, one that thrives on transparency, data sharing, and mutual trust.

## DATA FOR FORESIGHT

The smartest logistics decisions are now made in milliseconds. Data analytics is helping Spar make faster, smarter, and more transparent decisions, whether it's optimising inventory, managing fuel consumption, or predicting maintenance needs.

Integrated dashboards allow teams to view multiple reports in a single

window. Artificial intelligence analyses trends across procurement, transport, and warehouse functions, freeing up human talent to focus on innovation rather than administration.

The outcome is not only efficiency, but it's also visibility. Every link in the chain sees the same truth, in real time.

## ENABLING SUPPLIERS

A core part of Spar's logistics ecosystem is its ability to connect local suppliers with national markets. Efficient distribution centres and digital traceability allow small producers to scale sustainably, meeting national demand without compromising quality or timeliness.

This "local-to-national" flow strengthens South Africa's food security while driving inclusive economic growth – proof that logistics can be both efficient and equitable.

## THE FUTURE

Globally, the next decade of retail logistics will be defined by automation, localisation, circularity, and digital traceability. At Spar, we see opportunity in all four.

Automation will continue to reduce waste and cost. Localisation -through micro-distribution and regional hubs - will bring goods closer to communities. Circular logistics will make

reverse supply chains a norm, not a novelty. And traceability, powered by blockchain and AI, will make the entire value chain more transparent, from farm to fork.

We're also exploring smarter delivery windows – extending into late-night operations to cut congestion and fuel usage, while accelerating cash flow between suppliers, retailers, and consumers.

## PEOPLE

Technology may drive the transformation, but people sustain it. Our change-management process begins with practical, hands-on training to ensure that every warehouse operator, driver, and planner can use new systems confidently.

The goal isn't to replace experience with software, it's to amplify it. The more intuitive our systems become, the more empowered our teams will be to innovate on the ground.

## REIMAGINING

If we could reimagine retail logistics for the next decade, it would be a world of connected systems, extended delivery windows, and zero-friction collaboration between partners. Systems would be intuitive. Data would be instantaneous. Every store, would have access to the same level of insight and efficiency.



# SA manufacturer makes a strong case for crane refurbishment

**R**EPLACING an overhead crane is costly. There is capital expenditure. There is risk. Not only must the buyer consider the scale of financial outlay, but also any possibility of equipment underperformance, or failure if his choice is wrong. The watchwords are care, and caution too.

One viable option, often overlooked, is refurbishment, according to Condra, a leading South African manufacturer of cranes and hoists.

If the function of the crane has not changed, then refurbishment offers at least three clear advantages: cost savings first; improved crane performance second (through newer, faster hoists); and operator familiarity third.

This is because modern refurbishment programmes go beyond basic repairs. They integrate updated controls, safety systems, drives and automation technologies to bring older cranes up to or beyond current performance and compliance standards.

Condra offers a comprehensive crane refurbishment service, as well as the design and manufacture of new cranes. Recent refurbishments have included machines as old as 40 years, installed and recommissioned with the same warranty as a new crane.

The familiarity factor, not as obvious as cost savings and improved crane performance, cannot be overemphasised as a leading advantage of refurbishment. The continued use of an as-new machine already familiar to operators avoids any need for retraining. Production can continue as before, with no change to established procedures.

Condra recommends that, if tempted to buy new, the buyer should ask what the cost might be of lost production in the case of breakdown. Always high, this figure can become unimaginably so if long shipping times are

needed for component parts to arrive from a foreign manufacturer. Establish how much production will be lost, and at what cost.

As a South African manufacturer, Condra needs about three weeks to refurbish a crane to top standard, and will incorporate modern technology, specified by the customer, to upgrade the crane's capabilities.

The overall cost is almost always less than buying a new crane.

Usually, Condra refurbishes only its own cranes, because spare parts from competitor firms are not always available. The company says they are also expensive to import, whereas it manufactures all spares locally.

"If the crane is one of ours, then refurbishment is usually worthwhile," says a Condra spokesperson. "We encourage it because new crane prices are about 60% higher today than they were ten years ago. If needed, we can change crane capacity and span. Even cranes twenty years old or more can usually be improved by installing variable frequency drives for smoother acceleration and deceleration. We can also fit enhancements such as remote control, and a digital read-out on the load.

