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The 2024/25 budget provided little hope that a major correction in the construction industry is on the cards and showed that in terms of employment, the once biggest employer in South Africa is the worst performing employer of the formal employment index (transport, trade, mining manufacturing, electricity, community services and business services). Despite this, the construction industry is a resilient one and will weather this storm.

COMMENT

At the AfriSam 2024 Budget Breakdown Event in Johannesburg recently, well-respected economist Dr Azar Jammine unpacked the 2024 national budget and provided an outlook on the South African economy, the construction industry and infrastructure spend. This event annually brings together various stakeholders in the construction industry and marked AfriSam's 90th anniversary.

The budget provided little hope that a major correction in the construction industry is on the cards and showed that in terms of employment, the once biggest employer in South Africa is the worst performing employer of the formal employment index (transport, trade, mining manufacturing, electricity, community services and business services).

The number of building plans passed has started slowing – even in semigration hotspots such as the Western Cape. As much as there is a concerted move towards renewable energy (by implication the building of windfarms and solar plants), there is also an anti-renewable syndrome in the ruling party as the country's reliance on coal fired electricity, may result in major job losses if renewable energy takes hold.

Even though road transport has significantly increased over rail transport with the implication that more maintenance on major roads is necessary, major road projects on provincial and national level have not been forthcoming.

In theory, more has been budgeted for infrastructure spend, but there is a chasm between what is budgeted and what is spent. R943,3b is budgeted for across the public sector which includes sectors such as energy, water and sanitation, and human settlements. In the 2023/24 budget this was R903b, so this year saw an increase, but unfortunately a theoretical one. The overriding thought is that there is little to breed confidence about dealing with the structural impediments to growth.

Dr Jammine's view of the budget

Overall, revenue collections were down on last year's budget. However, Treasury has managed to engineer reduced budget deficits and public debt by means of the R150b withdrawal from the Gold and Foreign Exchange Contingency Reserve Account which resulted in the reduction growth and debt servicing costs.

There are now 7 409 406 tax payers in a country of more that 60 million and tax rates have been left unchanged as Jammine says even SARS knows that it cannot milk the taxpayers more. In light of the fact that there is an election later this year, one can be forgiven for being sceptical about the merits of this approach. Jammine says that as long growth in South Africa is weak, the fiscal situation is set to deteriorate and there may not be ways in future for treasury to engineer a reduction in the budget deficit and public debt.

Where does this leave the construction industry? Unfortunately exactly where it was last year. It is, however, a resilient industry and has weathered this storm for the last eight years, so it will weather this one too.

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CONSTRUCTION INDUSTRY IS POSITIVE ABOUT 2024, SURVEY SHOWS

The construction industry in Sub-Saharan Africa and the Middle East and North Africa (MENA) region is looking forward to a busy and profitable 2024, with the majority of players expecting an increase in revenue and projects.

This is according to the results of an industry survey conducted by construction software company, RIB Software, in November 2023. The survey gathered 292 responses from industry players, with 75% in Sub-Saharan Africa and 25% in Middle East and North Africa.

The lion's share of responses were gleaned from the building (31%), civils (27%) and general contracting (17%) operations.

The majority of companies (87%) said they had recovered from the Covid-19 pandemic, citing rising input costs (51%), margin pressures (39%) and attracting and retaining qualified individuals (30%) as their three greatest challenges over the past 12 months.

RIB Vice President MEA, Peter Damhuis **(pictured)**, says rising input costs can largely be attributed to supply chain disruptions following the pandemic and exacerbated by the turmoil in Ukraine and Gaza. "This has led to an increase in prices of key construction materials such as cement, diesel, and asphalt, affecting initial budgets and resulting in even thinner margins for the industry."

In the months ahead, industry players are looking forward to an increased order book pipeline (45%), increased private sector work (43%), sustainability (39%), worker productivity enhancements (37%) and government-led infrastructure spend (29%).

Projections for 2024 in terms of revenue and project pipeline are cautiously optimistic. Some 39% of respondents expect to increase their revenue by between 5% and 10%, while 27% expect increased revenue of 15% or more.

In terms of project pipeline projections for 2024, 29% of respondents expect an increase of 15% or more, another 29% expect an increase of between 5% and 10% and 24% expect an increase of between 10% and 15%.

This more favourable climate is echoed by economist, Dr Roelof Botha, a compiler of the Afrimat Construction Index (ACI), pointing to the focus on renewable energy, the need to overcome logistical challenges, government spending on various projects ahead of the election, and sustained growth in new capital formation as key drivers for the sector in South Africa. The rising price and demand for oil could see some Middle East countries benefit from future oil and gas construction projects, with construction expected to increase steadily in Qatar, UAE / Dubai, Bahrain and Kuwait in the year ahead and beyond .

In 2024, 53% of industry players will focus on digital transformation as a key strategic initiative, while 50% intend to implement LEAN construction principles, 44% will look at expanding their business offerings and 38% intend to expand their geographical reach.

Damhuis says RIB welcomes the focus on digital transformation, the construction software company's area of expertise. "The construction industry is notorious for being somewhat behind the curve when it comes to digital transformation. A well-thought-out digital transformation strategy can help construction companies improve their margins and ensure they meet budget and time deadlines."

When choosing construction software, respondents will be prioritising functionality (31%), ease of use (32%) and cost (13%) in 2024.

Notably, 52% of respondents say their companies will spend more on IT in 2024 than they did in 2023 and 30% say their spend will be the same as 2023. The technologies they intend to focus on in the year ahead will be on estimating and planning software (37%), cloud and real-time collaboration (26%) and project management software (10%).

When asked whether they would be exploring ISO19650 standards and compliance to the standard ISO, 38% of respondents affirmed they would be. In addition, 52% of respondents said they expected the number of projects involving Building Information Modelling (BIM) to increase.

When asked about the greatest risk factors relating to their businesses in the year ahead, 76% of respondents cited rising costs due to global unrest as the greatest risk factor, followed by fuel prices (51%) and construction mafia (50%).

Interestingly, only 0,02% of respondents in the MENA region said the construction mafia represented a risk, while 48% of respondents in the SSA region cited it as a significant risk to their operations.

Only 42% of respondents have carbon reduction strategies in place, with 41% saying that progress in the carbon reduction space remained the same as in the previous year and 26% saying more progress was made over the past 12 months.

Damhuis says overall the industry outlook is positive for 2024. "This is encouraging, especially for Sub-Saharan Africa where the industry has been faced with significant challenges such as the construction mafia, rising costs, a dearth of talent and projects not coming to fruition quickly enough." ⦿

OVERVIEW

- The lion's share of responses were gleaned from the building (31%), civils (27%) and general contracting (17%) operations.
- Some 76% of respondents cited rising costs due to global unrest as the greatest risk factor, followed by fuel prices (51%) and construction mafia (50%).
- When choosing construction software, respondents will be prioritising functionality (31%), ease of use (32%) and cost (13%) in 2024.

A simple framework to measure THE IMPACT AND SUCCESS OF INFRASTRUCTURE PROJECTS

Infrastructure projects provide essential services and other benefits to people from all walks of life, and play an integral role in the welfare and economic stability of a nation. However, it's often difficult for developers and clients to measure how impactful and successful a project will be once completed.

"While every precaution is taken in the planning and construction phases to ensure the structure's long-term durability and utility, the only true measure of a project's capabilities is how people use it every day," explains Olebogeng Manhe **(pictured)**, Chairman of the Gap Infrastructure Corporation.

"There is value in understanding a project's impact and success once completed. Post-analyses help determine whether what we deliver is of value and meets the needs of the client, and especially the communities we serve. It further identifies potential future issues that the system may experience, what the long-term maintenance requirements will be, what additions need to be made, and how developers can improve upon their processes in future projects."

Post-project analyses are systematic and comprehensive assessments of the project's performance, outcomes, and impact after its completion. These assessments can be conducted at different levels and stages, depending on scope and evaluation.

For example, some analyses may focus on the technical aspects of the project, such as the design, construction, operation, and maintenance of the infrastructure. Others may focus on the economic, social, environmental, or institutional aspects of the project, such as the cost-benefit ratio, stakeholder satisfaction, environmental impact, or governance and accountability.

Measuring impact and success

There is no one-size-fits-all method for measuring the impact and success of infrastructure projects. Different projects may have different objectives, characteristics, contexts, and challenges that require different approaches and indicators. However, some general steps and principles can guide the process of developing and applying appropriate methods for measuring impact and success.

First, it is important to define clear and relevant measures of success that reflect the project's objectives and value. These measurements should be aligned with the expectations and interests of the stakeholders involved. For example, a public sector client may be more concerned with the social and environmental benefits of an infrastructure project than a private sector contractor who is more focused on financial returns.

Second, it is essential to collect reliable and valid data to support the measurement of success. This may involve using various sources and methods of data collection, such as surveys, interviews, observations, records, or sensors. Some data may be quantitative, such as numbers or statistics. Others may be qualitative, such as opinions or stories. The data collection should be planned and conducted in a systematic and ethical manner. Third, data must be analysed and interpreted to draw meaningful conclusions and recommendations. This may involve using various tools and techniques of data analysis, such as descriptive statistics, inferential statistics, regression analyses, or content analyses. The analysis should be rigorous and transparent, with clear assumptions, limitations, and declaration of uncertainties. There are a few methods that can help both infrastructure developers and their clients measure the impact and success of a project.

A fault-tree analysis is a graphical technique that identifies and analyses possible causes that may lead to an undesired event once the infrastructure is in use. The method uses logic symbols and rules to represent the relationships between events, and to calculate their probabilities. A fault-tree analysis can be drawn up directly after a project's completion, using simulated data to determine what future issues may come to pass.

Georeferenced data, in combination with demand peak indicators, reflect the highest level of demand for or usage of a completed project, using real-time geographic location data. This analysis can be used to, for example, monitor peak traffic periods and high traffic loads to estimate how well a road or bridge will function under certain circumstances, what future maintenance requirements will be, and when said road or bridge will need large-scale reparations or replacement.

Similar to demand peak indicators, a demand forecast analysis can be used to estimate future demand for an infrastructure project based on various factors such as population growth, local income level changes, user behaviour, and other trends that would affect how people will use the infrastructure.

Finally, an accessibility analysis measures how accessible infrastructure is, whether the service is easily or conveniently reachable or available to users, whether there are any gaps or disparities in access coverage, and whether there are opportunities or challenges to be improved upon.

"By using some of these methods to measure the success of our projects, project developers can improve the quality and functionality of future projects, enhance decision-making processes, optimise resource allocation, and increase client and user satisfaction. Through being more aware of our successes and failures, we're able to improve and implement enhanced techniques with every new project, ensuring that South Africa's infrastructure continues to improve over time," says Manhe. ⦿

Portrait of a diamond-grade CONSTRUCTION COMPANY

In business for almost 60 years, Bartlett Construction offers useful pointers for success in what has always been a challenging industry.