"So, by refurbishing we deliver back to the customer a crane much faster and lighter than before, and we can automate it, too, upgrading the mechanicals to work with new electrical equipment.

"These options are offered during any refurbishment, from standard 2M workshop cranes to the higher performing machines such as Class 3 and Class 4," the spokesperson added.

Condra claims advanced levels of design flexibility and staff availability for all refurbished cranes.

"There are examples of Condra cranes being sold second-hand for their original purchase price, so crane refurbishment makes a lot of sense," the spokesperson said. "But we're not doing as many refurbishments as might be expected because our products last a long time, and because we very quickly repair existing crane installations. For a refurbishment we need a little more time, usually two to three weeks."

Refurbishments carry a two year warranty if authorised Condra agents service the crane, or one year if not.

Condra has a long track record. This year marks sixty years since its formation as a general engineering company offering a range of locally made competitively priced hoists. Crane manufacture began in 1971.



Tailored hoist manufacture at Condra's Germiston factory.

# Controlled shaft support for screw conveyors in arduous conditions

**B**MG's Bearings division has expanded its Timken product offering to include split cylindrical hanger units, engineered for screw conveyor shafts operating in demanding environments. These robust units deliver reliable performance under continuous load, heavy contamination and high mechanical stress in bulk material handling applications.

"Screw conveyors that operate in arduous conditions are subjected to sustained demands on bearing support and sealing performance," says Gift Davhana, product specialist in BMG's bearings division. "These hanger units have been developed by Timken to support screw conveyor shafts in applications where alignment control, sealing integrity and accommodation of axial movement are critical to bearing service life.

"These units are essential for use in abrasive and high-duty conveyor applications in many industries, including mining, minerals processing and bulk materials handling. Each unit in this range features a cast iron split housing fitted with expansion-type split cylindrical roller bearings. This allows the shaft to move axially, while remaining fully supported under radial load. The housing also includes a drilled and tapped boss for direct mounting to conveyor cross bracing or other structural members."



BMG specialists recommend incorporating a swivel-type fixing into the mounting design to allow for static alignment, particularly in conveyor systems subject to structural deflection or installation tolerances.

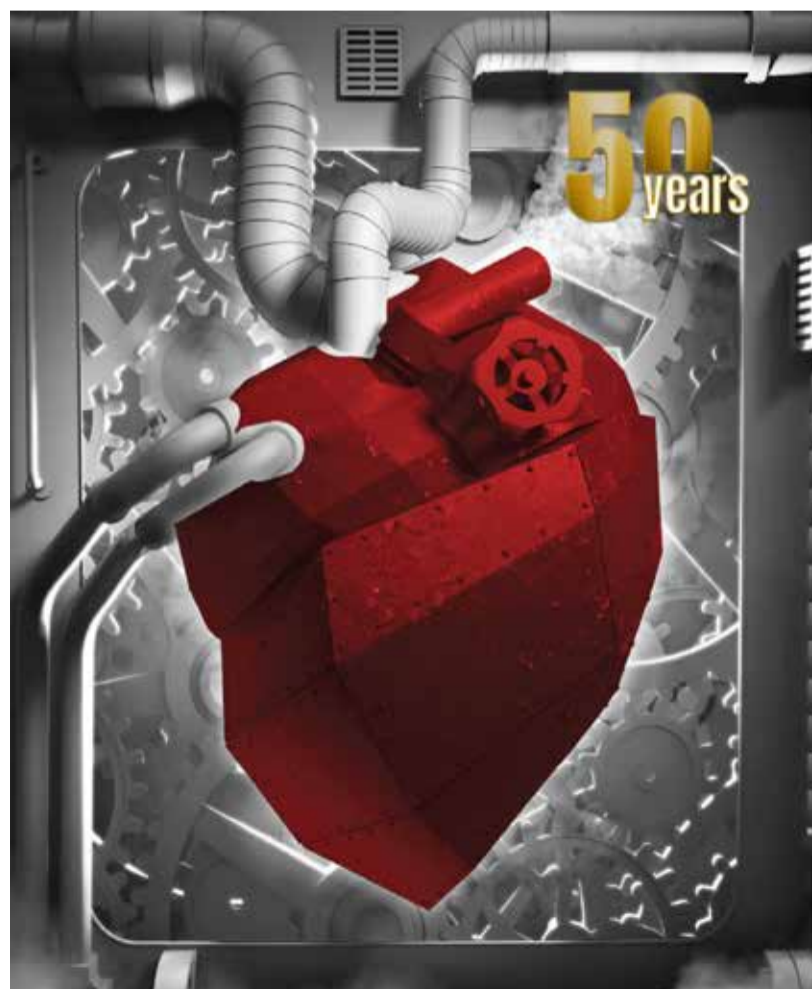
Sealing performance is a key feature of the Timken hanger unit design. Supplied as standard by BMG, each unit includes double felt seals and two seal grooves on both sides of the housing.