Richard Bartlett's father, Quintin, was a carpenter by trade, and began expanding into "building a house or two". The company that bears his name was formally founded in 1964, and joined the Master Builders Association North three years later in 1967.

Now the firm's MD, Bartlett joined the company in 1977, and his brother Wayne two years later. With Richard's son Cavan also now in the business, the company can boast it's been around for three generations.

The oil companies were a mainstay of the business in its earliest days. Bartlett Construction worked for all the main oil companies, but had a particularly close association with Total, and it still has some projects for the industry on its books. In fact, Bartlett was sent to work as a carpenter on a project for Sasol when he joined the industry, despite being qualified as a quantity surveyor. His father wanted him to get on-the-ground exposure to the business at first.

"He believed you didn't just come to work in a tie from day one," Bartlett says. "His sons had to get hands-on experience across the various trades so we really understood how the business works."

Over time, the company diversified into commercial and industrial developments. "Dealing with Mr and Mrs Smith can be challenging," says Bartlett wryly. In due course, it opened a development business, Scarlet Developments, to complement the construction business – Cavan Bartlett is involved with this side of the business.

This diversification into development offers a real clue to Bartlett Construction's long-term success. "You need to find different avenues in order to survive," says Bartlett. However, he adds, it's also wise not to stray too far from your area of expertise. "Stick to your knitting is good advice," he says.

Contractors are typically squeezed by developers, so the construction side of the business is only involved in Scarlet Developments projects if all the stakeholders agree on the terms of the contract.

Going green

Another diversification is Biobuild, a Bartlett Construction company that specialises in the production of sustainable building solutions. BioBuild manufactures an innovative, lightweight building system manufactured out of mineralised woodchips and cement. The manufacturing process is eco-friendly and uses wood waste – that largest portion of the waste stream generated by construction and demolition. Biobuild creates panels for modular construction out of this material, a process that saves enormous amounts of time as compared to the traditional brick-and-mortar construction.

It's ideal for putting up structures in double-quick time, such as extra facilities at schools, but also has the potential to speed up the work of eliminating the country's housing backlog.

Like the development business, Biobuild is very definitely adjacent to the mother business of construction.

If one had to sum up why Bartlett Construction has survived and prospered for so long it would probably come down to this ability to spot new ways of applying its hard-won expertise to develop alternate income streams.

It's never been more important than now – Bartlett says he has lived through several downturns but the current one has lasted the longest, with no end in sight.

An uncertain future

His comment raises the all-important question: what is to be done? It's common knowledge that the construction industry has been in the doldrums for many years now, with many well-known names in business rescue, closed or now operating in other countries. Bartlett says that margins have been squeezed into virtual oblivion. "As far as I can see, many contractors are now working for nothing, just to stay in business and look after the hungry mouths in the company," he laments. "It's just not sustainable."

The root cause of this sorry state of affairs is ultimately the lack of work, which has served to break down the culture of trust that once prevailed in the industry. Where once contracts were sealed with a handshake and parties could trust each other's word, now it's all down to sharp dealings on contracts as each member of the value chain tries to ensure survival.

The now-common practice of altering the JBCC contracts, usually to the detriment of the contractor, springs from this state of affairs. "We need to come together as an industry to re-establish some sense of trust between role players, and recommit to honouring the JBCC contracts which are, after all, the product of an industry-wide process," he says.

Lack of opportunity leading to desperation has also seen contractors acceding to banks' demands that they cede their liens on projects, thus leaving them unprotected against non-payment.

Similarly pernicious is the practice of issuing zero certificates at the end of a project, so that the already vulnerable contractor is forced to go to the expense of legal action to obtain monies owing to it.

"The construction industry is ultimately dependent on the country's economy and thus the government's economic policy – we won't see strong growth in demand for construction projects until the economy picks up and government honours its commitment to renew and extend the country's infrastructure," says Boitumelo Thipe, Marketing & Business Development Manager, Master Builders Association North. "Nevertheless, a company like Bartlett Construction demonstrates that it is possible to identify and seize new opportunities even in the toughest circumstances. Construction companies could do worse than follow their playbook." ⦿

ABOUT THE MASTER BUILDERS ASSOCIATION NORTH

The Master Builders Association North is the amalgamation of the former Master Builders Associations of Johannesburg (founded in 1894) and Pretoria (founded in 1903). The organisations merged to form the Gauteng Mast Builders Association in 1996, and was renamed Master Builders Association North, representing four regions: Gauteng, North West, Mpumalanga and Limpopo. It is a chapter of the Master Builders Association South Africa. Based in Halfway House, the Master Builders Association North represents the interests of employers in the building and allied trade industries in the abovementioned four regions. It aims to serve its members by facilitating best practice within its membership and the building industry as a whole.

Transparency and mitigation are key to SA'S JUST ENERGY TRANSITION

South Africa is playing a key role in the quest for transparency when it comes to its Just Energy Transition and climate change mitigation, comments Thapelo Letete ***(pictured)****, Director: Climate Change at Zutari. The leading consulting engineering and infrastructure advisory practice was represented at the 28th United Nations Climate Change COP28 Conference from 30 November to 12 December in Dubai.*

Letete presented his research findings on the transparency arrangements of 11 countries, including Brazil, China, Colombia, Indonesia, Kenya, and South Africa. "My research revealed that a lot of domestic transparency requirements expressed in the national policies of many African countries are catered for in the United Nations Framework Convention on Climate Change (UNFCCC) and Paris Agreement transparency requirements that those signatory countries must comply with, as such developing countries must see their participation in those international transparency arrangements as an opportunity to assist them with their domestic climate information needs, rather than as reporting burdens."

Letete presented at two side events aimed at discussing the benefits and burdens of participating in UNFCCC transparency arrangements by developing countries and exploring links between participating and domestic climate priorities for developing countries. Zutari co-hosted these events with its partners under the 'Together4Transparency' initiative hosted by the UNFCCC Secretariat. The initiative was a two-week series of climate transparency events covering various issues, focusing on achievements, successes, and best practices from the past 30 years. "The goal was to pave the way for the full implementation of the Paris Agreement," notes Letete.This Togethr4Transparency initiative served as a 'Laboratory' to generate global momentum for governments to prepare and submit the first Biennial Transparency Reports (BTRs) by 31 December 2024 at the latest, as part of implementing Article 13 of the Paris Agreement. "The initiative aims to enhance

transparency, accountability, and shared learning to foster international collaboration and capacity-building," adds Letete. During COP28, the International Consultation and Analysis (ICA) – Enhanced Transparency Framework (ETF) poster session gave insights into the multilateral process for developing countries in terms of progress in global climate actions. It mapped trajectories from the past to the present, informing future actions under the enhanced transparency framework. Diverse countries highlighted their experiences and achievements related to technical analysis, facilitative sharing of views, greenhouse gas (GHG) emissions reduction strategies, and how to address implementation challenges.

South Africa is in the process of adopting a Climate Change Act – currently in the form of a Bill – that will legislate transparency activities in the country to enable it to address its transparency needs both domestically and internationally. In the meantime, it is using various approaches to strengthen its transparency and monitoring process, including the promulgation of regulations under the National Environmental Management Act and piggybacking off the experiences and expertise of other countries further along in their transparency journey. "Unlike many developing countries, which see participating in international transparency arrangements as a burden, in a South African context, it presents a great opportunity to access transparency-related resources, including finance, capacity building and technical expertise," says Letete.

South Africa is privileged to have one of its delegates, Professor Harald Winkler, as a co-facilitator of the first-ever Global Stocktake, the Paris Agreement's process of assessing progress every five years and mobilising stronger climate action. Dubbed the UAE Consensus, it covered the full scope of climate issues, sending critical signals for energy, transport, and nature, and providing direction for the next round of national climate commitments (called Nationally Determined Contributions) due in 2025. The UAE Consensus was a rallying cry for the world to transition away from fossil fuels in energy systems in a just, orderly, and equitable manner, accelerating action in this critical decade, in order to achieve net zero by 2050. Letete comments it signifies both a rapid near-term shift away from fossil fuels and a long-term direction towards a zero-carbon future.

It was further agreed to triple the world's renewable energy capacity and double its energy efficiency by 2030, goals reflecting a pledge made by 130 countries. Countries were called on to accelerate emissions reductions from road transport through means other than zero-emission vehicles to include sustainable public transport and integrated infrastructure.

During the Global Stocktake, South Africa stressed the importance of balancing climate ambition against mitigation, adaptation, and means of implementation. It highlighted the significance of equity and the principle of common but differentiated responsibilities and respective capabilities for developing countries.

In addition, South Africa welcomed decisions related to the Loss and Damage Fund, the Just Transition Pathways, the Mitigation Work Programme, and the Global Goal on Adaptation. "These decisions align with our national framework on our Just Energy Transition away from fossil fuels to ultimately achieve net zero," says Letete.

He points out that Zutari's representation at the UNFCCC Conferences of Parties, including COP28, was of vital importance. "It sends an important message to our clients and gives them confidence that we are at the forefront of the latest climate change developments, which are automatically incorporated in our co-created approach to infrastructure development, engineering design, and community empowerment," concludes Letete. ⊙

OVERVIEW

- SA is in the process of adopting a Climate Change Act – currently in the form of a Bill – that will legislate transparency activities in the country to enable it to address its transparency needs both domestically and internationally.
- It was agreed to triple the world's renewable energy capacity and double its energy efficiency by 2030, goals reflecting a pledge made by 130 countries.
- SA stressed the importance of balancing climate ambition against mitigation, adaptation, and means of implementation.

SAWEA 2024 AGM marks significant **PROGRESS IN SA'S WIND ENERGY SECTOR**

The South Africa Wind Energy Association (SAWEA) convened its Annual General Meeting (AGM) on 20 February 2024, heralding a pivotal moment for the future of wind energy in South Africa.

The event was marked by the unveiling of SAWEA's first annual report, which underscored the sector's vital contributions to the nation's wind energy landscape in 2023, as well as the appointment of a new Chairperson and elected board members for 2024.

SAWEA 2023 Annual Report

Delving into the various activities in the wind energy sector through the 2023 financial year, SAWEA's Chief Executive Officer, Niveshen Govender, delivered a comprehensive analysis of the wind energy market, addressing various facets crucial to the industry's growth. Emphasising global ambitions, Govender spoke about the continent's vast potential in renewable energy, particularly wind power.

"The report focuses heavily on SAWEA's objectives, including the need to enhance grid capacity, the promotion of supportive government policies such as IRP2023, and the fostering of stakeholder relationships," says Govender.

Internationally, the role of wind energy is increasingly critical, with global capacity reaching 1TW. Africa is emerging as a key player, led by South Africa's 30% share of the continent's 9GW capacity.

Domestically, the wind energy sector foresees the production of 3 200 MW through Bid Window 7. Furthermore, ongoing negotiations with PPAs suggest the potential for an additional 3 000 MW of energy to be produced in the coming years.

Discussing the local landscape, Govender meticulously unpacked the regulatory environment, shedding light on the shortcomings of the draft IRP2023 and outlining the association's strategic advocacy plan aimed at fostering a more consistent and ambitious national energy agenda.

Addressing the pressing issue of grid access challenges, he provided insights into the progress made thus far through collaborative efforts with NECOM, signalling a collective commitment towards overcoming obstacles and propelling the wind energy sector towards a sustainable future.

The report also highlights several notable achievements made by the association, including the groundbreaking Renewable Energy Grid Survey, conducted in partnership with Eskom, which revealed that 64GW of renewable energy projects are currently in development, with half of these comprising wind energy projects.

Other notable achievements include Windaba Conference & Exhibition that saw 1 000 attendees over the three conference days, where the Community Engagement Guidelines were launched. In addition, the Blade Painting/Patterning Briefing Note was launched, the CAA Blanket Application for Alternative Means of Compliance (AMoC) for industry was approved, and the Gender Diversity Study concluded, which gave rise to the need to develop a gender diversity charter for the sector.

"The report further emphasises how the association's influence extends to pivotal regulatory and policy engagements, making substantial contributions to discussions on grid capacity, environmental norms, and the regulatory landscape," says Govender.

Election of a new board for 2024

An integral part of the AGM involved the election of a new board for the 2024 financial year. Here, three new board members were elected, namely Lena Chirwa, Lance Blaine **(pictured)**, and Nontokozo Nkosi (Treasurer); while previous members, Sunette Smith, Titania Zincke, Jose Rodrigues, and Niveshen Govender will continue in their respective roles. From this board, Smith steps in as the new Chairperson, succeeding Dhesen Moodley, whose tenure with the association marked several critical advances in the sector.

More details about the 2024 board of governance can be found here. “I’d like to thank the former Chairperson, Dhesen Moodley for diligently leading SAWEA through a turbulent start for the industry in 2023. The interventions he introduced have reassured us that under the leadership of the incoming Chairperson, Sunette Smith, the association will achieve even greater levels of success and impact in advancing the renewable energy agenda in South Africa," concludes Govender.

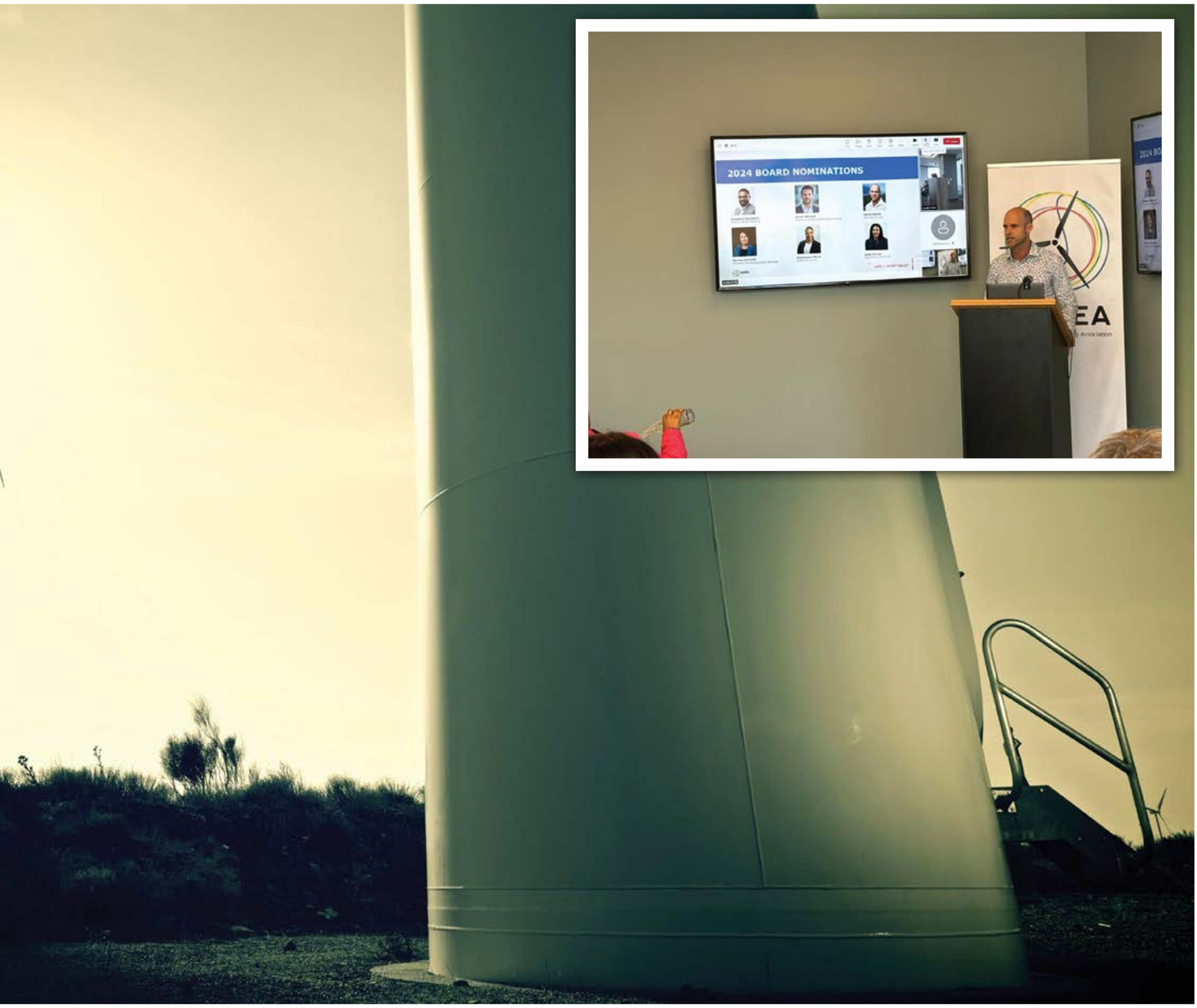
Smith served as a board member in 2023 and is well versed with the association’s 2024 strategic priorities, with grid capacity being a key focus area. Bringing a wealth of experience to her new role, Smith is well-poised to propel SAWEA forward in its mission to promote and advance the wind energy sector in South Africa.

As Business Development Executive at Reatile Group (Pty) Limited, a South African investment holding company with a 21-year track record focused on energy solutions, Smith embodies SAWEA’s shared vision for a sustainable energy future. Smith's leadership is expected to further elevate SAWEA's impact in the renewable energy landscape.

"I am honoured to have been chosen to lead SAWEA at this pivotal time,” says Smith. “I look forward to building on the foundation laid by Dhesan Moodley and working collaboratively with stakeholders to advance the association’s goals."

Despite the grid capacity and industry-wide challenges, SAWEA remains steadfast in its dedication to fostering positive transformation and pioneering innovation within the renewable energy landscape.

By championing wind energy as the bedrock of South Africa's sustainable energy future, SAWEA continues to lead the charge towards a greener, more resilient, sustainable future. ⦿



SAICE CALLS FOR RESILIENCE

In the same spirit in which President Cyril Ramaphosa relayed the State of the Nation Address (SONA), the South African Institution of Civil Engineering (SAICE) emphasises the need for resilience to address the challenges facing South Africa's economy and infrastructure.

SAICE acknowledges the optimistic sentiments conveyed by the South African government last night, however, Sekadi Phayane-Shakhane **(pictured)** CEO of SAICE, highlights the importance of effective implementation to catalyse the necessary changes for economic development.

"Detailed timelines, clear roles, and accountability are essential for rebuilding South Africa's infrastructure and economy. We further call for an increase in investment for infrastructure; reducing underspending; and enhancing procurement regulations to foster sustainable growth."

It is also encouraging, explains Phayane-Shakhane, to note the importance placed on work opportunities and work programmes for unemployed youth seeking employment. "We commend companies that aspire to drive mentorship and provide opportunities for young professionals. Unemployment figures are at all time high and need urgent government intervention."

SAICE also welcomed the government's stance to mitigate corruption in the country. In light of which, SAICE reiterates its call for procurement processes to uphold integrity, be held accountable, provide value for money, and be shielded from political interference. "We cannot stress the importance of bold steps to enhance state capability and reduce the scope for procurement corruption. Perpetuating the status quo risks further hindrance to infrastructure development, particularly within the parastatal entities, and the attraction of vital local skills and funding needed for progress," states SAICE's 2024 President Andrew Clothier.

Clothier adds that government needs to follow through on their commitment to overhauling the freight rail system and maritime infrastructure and make good on their promise for increased spending on infrastructure developments, possibly through alternative finance vehicles, such as Build Operate Transfer projects.

Meanwhile, addressing the current energy crisis remains paramount. "SAICE acknowledges efforts made, including private investments, but underscores the urgency for clear mandates and expert involvement in restructuring and reforming entities like Eskom," says Clothier. It is encouraging to note that the growth of the renewable energy programme as mentioned in SONA and that greener technologies are taken more seriously.

Phayane-Shakhane adds that dysfunctional municipalities and the professionalisation of the State require immediate attention. "We emphasise the need to reinstate skilled professionals and build human capacity to oversee infrastructure projects effectively. Further, transport infrastructure, particularly rail and road systems, demands accelerated policy implementation to stimulate economic growth."

In light of the various service delivery issues impacting South Africans, particularly the lack of basic services and sanitation, she believes that water supply and maintenance of infrastructure are critical for public health and economic stability. In particular, SAICE calls for proactive measures to address water system challenges and prioritise maintenance to prevent further deterioration. "We welcome the establishment of the Climate Change Response Fund given the devastation we have seen across our provinces. However, as SAICE, we continue to urge the government to ensure the effective implementation of the proposed solutions outlined in the SONA."

"As we navigate the challenges and opportunities, SAICE remains committed to collaborating with all stakeholders to drive positive change and secure a prosperous future for all South Africans," concludes Phayane-Shakhane.

"We emphasise the need to reinstate skilled professionals and build human capacity to oversee infrastructure projects effectively."

Sekadi Phayane-Shakhane,
CEO of SAICE.

Two 'World Best' wins for Waterfall City

At the prestigious annual International Property Awards ceremony held at the iconic Savoy Hotel in London on 22 February, Waterfall Management Company (which recently rebranded to Waterfall City Management Company) walked away with the coveted Best International Mixed-use Architecture 2023-2024 award for Waterfall City, in addition to also winning the Best International developer website.

These international accolades were preceded by three Best in Africa 2023-2024 awards, including: Best Mixed-use Architecture, Best Development Marketing and Best Developer Website, with the latter two accredited to both Waterfall City Management Company and Attacq, the strategic development partner of Waterfall City. Entries were judged based on criteria ranging from design layout and quality, architecture, services and security, to innovation, originality, marketing and commitment to sustainability.