This configuration supports alternative sealing arrangements when enhanced protection against dust or fine particulate ingress is needed. The seal groove geometry also accommodates strip seal combinations, which can be tailored to specific material handling environments.

For added contamination control, the housing can be specified with a tapped port between the seal grooves at each end. This allows grease or air to be introduced into the sealing area, purging contaminants and extending operating intervals in harsh conditions.

These hanger units are designed for use with expansion (BX) type bearings only and have defined limits on permissible radial loading. BMG recommends assessing load conditions and sealing requirements to ensure correct unit selection for each application.

The BMG team works closely with customers to define precise mechanical requirements and ensure accurate bearing selection for each application. The team advises on cost-effective solutions that improve machinery productivity, extend system service life and reduce maintenance demands. BMG introduces the latest global technologies, trends and products to the local market, to meet exact customer demand.



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# Supporting farmers' fight against FMD with motorised sprayers

LIVESTOCK farmers across South Africa are facing one of the toughest challenges in recent history due to the outbreak of Foot-and-Mouth Disease (FMD), widely regarded as a major agricultural crisis. Industry leaders are calling it the worst livestock disaster the country has ever experienced, with wide-reaching effects on farmers, rural areas and the agricultural sector as a whole.



The outbreak, which began in April 2025 in KwaZulu-Natal, has spread to several provinces, including North West, Free State, Mpumalanga, and Gauteng. Concerns over trade restrictions, rising costs, and economic losses continue, even as vaccination and control measures are underway.

FMD is a highly contagious disease among cloven-hoofed animals, and the virus can spread quickly through both direct contact between livestock and indirectly through contaminated surfaces. Unfortunately, animals can also carry the virus before showing symptoms, making early detection difficult.

"This is an incredibly challenging time for many of our farmers, and with the FMD virus able to survive on surfaces such as vehicles, boots, fences and feeding equipment, daily routines have had to be reshaped, making biosecurity a critical line of defence and one that requires constant effort," says Timothy Isabirye, marketing manager at Husqvarna South Africa.

This means that routine cleaning and disin-

fecting have become part of daily farm management for many producers, as it is widely recognised as a key component of outbreak control measures. And this is where motorised agricultural sprayers can help ease the burden, assisting farmers to apply disinfectants more quickly, efficiently, and with less effort across large, high-risk areas.

Vehicles are a well-recognised way that livestock diseases can spread, especially when wheels, undercarriages and footwells are not disinfected consistently. As a result, entry and exit points form an integral part of farm biosecurity routines, with footbaths and wheel dips now a familiar sight at many farm gates. In these areas, disinfectant solutions can be applied using sprayers, which allows for more even coverage and helps ensure high-traffic surfaces are thoroughly treated.

Animal housing and handling areas are another key focus. Pens, barns and feeding spaces are generally cleaned and treated between groups of animals, helping to reduce

the chance of the virus lingering in the environment. Sprayers can be used to apply disinfectant evenly across these surfaces, effectively covering larger areas and maintaining consistent biosecurity practices.

Movable equipment – including tools, fencing materials and feed containers – also requires regular disinfecting to help reduce the risk of the virus spreading between different areas of the farm. Larger vehicles and farm machinery, such as tractors or feed wagons, must be carefully cleaned, particularly when moving between paddocks, pens or animal camps. Sprayers can be used to apply disinfectant solutions across all of these surfaces, helping to ensure thorough coverage to support biosecurity efforts.

According to South African biosecurity guidance notes, disinfectants approved for FMD control are commonly applied using sprayers as part of a broader biosecurity programme, helping farmers strengthen their defences against FMD while complementing vaccination and other control measures already in place.

"Any and every measure that can aid stock farmers to protect their herds and livelihoods matters," says Isabirye. "Husqvarna's range of powerful motorised sprayers, designed for agricultural spraying, is one way that can help make daily biosecurity routines more manageable, providing farmers with practical support in the fight against this unprecedented crisis," he concludes.

# Unified solution combines asset and resource intelligence to improve critical infrastructure resilience

HITACHI Energy, in collaboration with Microsoft, is accelerating the digital transformation of essential infrastructure – from electricity networks and transportation corridors to heavy industrial operations – by reinventing how critical assets are managed and maintained.



Power grids, rail networks, manufacturing facilities, and other critical assets are often decades old and are under pressure from rising demand, extreme weather, and ageing components. Failures within these systems can lead to severe cascading impacts, including widespread blackouts, safety incidents, environmental damage, and significant economic losses. By combining Hitachi Energy's extensive expertise in managing critical infrastructure with Microsoft's advanced artificial intelligence and data capabilities, operators can transition from reactive problem-solving to proactive, comprehensive, data-driven asset lifecycle management—addressing issues before they occur.

Hitachi Energy is reinventing Hitachi Energy's Ellipse Enterprise Asset Management (EAM) with Microsoft Dynamics 365, Microsoft Fabric, Microsoft 365 Copilot, and Microsoft Foundry – into a unified solution to manage data, analytics, and business operations. It builds on the strategic alliance between Hitachi, Ltd. and Microsoft Corp. announced in June 2024, which established plans to embed Microsoft technologies into Hitachi's Lumada solutions. Today's announcement brings that collaboration to the energy sector, and leverages Ellipse's 40 years of EAM expertise with Microsoft's advanced technology and capabilities.

"Hitachi Energy has decades of experience building and operating the infrastructure that keeps modern life running," said Massimo Danieli, executive vice president and managing director of business unit grid automation at Hitachi Energy. "Microsoft technology accelerates and enhances value to our Ellipse customers, while also bringing to market a solution that is unmatched in terms of IT and OT capabilities, offering essential service providers the ability to operate more intelligently and sustainably."

"Critical Infrastructure operators need insight they can act on. Together with Hitachi Energy, we're combining AI, cloud, and enterprise systems to help organisations move from reactive maintenance to predictive operations, improving reliability, safety, and long-term value for the infrastructure society depends on," said Dayan Rodriguez, corporate vice president, manufacturing and mobility, Microsoft.

The solution leverages a combination of advanced digital solutions, including Microsoft Foundry, Fabric, Microsoft 365 Copilot and Microsoft Dynamics 365, to integrate critical

datasets supporting asset operations and provide unprecedented visibility of equipment across entire networks. It can recommend the best time for maintenance based on supply chain, HR, and financial data, ultimately helping organisations operate and plan investments more efficiently. This means more reliable services, safer operations, and fewer emergency repairs, which are often the most expensive and disruptive.

## THE VALUE OF INTEGRATION

Traditionally, EAMs and supporting systems, like ERPs and CRMs, operate independently, making data silos. EAM data focuses on asset lifecycle management but can be strengthened when combined with supporting data, like financials, procurement, and workforce planning, often found in an ERP or CRM. This separation often leads to inefficiencies, data duplication, and limited visibility. By integrating these systems, with Microsoft's Agentic business applications, utilities gain:

- End-to-End visibility: A single source of truth for assets, financials, and operations enables better decision-making and compliance.
- Optimised asset management: Real-time data flow between EAM and ERP systems for accurate budgeting, forecasting, and resource allocation.
- Improved reliability and resilience: Predictive maintenance powered by integrated data reduces downtime and extends asset life.

## 2026 Features

Apr / May 2026

Ad Booking / Editorial Deadline:

4 April

- Agriculture & Agro-processing
- Automation & Robotics
- Mining & Quarrying
- Petrochemicals, Oil & Gas
- Supply Chain, Distribution & Warehousing
- Water & Effluent Management

Jun / Jul 2026

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6 June

- Construction, Civil & Structural Engineering
- Electrical & Electronics
- Industrial Property & Development
- Machine Tools & Equipment
- Metals, Alloys & Fabrication
- Recycling & Waste Management
- Sugar Industry

Aug / Sept 2026

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- SHEQ Management
- Renewable Energy

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- Security
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# Civil engineers' new contract conditions aim to reduce risk in construction projects

**OPINION** | THE General Conditions of Contract (GCC) are a standard set of legal and contractual rules that define how a contract is supposed to work in practice – especially for construction and engineering projects, according to Zandrie Rademeyer, SchoemanLaw Inc.