Over and above these achievements, Balwin Properties were crowned the Best Leisure Development in Africa for the Munyaka Lifestyle Estate located in Waterfall City.

The International Property Awards, now in their 32nd year, celebrate the very best projects and professionals in the industry across 45 residential and commercial categories. Awards are split into four sectors namely, Architecture, Development, Interior Design and Real Estate, across nine regions covering Africa, Asia Pacific, Arabia, Canada, Caribbean, Central & South America, Europe, UK and the USA. Over the past year, a panel of over 90 independent expert judges studied and assessed more than 2 000 entries from 126 countries to finally arrive at the winners.

Willie Vos, CEO of Waterfall City Management Company, said; "Receiving international recognition across various segments of these awards, such as architecture and marketing, continues to reinforce the excellent work that numerous teams involved in Waterfall City are delivering. There is so much passion and innovation that goes into every detail that makes up Waterfall City. From the state-of-the-art design of our buildings to the user-friendly interface of our website, it's about achieving excellence in all we do. And we look forward to continuing to create a place where people love to be – a smart city so admired, safe and sustainable that there is no better place to live, work, play and prosper. We are super proud of these awards and congratulate all our teams and partners involved on these achievements." ⊙

Zutari has Africa's only representative **ON INTERNATIONAL BODY**

*Joining seven members from Europe, Asia, Australia, and the Americas, Sonja de Klerk **(pictured)** from leading consulting engineering and infrastructure advisory firm Zutari is the only representative from Africa on the Quality Task Group of the International Federation of Consulting Engineers (FIDIC). The global representative body for national consulting engineering associations, FIDIC represents over a million engineering professionals and 40 000 firms in 100 countries.*

When the updated version of the ISO 9001 standard on quality management systems was developed prior to 2015, De Klerk represented South Africa on the relevant ISO technical committee. Following that, she co-authored the FIDIC Guide to the Interpretation and Application of ISO 9001:2015 for the Consulting Engineering Discipline.

This remains the 'go-to' guide for any global consulting engineering firm aiming to implement or improve their quality system. "However, work has started at ISO level to develop a new version of ISO 9001. When we see those updates coming through, we obviously have to be responsive, so watch this space," reveals De Klerk.

FIDIC's core values of quality, integrity, and sustainability foster important discussions. "These values are interconnected," notes De Klerk. "Quality engineering in this day and age should be innovative, particularly to drive progress in terms of sustainability."

For Zutari, this aligns strongly with its purpose to co-create an enduring impact through infrastructure to enable communities, economies, and environments to thrive. The FIDIC values also align with De Klerk's work portfolio in Zutari as Lead of Quality, Environment, and Sustainability. "These are topics I am very passionate about and hope to inspire others."

FIDIC is perhaps best known for publishing standard contracts for engineering clients, consultants, sub-consultants, joint ventures, and representatives that are used worldwide. "It helps engineering projects run more smoothly, from contract negotiations to contractual risk management," says De Klerk.

Other tools and resources available include business practice documents, policy statements, position papers, guidelines, training manuals, and training resource kits. FIDIC also supports national associations for engineering firms in the areas of management systems, including management, risk, business integrity management, environment management, sustainability, and quality management, which is where De Klerk's specific contribution fits in.

Commenting on the importance of Zutari, and indeed Africa having FIDIC representation, De Klerk says it is a critical link for national consulting engineering bodies such as Consulting Engineers South Africa (CESA) and equivalent associations from Botswana to Cote d'Ivoire,

Egypt, Ghana, Kenya, Zambia, and Zimbabwe.

FIDIC provides important advocacy and stakeholder engagement for the industry, hosting forums and conferences to develop solutions for industry issues in a collaborative manner. For example, the FIDIC stakeholder network includes transnational organisations such as multinational development banks, the World Bank, and institutions from the United Nations to the International Monetary Fund and the World Economic Forum.

Interaction among member associations and industry colleagues from all over the world allows the sharing of best practices between nations, but also between different sizes of consultancies. Regional groups like the FIDIC Group of African Member Associations arrange regional conferences. Meanwhile, the FIDIC Africa conference is an important event on the annual calendar, allowing the consulting engineering sector in Africa to network and foster capacity building. A trend is the rapid digitisation of workflows. When she started out in the industry, De Klerk reflects it was still the norm to create two-dimensional drawings, sign them physically, and then take them to site with transmittal notes.

"It has changed dramatically, and from my observation is drastically accelerating," comments De Klerk. Many global consultancies now create multidimensional models of the assets they create. Not just three-dimensionally, but adding time and construction sequencing, cost, and future maintenance.

"If an engineer talks about seven dimensions, they are not talking about science fiction. A digital model of an infrastructure asset does not just 'look nice for clients'. It helps identify issues early," points out De Klerk. For example, making designs safer for construction crews and end users, avoiding clashes, and therefore any further disruptions and delays on a project.

"All of that also makes project delivery more cost-effective, faster, and more predictable. An increasing number of firms also use technologies like drones for reality capture or virtual reality to train end users on how to operate assets. There is really huge potential in digitisation," highlights De Klerk.

Some countries like the UK remain ahead of South Africa due to the government, for example, making it compulsory for large-scale infrastructure projects to be carried out using BIM. "But there is amazing digital work being done across Africa, from Egypt to South Africa," stresses De Klerk. "Obviously, digitisation also brings totally new risks with it. As a management system professional, I feel strongly that conventional quality management systems must 'up their game' to include systems and processes for BIM and information security (IS)."

Relevant standards like ISO 19650 for BIM and ISO 27001/2 for IS cater for this new reality. Having led the heritage organisation to its successful ISO 19650 certification, De Klerk is now collaborating with colleagues from diverse functions and regions across Zutari to progress BIM, IS, and drone management systems. "That is an area of expertise I am confident will be of great value to the FIDIC Quality Task Group," adds De Klerk.

FIDIC champions for sustainability to be incorporated right from project inception. The later a project starts considering its environmental, social, and economic performance, the more difficult and costlier it will be to implement. However, De Klerk says it does not mean nothing can be done on a project already in progress. "It is never too late."

However, the sooner sustainability is factored in, the better. FIDIC offers useful material in the form of the Project Sustainability Framework (or PSM2 for short). Locally, CESA has a sustainability framework and guide, and supports member firms in this regard. "What can be done is very discipline specific," says De Klerk.

"Most are familiar with 'green' buildings, but really every engineering discipline can do exciting work to mature sustainability and resilience," says De Klerk. She points to the exciting and encouraging work happening across the industry, be it methane harvesting from wastewater treatment works to provide energy for its operation, to innovative, more carbon-conscious material mix designs. "Methane is normally a waste product that contributes to climate change. Now we are realising it is a resource, and if we apply circular economy thinking, we have much to gain," says De Klerk.

In terms of climate resilience and the growing need to futureproof essential infrastructure, De Klerk says the challenge is that design standards tend to be based on what happened before – that is, on collective experience. "Now we are seeing more extreme weather events, higher wind speeds, and more rainfall in shorter periods, which we now have to think about when setting out on new projects," says De Klerk.

In addition, there is increased pressure from regulators, stock exchanges, institutional investors, and banks to find sustainable solutions. "For me, it is more about doing the right thing and recognising the value-add which consulting engineers can contribute, rather than just reacting to pressure 'because we must'," concludes De Klerk. ⦿

Enhancing water management WITH CLOUD TECHNOLOGIES

The cloud is water management's future - how can water managers ensure they get the best outcomes?

Water infrastructure managers want efficient and sustainable operations. They need to see what is happening across their sites. Yet this is challenging because old software and obsolete data analytics deliver underwhelming operational visibility.

Cloud technologies can help managers reach those goals, optimising operations and ensuring potable water. When managers want predictive maintenance, real-time alerts, or remote management, the best results are almost exclusively through the cloud.

Nonetheless, they have many questions. Using the cloud can create new risks. There are concerns about security, data control, and other potential problems.

"Many water managers are not sure if they should use cloud technologies," says Chetan Mistry, Xylem Africa's Strategy and Marketing Manager. "There are also numerous myths and misconceptions about the cloud, which is a pity because cloud systems enhance and modernise water operations. People should try to understand the cloud and challenge these misconceptions, but we can't blame them for being reluctant because they are the ones sticking their necks out to bring the cloud in."

What are the fundamentals of the cloud, and why are cloud solutions well-suited for water infrastructure management?

The cloud, data and security

The cloud radically increases returns while reducing up-front investment costs. Through the inventive use of modern software, cloud systems combine and scale multiple servers to deliver cutting-edge digital, data and artificial intelligence services across the internet at very competitive costs. Traditional IT cannot do this without incurring enormous expenses and upfront investment.

Typically, a site would purchase software and long-term user licences, and purchase and maintain the hardware and human skills that run that software. However, this traditional approach has considerable drawbacks.

Foremost, it takes time, money and skills to maintain the hardware. Second are costs incurred for software maintenance, updates, and patches. Third, the software is isolated to a specific location—people must be on-site to use it. And lastly, the software has no natural ability to scale cost-effectively. Water sites are stuck with what they bought and have to 'sweat' the software, even if it's outdated and lacking new features.

Cloud computing turns this approach on its head. Sites don't need to purchase software or licences—they access on a pay-per-month or pay-per-use subscription model. The cloud service provider owns and runs the servers hosting the software. Patches and updates are applied proactively and at no extra cost to customers.

As the cloud is a native internet technology, cloud software is remotely accessible. Cloud business models use platforms that scale, so the cloud service can shrink or expand as needs and budgets change. Cloud software also increases security—while customers must continue to create healthy security practices, cloud providers invest extensively in security features, industry-standard frameworks, and data protection standards such as ISO 27001 and SOC 2 Type II.

The cloud de-risks software usage, lowers associated costs, and provides more flexibility. Yet site managers don't lose any control. They still manage their data, compliance, and security. But they let go of cost and management elements holding them back, passing those to cloud partners with serious resources, skills and innovation capacity.

Choosing the right partner

The cloud can relieve water management from outdated systems and technology stagnation. Trust is the cloud's currency; water sites should focus on selecting partners that will stick with them.

"If a cloud company is primarily trying to sell a product to you, walk away," Mistry advises. "You are not buying a product, you are buying into a relationship. They need to demonstrate that they listen and can assess your needs for proactive solutions. They must also demonstrate that they know your sector and they continually invest in their systems for your benefit."

Take cybersecurity as an example: Serious partners offer security assessments and back solutions with real-world use cases and customer stories. They follow best-practice security frameworks, earn and maintain standards such as ISO 27001 data protection, and align with the top cloud vendors, such as Amazon and Microsoft.