The GCC 2025, published by the South African Institution of Civil Engineering (SAICE), has replaced the previous 2015 edition. It sets out the rights, responsibilities and risks of everyone involved in a project including the employer, the contractor and the engineer. It covers things like the scope of the work, timeframes, delays, variations, risk, insurance and dispute resolution. Think of the GCC as a rulebook that covers how the project is run from start to finish.

The reason why the GCC is so important is that it creates legal certainty as South African construction law relies heavily on contract law. By using a standard form like the GCC ambiguity is reduced, it aligns with South African legal principles and has been tested in courts. It is also widely accepted in public-sector projects like municipalities, Sanral, waterboards and state-owned enterprises.

The GCC also aims to fairly allocate risk by avoiding placing all the risk on one party. In the case that a dispute does arise, the GCC provides structured steps to resolve it by firstly, making it the engineer's decision, secondly adjudication and thirdly arbitration or litigation. This is especially important in South Africa as court processes can be slow and expensive.

## WHY THE NEW GCC

The previous edition had a few problems including late payments, claims escalating into disputes and unclear termination and suspension rights. The previous edition encouraged a "claim-first" culture and dealt with problems after they happened which led to delays and expensive litigation. Earlier contracts dumped excessive risk on contractors, failed to clearly define who carries which risks and led to inflated tender prices.

The GCC 2025 reflects lessons learned from years of litigation, arbitration and stalled projects. SAICE's CEO Sekadi Phayane-Shakhane stated "It's been about ten years since the contract was last updated. GCC 2015 was a well-understood contract, but practices and challenges have changed.

GCC 2025 is about ensuring our industry has a document that is relevant, practical, and fair."

## KEY CHANGES

Firstly, gender-neutral language has been adopted throughout. Secondly, there is now an early warning alert and proactive contract management. This requires parties to notify each other of potential problems before they become formal claims. This aims to reduce disputes by promoting early engagement and mitigation. Thirdly, GCC 2025 clause 18.1 has removed the option to orally make variations, from now on only written orders can form the basis of valid variation instructions.

One of the biggest changes however relates to how disputes are handled. A two-stage claims process has been introduced. Contractors get 28 days to notify a claim and a further 28 days to provide details. This allows contractors to prepare more detailed claims as they now have more time. This also gives a stricter deadline for the employer's agent to rule on claims as the claim will be automatically rejected if the responses aren't provided on time.

The contract also tries to mirror international best practice by introducing clearer rules around dispute boards.

This is to ensure that conflict is resolved early and cost-effectively. It

is important to note that a party cannot enter arbitration or litigation proceedings without first complying with the adjudication board's decision.

The GCC also strengthens a contractor's rights by allowing suspension and eventual termination if payment is not made. To try and provide some relief for late payments, the interest has been increased to the prescribed rate plus 3%.

The retention amount that employers may hold has also been limited. Retention may not exceed 10% of any amount due to the contractor. If the contractor is required to provide security, then the retention may not exceed more than 5% of the contract price.

These changes reflect lessons learned from previous years and challenges including the Covid-19 pandemic. There are provisions specifically made for government-declared states of emergency and disasters as valid reasons for project delays.

## NEXT STEPS

Employers must ensure that they update tender documents and train project managers and engineers. Employers must ensure that instructions, determinations and variations are recorded with precision. Contractors must revisit risk pricing and ensure that they under-

stand suspension and payment rights.

They will also need to update their internal systems to manage tighter claim timelines and documentation requirements. Legal advisers must review the amendments to the GCC 2025 carefully and align dispute clauses with client strategy. The GCC 2025 is expected to become the standard for many new projects thus industry players must familiarise themselves with the changes and update their internal processes.

The GCC 2025 is part of a broader move toward collaboration, certainty and early risk management. These changes demonstrate a conscious response to the practical challenges that have plagued construction projects for years. The GCC 2025 aims to reduce uncertainty and limit costly litigation or arbitration. However, the success of the GCC 2025 will depend on how parties adapt their practices to meet the new standards. If it is applied consistently than the GCC 2025 will improve project outcomes, protect cash flow and foster a less adversarial construction environment. It is believed that the contract will create a more stable and fairer environment for both employers and contractors. Legal guidance for those going through the transition could make the difference between compliance and costly mistakes.