Xylem knows that cloud computing is a game-changer for water management. But we also appreciate that there are concerns about risks such as control, security, maintenance, and cost management. To answer these needs for our customers, we develop and maintain policies, skills and partnerships to counter risks and boost value. Whether the concern is about data breaches, data sovereignty, cloud skills, or aligning cloud technologies with water strategies, we do the heavy lifting so that water sites can focus on their core priorities.

The best partners listen and respond. Cloud computing is about flexibility and focused solutions without capital expenditure burdens. Technology makes it possible, but partnership and trust make it happen.

"Focus on the partners and what they can deliver over the long term," says Mistry. "The technology is academic—it's the partner's job to listen to your needs and respond with the right solutions. It doesn't make sense to stay in the past with outdated systems."

The effects of badly run municipalities on COMMERCIAL PROPERTY DEMAND

The cloud is water management's future - how can water managers ensure they get the best outcomes?

Badly-run municipalities do more than just annoy residents and lead to rubbish pile-ups – they can also be a slippery slope to wide-scale economic decline. For urban centres in particular, the signs of a badly run municipality soon become impossible to ignore, symptomatic of a loss of confidence in the economic viability of the area and fears that crime rates will rise as opportunists capitalise on vacant buildings,

"The stark contrast between Cape Town and Durban's CBDs illustrate the detrimental impact that inadequate service delivery can have on surrounding commercial real estate businesses," shares John Jack **(pictured)**, CEO of Galetti Corporate Real Estate. "While there is still a significant amount of economic potential in the city, sustained efforts will be needed to restore Durban to a thriving and safe hub for businesses and consumers alike."

Cape Town remains an outlier

"Cape Town's infrastructure has received a significant boost from both private investment and the City of Cape Town itself, with the latter allocating R6,94b to infrastructure upgrades during the 2022/2023 fiscal year. The benefits of this significant cash injection are evident in the bustling foot traffic and the low vacancy rates of both office and retail buildings in Cape Town's CBD," he adds.

The Q4 2023 FNB Property Broker's Survey revealed that looking for more reliable utilities and services is now the fourth biggest factor driving owner/occupier sales, with 37,49% of respondents giving this as their reason for moving on. FNB links this to the deterioration of infrastructure and service in various municipalities, compounded by the ongoing energy crisis.

"Cape Town's municipal efforts to end loadshedding by purchasing electricity generated by independent power producers and less intensive power outage schedule is a major attraction to businesses in other parts of the country considering relocation," Jack says.

Jack believes that Cape Town is a prime example of the positive impact that private investment can make. "The private sector is intervening and taking back poorly functioning municipalities. Cape Town is a prime example of the benefits of a public private partnership."

"We urge municipalities to start encouraging and supporting this. It will help speed up the return of capital to the city, help reduce expenses on the fiscus and return on capital investment which in turn improves the rate of recovery." Jack adds that "the alternative is that the municipality rallies against the initiatives because they want to retain control in a form of ego battle. If this is the case, then you will see capital flight and a worsening condition."

The four major effects of badly run municipalities

He unpacks the four main consequences of badly run municipalities on commercial real estate as follows:

Decreased property values

Property values are influenced by the overall stability of an area and inconsistent service delivery can make commercial landlords uncertain about the future. Thus, the value of property within a poorly run municipality becomes less desirable to both landlords and tenants, impacting demand and decreasing property values.

"Lower property values can result in larger economic decline due to a decrease in job opportunities and economic activities within an area, as well as higher crime rates due to fewer economic prospects."

Loss of investor confidence

Private investment plays just as crucial a role as a well-run municipality in preventing CBDs from becoming ghost towns. However, investor confidence is closely linked to their belief in a municipality's ability to maintain high levels of service delivery.

"This money is typically allocated towards infrastructure upgrades, which in turn attracts more businesses to the area and further cash injections from investors looking for stable markets," says Jack.

Higher vacancies

"Badly run municipalities can, over time lead to a mass exodus from a certain area due to frustrations over service delivery. Unfortunately, vacancies can often have a domino effect, with businesses following their competitor's lead and leaving once bustling high streets empty."

Higher vacancy rates are directly linked to a city's average capitalisation rate, where higher figures represent higher risk. The Q3 2023 Rode Report found that Durban's average capitalisation rate for Grade-A decentralised office property was at 11,6%, reflecting a higher level of risk in investing in the city. In contrast, Cape Town's average capitalisation rate stood at 9,7% - well below the national average of 11,1% and the lowest of any South African city.

Landlords have to spend more on private services

Halting operations during a power outage is not an option for most businesses, particularly those in the logistics sector and for those that deal with consumers directly. As a result, ongoing loadshedding has forced many landlords to invest in costly alternative power sources to shield their tenants.

"Loadshedding affects all parts of South Africa, but there are some areas that experience longer periods without power as a result of damages to substations and wire theft, which the municipality may not attend to in a timely manner. As a result, landlords and businesses in these areas are under increased pressure, with frustrations compounded by other service delivery failures like no refuse removal or water outages," says Jack.

Landlords taking on the burden of paying for private suppliers to maintain service delivery can have a knock-on effect on raised rental prices for them to remain financially afloat. ⊙

Transforming Bellville with revitalisation OF NEW BOSTON CENTRE

With the aim of contributing to revitalising the Bellville CBD, Brönn Properties, under the experienced guidance of Alewyn and Gerdus Brönn, embarked on an ambitious project to refurbish the New Boston Centre, a property with significant potential located at 85 Voortrekker Street. Bellville Cape Town. The project, which kicked off several years ago, was made possible with financing provided by TUHF and it breathes new life into the area, showcasing the transformative power of strategic investment and community-centred development.

When Brönn took over Boston Centre, originally known as the Boston Hotel and Dept of Home affairs, was completely derelict. However, his entrepreneurial spirit, vision for the Centre, and the fact that SPAR was looking to take on a lease agreement, contributed to his decision to partner with TUHF and invest in the property.

The partnership with TUHF has been integral to the success of this project. With funding from TUHF exceeding R76m, the Boston Centre – a 10-storey building spanning 8 386 m² – has been transformed from a distressed asset to once again become a beacon of progress and vibrant feature of Bellville's urban landscape.

As the first official tenant, the SPAR, which spans the ground floor, opened four months ago – and according to Brönn is one of the best-looking SPARs in the Western Cape. Ensuring accessibility and convenience entailed developing outdoor parking, with a ramp to further under cover parking spanning the first floor of the building, with 70 parking bays and two new lifts, catering to the needs of both residents and visitors in the area.

Up next, Brönn's attention turned to the residential component of Boston Centre and meeting the demand for quality and affordable long-term rentals that would meet the need for housing in this metro.

The refurbishment included gutting most of the interior with new engineering services and interior design - from new lifts that now travel to the roof and new HVAC plant, fire and wet services engineering, all new electrical and plumbing including a heat pump system to distribute hot water throughout the building, to all new windows, fire/sound-proof doors, sanitary ware, built-in cupboards, lighting, flooring, fibre for high speed internet, etc.

Looking ahead and pending approval from the City of Cape Town and availability of funds, Brönn also has his sights on developing penthouses on the roof. Furthermore, once the building has been fully let and the electricity demand/consumption can be measured to determine the business case, Brönn is considering a potential future solar installation on the roof of the building and the external parking bay structures with a micro grid to build power resilience into the development, along with other potential engineering interventions,

that will offset the buildings power demand and carbon emissions.

Brönn further notes that there has already been an influx of enquires and lease applications. "We have Revo Property onboard as our property and rental management company, where the units are currently 50% let - and with the last few units expected to be completed by the end of November/December 2023 all residential units are expected to be 100% let by the end of the year, or January 2024."

Matthew McWilliams, COO of Revo Property comments: "We have been impressed by the efficient pre-letting of the residential component prior to work completion and the high calibre of tenants now residing in the building, which are primarily medical professionals and students. Due to the resounding success of the residential and retail area components, we are bound to see a further surge in additional investment in this rapidly growing node of Belville."

Velda Derrocks, Regional Manager for the Cape Region, says: "Boston Centre stands as a testament to what can be achieved through collaboration, strategic investment, and a shared vision for urban regeneration. TUHF is proud to be part of this transformative journey, marking another milestone in our ongoing commitment to revitalising inner cities across South Africa."

"Ultimately, without TUHF, none of this would have been possible. They have been great at understanding me as an entrepreneur and as an investor. And this project has been a significant learning curve, but a wonderful experience all at the same time, and I am very proud of what we have built," concludes Brönn. ⦿

Impact and strategies for Facilities MANAGEMENT SECTOR

The 2024 Budget Speech delivered by Finance Minister Enoch Godongwana shed light on the profound financial constraints facing South Africa, with approximately 75% of Gross Domestic Product (GDP) encumbered by gross debt. ***By Jamie Louw - Financial Director: FM Solutions***

This staggering debt burden has doubled interest repayments since 2014, exacerbating the challenges posed by a shrinking revenue base. In the face of a burgeoning population, nearing 62 million, and escalating inflation and unemployment rates, the imperative for a paradigm shift in the country's trajectory is evident. However, amidst these economic woes, the implications for South Africa's facility management industry remain significant.

Budget cuts and fiscal constraints have not only strained government operations but also jeopardised the maintenance and safety of public buildings. Recent incidents, such as fires in Johannesburg buildings due to poor health and safety standards, underscore the urgent need for improved facilities management protocols. Run-to-fail approaches are no longer tenable; instead, a more inclusive and informed strategy is imperative to preserve assets and ensure their continued functionality.

Tendering processes have been plagued by delays, hindering timely project implementation and exacerbating economic inefficiencies. Streamlining these processes is crucial for restoring confidence in the tender system and fostering productive collaborations between government and service providers.

Moreover, concerns regarding irregular spending and mismanagement in public entities have necessitated a reassessment of governance mechanisms. Rewarding well-performing departments while defunding underperforming ones can incentivise fiscal compliance and mitigate the risks associated with institutional failures. The fight against corruption remains a paramount concern, requiring strengthened enforcement mechanisms and impartial judicial processes. By empowering anti-corruption agencies like the Hawks and the National Prosecuting Authority (NPA), the government can signal its commitment to accountability and bolster public trust.

Municipalities, as frontline service providers, require enhanced capacity and reduced political interference to deliver effective governance. Merit-based appointments and depoliticised decision-making are essential for addressing structural challenges and improving service delivery.

In this challenging landscape, property owners must prioritise the maintenance and optimisation of their facilities. Embracing established facilities management frameworks and outsourcing to professional firms can yield cost reductions and efficiency gains, contributing to overall economic resilience.

The downturn in construction activities presents both challenges and opportunities for the facilities management sector. While reduced construction projects may constrain market growth, innovative strategies such as total cost of ownership planning can optimise asset utilisation and inform future budgeting processes. Proposed policies in this year's budget, such as addressing issues in the National Student Financial Aid Scheme (NSFAS) and enhancing fuel levy efficiency, can stimulate talent development and alleviate transportation costs, respectively. Moreover, measures to streamline logistics, reduce red tape, and combat crime can create a conducive environment for industry growth and innovation.