# Modern materials build a new era of urbanisation in SA

**S**OUTH Africa is entering a new era of urban growth. Already a predominantly urban country, it is estimated that by 2035, more than 70% of the population will live in towns and cities. This rapid shift presents both opportunities and challenges – opportunities to unlock economic growth and improve quality of life and challenges around housing demand, transport networks, basic services and environmental sustainability.

This is according to Amit Dawneerangen, AfriSam construction materials executive – sales & product technical, who says that for South Africa's construction sector, this means designing and delivering infrastructure that can handle greater density, withstand climate pressures and reduce environmental impacts.

At the heart of this transformation lies the choice of construction materials. Cement, concrete and aggregates are not just commodities; they are the building blocks of urban life. In South Africa, AfriSam is a leader in providing materials that balance quality, durability and sustainability.

## URBANISATION'S EVOLVING DEMANDS

Urbanisation in South Africa is no longer simply about the expansion of cities into outlying areas.

Increasingly, the focus is on densification, making better use of existing urban footprints through renewal, infill and multi-storey development. This shift creates new demands for construction materials.

Mid-rise residential blocks, affordable housing developments and rental stock require concrete that is consistent, reliable and cost effective. Transport corridors such as bridges, bus rapid transit systems and interchanges call for high performance mixes that can endure decades of service under heavy loads. Municipal services – from schools and clinics to water and wastewater treatment plants – must be delivered on time, often within constrained urban sites where logistics and supply certainty are critical.

Cities also face growing environmental stresses. Flooding, storm surges and rising heat are already reshaping infrastructure priorities. Urban resilience now depends on engineered solutions such as permeable pavements to manage stormwater, durable culverts and channels to reduce flood risk and concrete road surfaces designed to handle high temperatures.

## DECARBONISING THE BUILT ENVIRONMENT

Globally, there is growing recog-

nition that construction materials - especially cement and concrete - hold the key to reducing embodied carbon in infrastructure. For South Africa, this is particularly relevant, as the country has set ambitious climate targets while facing ongoing energy and water constraints.

AfriSam has been a pioneer in low-carbon cement technology, producing blended cements that incorporate supplementary cementitious materials (SCMs) such as fly ash and slag. These substitutes reduce the clinker content in cement, directly lowering CO2 emissions without compromising strength. AfriSam has also embraced performance-based concrete designs, where specifications focus on outcomes like strength and durability rather than rigid cement content. This approach allows for innovation, cost optimisation and carbon reduction in tandem.

"Urban growth and decarbonisation are not competing agendas - they are two sides of the same challenge," Dawneerangen says. "Our blended cements and engineered



concretes are designed to deliver the performance cities need with a measurably lower carbon footprint."

From affordable housing to wastewater infrastructure, AfriSam's products demonstrate that sustainable options can also be practical and cost effective. Permeable concretes are being trialled to reduce stormwater run-off in dense precincts, while high durability mixes extend the service life of bridges and marine infrastructure. Each innovation brings South Africa closer to cities that are not only larger, but smarter and more sustainable.

## CIRCULARITY AND RESOURCE EFFICIENCY

Another crucial component of future urbanisation is circularity. With demand for materials rising, the sec-

tor cannot rely indefinitely on virgin resources. AfriSam is leading efforts to recycle returned concrete waste into aggregates for selected applications, reducing landfill pressure and preserving natural stone reserves.

At the quarry and plant level, the company continues to optimise operations to extract more usable product per tonne of raw material. Closed-loop water management systems reduce consumption and safeguard scarce water supplies, while dust control technologies protect surrounding communities and ecosystems.

These efforts show that sustainability is not an add-on but a central requirement for long term urban growth. "The future city will not be built at the expense of the environment. It must balance demand with responsibility and that is what AfriSam is striving to achieve," Dawneerangen emphasises.

## RELIABILITY IS SUSTAINABILITY

Urban projects are uniquely complex. Construction in congested spaces, under tight deadlines and with limited access, demands absolute reliability from suppliers. In this context, AfriSam's national footprint of plants and quarries becomes a sustainability lever in itself.