Ultimately, realising these objectives hinges on political will and effective implementation. By prioritising transparency, accountability, and meritocracy, the South African government can foster an environment conducive to economic recovery and sustainable development. Only through concerted efforts and collaborative partnerships can the facilities management sector thrive amidst the current financial challenges, contributing to the country's long-term prosperity. ⊙

ISUZU Trucks secures 11 years as SA'S TOP SELLING CAB-OVER-CHASSIS BRAND

ISUZU Trucks proudly celebrates its remarkable 11-year reign as the number one brand in South Africa's cab-over-chassis' medium and heavy commercial vehicle (MCV and HCV) segments. Despite market challenges, ISUZU Trucks continues to dominate, reinforcing its commitment to excellence and customer satisfaction.

Medium commercial vehicle segment: In 2023, ISUZU Trucks maintained a significant presence in the Medium Commercial Vehicle (MCV) segment. The sales results showcase the brand's resilience and market leadership:

- Total volume for 2023: 1 632 units, reflecting a 5,1% decline from 2022's 1 720 units.
- Market share for 2023: 30,8%, indicating a 1,4% decrease from 2022's 32,2%.
- Consistent leadership: ISUZU Trucks secured the top volume-selling cab-over-chassis (excluding van and bus) position for all 12 months, with March standing out as the best sales month, achieving a remarkable 198 units.

Heavy commercial vehicle segment: ISUZU Trucks' performance in the Heavy Commercial Vehicle (HCV) segment highlights its adaptability and strength in a dynamic market:

- Total volume for 2023: 1 160 units, compared to 2022's 1 223 units.
- Market share for 2023: 21,2%, reflecting a notable 0,7% increase from 2022's 20,5%.
- Despite a decrease in volume within the segment, ISUZU Trucks has successfully increased its overall market share.

Achieving top spot: ISUZU Trucks proudly claims the title of the #1 top-selling cab-over-chassis brand in both the MCV and HCV segments in South Africa.

The success is further exemplified by the NPR 400 and FTR 850 models, which stood out as the top volume-selling model derivatives, showcasing the brand's ability to meet diverse market demands.

"We are immensely proud of this achievement and grateful for the support of our valued customers, dealerships, and partners who have played a crucial role in our continued success," said Craig Uren, Senior Vice President Revenue Generations (SACU) at ISUZU Motors South Africa.

He furthermore expressed gratitude for the continued support of customers, dealerships, and partners, stating, "These results reinforce our dedication to providing high-quality, innovative solutions. ISUZU Trucks remains committed to setting industry standards and driving the future of commercial transportation." ⊙

Jet Demolition promotes sustainable DEMOLITION PRACTICES

Incorporating sustainability into modern demolition practices means adopting environmentally responsible methods to reduce waste, boost material reuse, and mitigate the overall environmental impact, comments Kate Bester, Contracts and Project Manager at Jet Demolition.

Bridge demolition features increased risk and high-pressure conditions.

Sometimes deconstruction is possible as opposed to demolition, where a building is carefully disassembled to salvage and reuse materials. This approach potentially reduces the amount of waste generated during the demolition process. It also prioritises the salvage and recycling of materials such as concrete, metal, wood, and other construction materials. It is important to establish a systematic sorting process on-site to facilitate recycling, notes Bester. Most importantly, though, it must be recognized that deconstruction is not suited to every project, and must carefully and judiciously be considered as an alternative to demolition.

A key part of the demolition process is to identify and safely managing hazardous materials such as asbestos, lead-based paint, and other contaminants in accordance with local regulations and guidelines. Any hazardous materials have to be properly disposed of or remediated to prevent environmental harm.

Another sustainable practice is to opt for selective demolition as opposed to complete demolition whenever possible. It means removing only certain parts of a building and allocating the remainder for reuse. Linked to this is having a proper waste management plan in place to set goals for waste diversion, recycling targets, and responsible disposal of non-recyclable materials. It is important to monitor and track progress against these goals to ensure sustainable best practice.

A neglected aspect of sustainability is local engagement to communicate these goals to the local community. It affords an opportunity to address any concerns, supply information, report on progress, and generally keep the community in the decision-making loop.

Effective dust control measures need to be implemented to minimise airborne particles during demolition. Such measures can range from water sprays to dust suppressants or using barriers to prevent dust from spreading beyond the demolition site. Noise pollution must be minimised by scheduling demolition activities during appropriate hours and using noise-reducing equipment when possible. Here the local community can also be engaged with to mitigate potential disruptions.

In terms of efficiency and best practice, Jet Demolition only uses modern equipment for demolition activities. It not only reduces the environmental impact but can also result in significant cost-savings due to reduced fuel consumption.

Sometimes an environmental impact assessment is required to understand and mitigate the potential environmental consequences of a demolition project, so as to evaluate the effect on air and water quality, soil, and local ecosystems.

An example of international best practice is the Recycling Certification Institute (RCI) of the US, which provides certification services to construction and demolition (C&D) recycling facilities globally. Its national certification programme ensures integrity, transparency, accuracy and reliability in the recovery and recycling reports of participating C&D recycling facilities.

The RCI promotes the National Standard CORR Protocol, the only C&D third-party certification protocol developed to ISO-level standards. Independent third-party evaluators verify the accuracy and reliability of the recovery and recycling rates reported. The institute provides a rigorous set of protocols, guidelines, and tools to professionally review and certify the recovery and recycling reports of participating C&D recyclers.

Jet Demolition's crews are trained in sustainable demolition practices to ensure they are aware of the importance of minimising waste and protecting the environment, adds Bester. "By integrating these strategies into modern demolition practices, it is possible to achieve a more sustainable and environmentally friendly approach, reducing the ecological footprint associated with building removal and creating a more circular economy within the construction industry."

Modern building design often incorporates the ease of disassembly and recycling at the end of their useful life. Further alternatives such as adaptive re-use are considered, with forward-looking analysis of potential rezoning to accommodate urban growth. Closed-loop design and construction methodologies enable the reuse of building materials at the end of their lifecycle, where adaptive re-use repurposes fit-for-purpose structures, to accommodate an ever-changing environment.

Jet Demolition Contracts and Project Manager Kate Bester.

Newer buildings are also more likely to embrace green building standards and certifications such as LEED, BREEAM, or Green Star to promote resource efficiency, waste reduction, and environmental performance. Adopting circular economy principles and practices such as cradle-to-cradle, closed-loop or regenerative design can reduce waste significantly and create value from waste streams. ⊙

LHWP II BRIDGES

The Polihali Dam will create a 5 042-hectare reservoir at the confluence of the Senqu and Khubelu rivers. The Polihali Dam and the Polihali to Katse Transfer Tunnel are the main water transfer infrastructure works of Phase II of the Lesotho Highlands Water Project.

Phase II adds 2 325 million cubic metres in storage capacity to the LHWP enabling an incremental increase in the volume of water to be transferred to South Africa from 780 to 1 270 million cubic metres per annum, while simultaneously increasing power generation at 'Muela by 40%.

New roads and bridges are required to restore access across the reservoir and connectivity to the national road network.

Three major bridges are being built under Phase II along the Maseru to Mokhotlong A1 road at the Mabunyane, Khubelu and Senqu rivers.

The three major bridges will provide access to Mokhotlong town across the reservoir even at full supply and retain connectivity to the national road network along the A1, the main road between the Mokhotlong district in the mountainous north-east of the country and Maseru, the capital of Lesotho.

The major bridges programme is complemented by the construction of four pedestrian bridges and six vehicle bridges under the feeder roads and bridges programme to maintain connectivity and ensure mobility for communities in the reservoir area. This programme is currently under procurement.

About the Senqu Bridge

The Senqu Bridge is the largest of the three major bridges under construction to span the Polihali reservoir.

Almost a kilometre long (825 m) and at a height of 90 m, it will be the first extradosed bridge in Lesotho and is larger than the Mphorosane Bridge on the Malibamats'o River which spans the Katse Dam and was constructed under Phase I of the Lesotho Highlands Water Project. The bridge design has taken into consideration the Mokhotlong highlands' long, cold and harsh winter conditions.

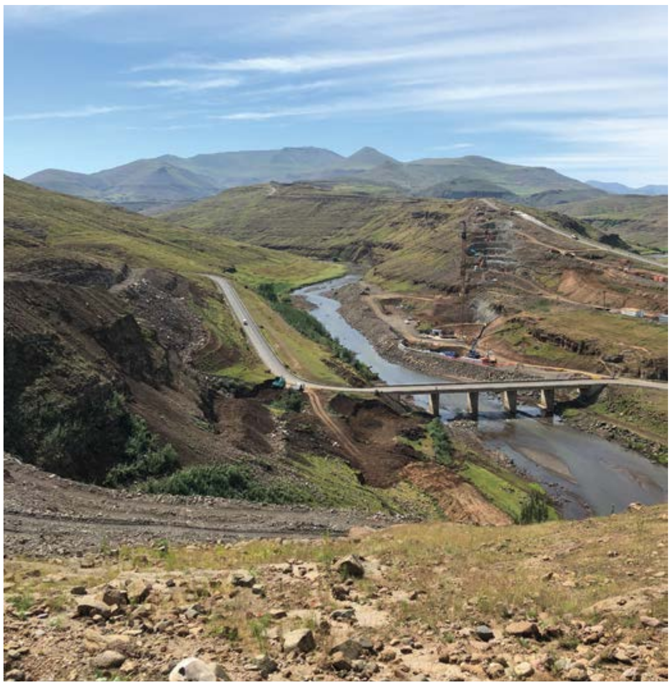
Due to the deep valley and the terrain of the area, the deck will be constructed incrementally from both abutments. This construction method will minimise disturbance to the surrounding work area and increase workers' safety. An in-situ segment midspan of the centre span will connect the two parts to form a continuous deck. The pier shape is ideal to be constructed with sliding formwork.

Work on the bridge design started in 2018, led by Zutari, formerly Aurecon Lesotho. Zutari also designed the Mabunyaneng and Khubelu bridges, the other two major bridges to be constructed under Phase II.

The Lesotho Highlands Development Authority awarded the Senqu Bridge construction contract valued at approximately M2 billion to the WRES Senqu Bridge Joint Venture in August 2022.

The WRES Joint Venture includes South African, Lesotho and international companies as per the requirements of the Phase II Agreement. The primary partners are: Webuild S.p.A. (Italy); Raubex Construction (South Africa); Enza Construction (South Africa) and Sigma Construction (Lesotho). Sub-contractors include: EXR Construction (South Africa; Gleitbau-Geselschaft (Austria); Post Tensioning and Structural Solutions (South Africa) and Freyssinet International et Cie (France).

The Senqu Bridge is expected to be completed in early 2026. ⊙



Spate of Joburg building fires calls for **PROACTIVE FIRE-SAFETY PLANNING**

The most recent incident of a fire breaking out in the Johannesburg Central Business District (CBD) in the early hours of Saturday morning on 3 February highlights the importance of the rational design of performance-based fire-safety systems for residential buildings in particular, according to ASP Fire CEO Michael van Niekerk.

The latest fire broke out in a building at the intersection of Kerk and Goud streets. Fortunately, no fatalities were reported. Emergency Management Services (EMS) responded swiftly, with preliminary investigations underway to determine the exact cause of the fire.

The incident follows the tragic fire in Nugget Street two weeks prior, which resulted in two fatalities and four injuries. In August 2023, the Usindiso building in Marshalltown was engulfed in a fire that claimed 76 people lives.

"It is crucial to address fire safety measures and support those affected during such challenging times," comments Van Niekerk. "Proactive planning, education, and collaboration are essential to prevent building fires and enhance overall safety in urban areas."

It is crucial to ensure fire safety in high-density urban areas like the Johannesburg CBD. Mitigation measures include adhering to stringent building codes and inspections. Regular building inspections must be carried out to ensure compliance with fire safety regulations. Strict enforcement of building codes, including the use of fire-resistant materials, correct electrical wiring, and emergency exits, is equally vital.

Public awareness campaigns can educate residents, business owners, and building occupants about fire safety best practice. It will promote awareness of fire hazards, evacuation procedures, and the importance of basic interventions such as smoke detectors and the presence of fire extinguishers.

It is vital that building managers, security personnel, and emergency responders receive adequate training in fire prevention and response. "Conduct regular fire drills so occupants are familiarised with evacuation routes," adds van Niekerk.

It is also important for the city to upgrade ageing infrastructure, including electrical systems, to prevent electrical fires. Fire hydrants, water supply systems, and firefighting equipment need to be maintained and inspected on a regular proactive basis.

In terms of the importance of rational building design in fire safety, Van Niekerk urges architects and engineers to prioritise fire safety during building design. Rational design accounts for the behaviour of a building during a fire. It means the structure must be designed to minimise any potentially devastating impact.

"A rational design is the performance-based design of fire safety and prevention mechanisms and strategies in a building in order to provide the same or better fire safety levels as prescribed in the National Building Regulations," explains Van Niekerk. The process commences with a fire-risk consultant such as ASP Fire visiting the premises, or reviewing a set of new building plans, to undertake a comprehensive evaluation of all areas of the property to inspect all areas of fire safety and risk in detail.

Correct and proper fire-engineering principles are applied to ensure that the design complies with the life, building, fire behavioural and environmental fire-safety objectives as required by law. All buildings in South Africa need to comply with the requirements of the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), Fire Protection, as set out in SANS 10400 Part T: 2011.

Upon completion of the fire-risk assessment and drafting the rational design report, ASP Fire provides the client with practical actions to implement. The report comprises a detailed and documented objective fire-risk assessment, as well as fire-engineering calculations and analysis where required, covering all aspects of fire risk and safety.

Other measures include compartmentalisation and adequate escape routes. Fire suppression systems should focus on automatic sprinkler systems, fire alarms, and smoke detectors. High-rise buildings should have pressurised stairwells for safe evacuation.

Collaboration with EMS can mean the difference between lives lost or saved. This calls for bolstered coordination between the fire department, police, and other emergency services. "A swift response during emergencies can minimise damage and save lives," concludes Van Niekerk. ⦿

Hodari Africa and GREA revolutionise CONSTRUCTION WORKFLOWS

In the fast-paced and intricate world of project management, having the right tools and technologies can make all the difference. This success story intertwines the experiences of two leading companies, Hodari Africa and one of their clients; Gateway Real Estate Africa (GREA), recognised the limitations of traditional project management methods and sought robust solutions to enhance their construction workflows. Through their journey with Autodesk Construction Cloud solutions, including Autodesk Build, GREA and Hodari Africa overcame challenges, achieved their project goals, and reaped significant business benefits.

Customer challenge

Communication gaps and disjointed collaboration among project teams, contractors, and service providers, grappled with geographical separation, affected the level of transparency on their projects. This made information sharing and coordination difficult.

Inefficient data management: Both companies encountered inefficiencies in data management and data in their project management processes.

Documentation issues: The issuance and notification of construction documentation were problematic for both GREA and Hodari Africa, leading to document loss, damage, or discrepancies.

Project management software lacked combability & integration: These software platforms did not effectively communicate or work together, resulting in a fragmented construction process.

This disjointed nature of their project management systems hindered efficient collaboration, data sharing, and workflow coordination among the various stakeholders involved in their projects.

Project goals

In their pursuit of better project management, Hodari Africa pursued the following objectives:

Unified collaboration: Both sought a unified platform accessible to all stakeholders—clients, professional teams, and contractors - for seamless communication, collaboration, and project management.

Standardised documentation: They aimed to standardise document issuance and organisation to ensure easy access for all team members, with consistent naming conventions and folder structures.

Enhanced dommunication: Improved communication was a common goal to streamline workflows and ensure timely project completion.

Automation of tasks: GREA and Hodari Africa aspired to automate and streamline tasks such as approvals, document

issuance, and task tracking to identify and address overdue tasks efficiently.

Hodari representatives encountered Autodesk Construction Cloud in a webinar hosted by Autodesk Gold Partner Baker Baynes, they decided to implement Autodesk Build for their construction project in Tatu City, Nairobi. This project encompassed the construction of 27 500 m² of office space, featuring two office towers, two basements, commercial units, and over 600 parking spaces.

Deric van Staden, Lead Design Manager at Hodari, emphasised the advantages of consolidating project information within a single platform. This forward-thinking approach marked a strategic shift towards excellence. Hodari had previously used various project management software solutions, but these often failed to align with their processes.

Solution

Supported by one of their key clients, Gateway Real Estate Africa (GREA), Hodari has been on a journey to digitalise its construction processes. Deric van Staden, Lead Design Manager for Hodari, acknowledges the investment GREA made upfront in its commitment to excellence.

"As a developer, identifying the benefits of housing all project information in one platform is a bold move but a strategically wise decision," reflects van Staden.

Connecting remote teams for seamless collaboration

Hodari faced a significant hurdle in their project due to geographical separation. With MEP services consultants in Nairobi and architects and structural engineers in South Africa, coordinating efforts and sharing information proved challenging. To bridge this gap, Hodari adopted Autodesk Build, establishing a Common Data Environment within the platform. This move connected remote teams and facilitated communication throughout the preconstruction processes.

Achieving clarity and transparency

In the construction industry, miscommunication and lost information lead to errors and delays. Hodari realized that centralizing project information digitally was vital to overcoming these issues. By adopting Autodesk Build, they eliminated fragmented communication, reducing reliance on emails and messages. This centralisation improved transparency and saved time previously spent searching for information.

Introducing new ways of working

This centralised approach streamlined workflows and enabled Hodari to use Autodesk Build's issues feature for efficient communication with consultants and contractors. It offered increased visibility into issue statuses, enhancing project oversight.

Ensuring quality and accountability

Quality assurance is paramount in construction, and Hodari recognised the need for a solution to ensure rigorous quality checks. They used Autodesk Build's photos feature to document every aspect of their work. This streamlined the inspection process, saving time and improving accuracy.

Greenlight to go-live

Hodari found Autodesk Build invaluable for reviewing construction drawings before initiating projects on-site. This extra layer of review improved project readiness and minimised errors.

Business benefits

The centralisation of project information within Autodesk Build offered Hodari numerous advantages. It eliminated the need for disparate systems and fragmented communication. The platform's forms feature simplified data collection and analysis, enabling Hodari to transition into a data-driven company. The potential of the dashboards feature excites Hodari, as it promises to enhance their data management for better project outcomes.

The implementation of Autodesk Construction Cloud solutions has yielded further significant business benefits for both companies:

Time savings: Teams at GREA and Hodari Africa saved substantial time on previously time-consuming tasks, allowing for more productive work on-site.

Streamlined meetings: Improved communication on Autodesk platforms led to more streamlined meetings, reducing meeting times and increasing focus on project tasks.

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GREA and Hodari Africa continue to see substantial improvements in collaboration, communication, and project delivery through their adoption of Autodesk Construction Cloud solutions. Expert training and support from Autodesk Gold Solution Provider, Baker Baynes, were instrumental in their success.

Van Staden emphasises, "Working alongside our trusted digital transformation solutions partner, Baker Baynes, has been instrumental in our journey towards construction excellence. Their expertise and support have been invaluable in maximising the benefits of Autodesk solutions for our projects."

These companies embrace digital tools to meet the evolving needs of the built environment, ensuring that they are well-prepared for the challenges of the future.⊙

4-star hotel development nears COMPLETION IN LIMPOPO

While many developers have responded to the construction sector downturn by taking a cautious approach and adopting a wait-and-see attitude, one company bucking this trend within the hospitality sector is Premier Hotels & Resorts that has just finished building its 23rd establishment in Thohoyandou, the former capital of the old Venda state.

It has chosen to fill a gap in the Limpopo area by growing its footprint into a new node in South Africa with its 4-star hotel due to open during 2024.

Undoubtedly to be the biggest 4-star hotel in the far Northern part of Limpopo Province in the Vhembe District that borders with Zimbabwe in an ever-green scenic view of Thohoyandou and a stone throw from the Kruger National Park's Punda Maria gate, the hotel will be a major milestone in the tourism sector and will serve as a catalyst to many economic developments that existed and are still planned for the region.

It is designed to serve both institutional travel demands and local business interest in a state-of-the art conferencing venue.

"Our decision to forge ahead with this development demonstrates our confidence in the Venda community and that we believe in the long-term future and economic viability of the area", says Samuel Nassimov, MD of Premier Hotels. "We strongly believe in the upliftment of skills which is why we have partnered with the main contractor, African Century Group, by providing opportunities to the local construction workers for growth, learning and upskilling who might not have had the experience in building a 4-star hotel."

"Never before have the construction workers in the area had the chance to learn the skills needed to build a hotel of this stature which is why we've chosen to collaborate with Premier Hotels & Resorts," says Lady Masia, head of the construction company African Century Group. "We approached them to be the management & marketing company due to the depths of experience they have had in the hospitality industry, much needed in order to make the hotel a success.

A project of this magnitude is critical in creating job opportunities. During the construction phase, in the region of 480 jobs varying from unskilled local construction labour through to highly skilled artisans, project managers and the like. When the hotel officially opens it will also employ 85 permanent workers, 30-40 contract/part-time staff improving the livelihood of the local families.

The Chief of Venda said that he wasn't aware of any other privately funded developments of the scale of this hotel, that's currently under construction and progressing at an aggressive pace with the IDC in funding the build.

The key factor in selecting the site was the hotel's visibility as it is being built on a rise enabling it to be seen from the recently built mall, sports stadium built to celebrate the independence of Venda and University of Venda - a big catalyst in the area - as well as giving guests superb views of the town and surrounding mountains.

This injection of money will also undoubtedly influence further future development in the region as well as attract trade and investment into Thohoyandou, serving as the gateway to the Kruger National Park and Zimbabwe.

The Premier Hotels development on the north-eastern edge of the town will be a modern build, with a touch of African flair, very similar to its OR Tambo hotel. The facade will be stone as opposed to brick with numerous environmentally friendly aspects.

With close to 8 697 m^2 of usable space, the hotel will accommodate 120 rooms, conference space to host up to 450 delegates for conferences for local business in the area or celebratory functions, business suite, bar & restaurant with wine bar, outdoor pool and gym facility.

This is not the last development we will see from the town and Limpopo province, but the 4-star hotel will definitely change the look of the town, known to have the largest baobab tree in Africa for those venturing into the Kruger and surrounding tourist hotspots. ⊙

CCSA model provides a reliable method of **DETERMINING CONCRETE CO_2 FOOTPRINT**

Cement & Concrete South Africa's (CCSA) concrete CO_2 model is facilitating the design of concrete mixes with a smaller carbon footprint.

Used by, among others, cement manufacturers, ready-mix producers, consulting engineers and architects, CCSA's CO_2 model calculates the carbon-dioxide equivalent (CO_2e) associated with the production of a cubic metre (m^3) of concrete.

This is determined according to a user-defined concrete mix design. Users of the model select the type of cement deployed in their mix and the end application for concrete. These include, inter-alia, roof tiles, bricks, precast-concrete elements or cast-in-place construction methods.

"Our concrete CO_2 model provides a reliable means of calculating the embodied energy of concrete. This has become a top priority for responsible built-environment professionals who are committed to reducing greenhouse-gas (GHG) emissions of this widely used construction material. Using our model, they are making more informed decisions regarding concrete for their projects," Gary Theodosiou, a Technical Consultant to CCSA, says.

Certainly, CCSA's concrete CO_2 model also raises awareness of "green" concrete, as well as facilitates and recognises environmental leadership in the design and application of the construction material. This is in line with CCSA's focus on the sustainable use of concrete. Just as importantly, it also provides client bodies and their professional teams with a method of accurately comparing concrete's embodied energy with that of competing construction materials.

In developing a reliable CO_2 emissions inventory, all components of concrete were considered. These include actions, namely transportation and mixing. This is in addition to the various concrete components, including admixtures; aggregates; CEM I cement; fly ash and ground-granulated blast-furnace slag (GGBS) – both often referred to as extenders – water; and steel reinforcing.

A primary focus for CCSA was to quantify the energy consumption involved in each activity and component. This is considering the large contribution that this function, alone, makes to the carbon footprint of the various actions and components linked to concrete production. The only exception is the cement industry where as much as 50% of emissions are generated from the calcination/decomposition of limestone in kilns. Electricity and fuel consumption make up the balance of the cement industry's carbon footprint.

CCSA defines these emissions according to the internationally recognised GHG Protocol. It is also used by the World Business Council for Sustainable Development's approved cement emission model, which was developed further and refined to make it more relevant to concrete by CCSA.

The embodied carbon of eight concrete mixes with a 30 MPa strength were compared. All of these mixes incorporated a CEM I base cement and were designed with and without admixtures for comparative purposes. Moreover, to evaluate the effects of fly ash, GGBS, admixtures, aggregates and water demand on CO_2 emissions, raw material amounts were varied in each concrete mix design.

Theodosiou says that CSSA's concrete CO_2 model demonstrates that the carbon footprint of concrete can be reduced in three ways. This is by using a cement extended with fly ash or GGBS; an admixture; or a good quality aggregate and sand with a low water demand.

When plasticizer admixtures are introduced to a CEM I mix design, water demand is reduced by 10%, resulting in a 17,6% decline in cement requirement. Overall, the use of admixtures lowers CO_2 emissions by 16%.

Fly ash can reduce associated emissions by 23%. When used with an admixture, concrete emissions can be reduced by a further 15%, resulting in a 38% decrease in the embodied energy of concrete.

The inclusion of GGBS in the concrete mix can lower CO_2 emissions by between 36% and 45% when used with an admixture. This is achieved by replacing up to 50% of cement in the concrete mix with GGBS.

CCSA also tested a concrete mix with decomposed granite sand as an aggregate input. This was to demonstrate the extent of the influence that the type of aggregate used has on the carbon footprint of concrete. A decomposed granite sand mix has a high-water requirement (240 l/m^3) of 76% or more. Therefore, this leads to an increased cement requirement of 53%, in turn, raising the concrete carbon footprint by 36%.

"Considering its many benefits, concrete remains the preferred material for a myriad of construction projects. Therefore, it is also the most consumed material after water, with the average consumption of concrete about one ton per year for every person on earth. Bearing in mind the sheer size of the South African concrete construction industry, alone, the prudent use of this building material can have a significant positive impact on global carbon emissions," Theodosiou concludes. ⦿

Steel and engineering sector on the precipice of **AN UNPRECEDENTED JOBS CRISIS**

The employment trends in the metals and engineering sector are an important indicator for the underlying structural constraints that have plagued the sector for the last decade and a half. The sector currently employs 362 871 people, which is a significant drop from the 577 507 people employed in 2008. This equates to a decline of 214 636 jobs, or 37,2% and when measured on a compound basis, represents a 2,9% decline per annum over this period. ***By Tafadzwa Chibanguza Chief Operating Officer at the Steel and Engineering Industries of Sothern Africa (SEIFSA)***

Employment in the sector has decreased at double the rate production has decreased over the same period. Considering the steel sectors induced economic multiplier of 2,7 times, the employment multiplier of six times and the dependency ratio of between 7 to 10 people relying on each formal job, the sectors employment trends spell wide scale social and economic disaster.

The steel and engineering sector is crucial to the South African economy, it is the backbone of the country's industrial base which is akin to none on the continent. Apart from the traditional arguments of the virtues of the manufacturing sector which include the productivity gains to economic growth, higher income elasticity of demand for manufactured goods and the spill over of growth to non-manufacturing sectors in response to growth in manufacturing output, the steel and engineering sector is also a strategic avenue through which the country converts its vast mineral endowment to final engineered products. This locks in a higher degree of value add domestically.

The value chain represented in the sector constitutes the entire metals value chain from metal production (ferrous and non-ferrous), merchants and service centres, metal fabrication to heavy and light engineering. The sector is a crucial supplier of inputs into sectors such as agriculture, mining, the automotive sector, construction, the electricity supply industry across all its facets, logistics and water sectors. Moreover, the sector is export intensive, with 40% of total production being exported, raising the country's foreign exchange receipts by USD20b annually.

Despite the sectors far-reaching impact and diversified demand profile the innate potential is unfortunately not being realised. The recent announcement by ArcelorMittal South Africa (AMSA) on the closure of its operations in Newcastle and Vereeniging, as well as ArcelorMittal Rail and Structural bears testament to this. The prospect of this development materialising is a major cause of concern which will only add to exacerbating the downward spiral to employment in the sector.

The long products operations under consideration include the country's only local mill capable of producing long steel from iron ore which are critical in industries such as construction, automotive, mining, electro-technical, electricity transmission, rail, wire and fasteners industry. The reliance of these downstream industries is not a preference question but rather higher quality and safety specifications. Faced with the prospect of a lack of domestic supply, these downstream industries will have no alternative but to look to import their feedstock, which translates to the loss of much needed domestic jobs, further deepening the unemployment crisis.

The intrinsic nature of risk mitigation for businesses is to act on eliminating potential risks before they become events, meaning that the horse may have already bolted in a number of instances. When import alternatives are bedded down, they are likely to become entrenched thereby structurally altering the industrial landscape permanently, to the detriment of South Africa's industrialisation aspirations and fortunes.

Of the 362 871 employed in the sector, the downstream industries account for 90% of the employment with the balance being employed in the upstream. This number has evolved from 80% (downstream) and 20% (upstream) over the last 15 years. The sector employed 577 507 people at the peak of 2008. Although the job losses have been felt across the entire value chain, they have mostly been concentrated in the downstream industries, which have accounted for 60.2% of the losses recorded over this period. The point being that the propensity of the sectors employment losses, as a result of the structural vulnerabilities and headwinds faced by the sector, mostly materialise through employment losses in the downstream industries. It is therefore reasonable to conclude that the impact of the plant closures will mostly be felt in the downstream where the bulk of employment resides. Of even greater concern is that a number of companies in the downstream have started estimating the business cases of importing their final product as opposed to semi-finished products (billets, blooms, etc.,) for further processing locally. This will have even wider employment ramifications by eliminating other intermediate processes like forging, galvanising and packaging, thereby converting many existing factories into distribution warehouses.

Another important structural dynamic emanating from the employment trends is a continued decoupling of the relationship between employment and production i.e., increases in production is becoming a less sufficient condition for employment creation. The latest estimates indicate that a 4,7% increase in production is required to induce a 1% increase in employment. An alternative approach to confirm the analysis is the fact that between 2008 and 2023 production has decreased at a rate of -1,3% (CAGR) while employment has decreased at -2,9% (CAGR). Given globalisation and greater levels of mechanisation, this phenomenon is not entirely surprising, however, the data indicates that periods of deep structural adjustment, like the 2007/8 global financial crisis, COVID lockdowns and periods of production disruption as a result of industrial action have tended to worsen the trend.

The AMSA plant closures, which will present a major headwind for the sector, followed by a deep and painful structural adjustment, will deepen the decoupling pattern.

In the final analysis, the reasons for the AMSA plant closure are structural, namely: low economic growth, anaemic gross fixed capital formation, electricity and logistics challenges. These are factors faced by companies in the entire value chain and without urgent intervention and reform are unlikely to be resolved in the medium term. It is conceivable therefore that in the absence of reform, the rate of employment declines observed thus far can be projected into the medium term with some modifying factors applied to account for the AMSA closure.

Taking into account the 3 500 employees that will be directly affected by the plant closures, projecting the 2,9% (CAGR) rate of decline across the entire steel and engineering sectors employment and applying the steel sector employment multiplier, on a five-year horizon, SEIFSA's estimates the employment losses could amount to a staggering 293 754 direct and indirect job losses.

This is an outcome that South Africa, given its already untenable unemployment rate, can ill-afford. Doing everything possible to finding lasting solutions to averting the announced plant closures should dominate our and governments agenda, failing which industry and the economy will be left to deal with a catastrophic socioeconomic jobs crisis of unimaginable proportions.

*Tafadzwa Chibanguza is Chief Operating Officer at the Steel and Engineering Industries of Sothern Africa (SEIFSA) an Employer Federation representing 1 300 companies employing 170 000 employees. ⊙

Closure of long steel plants in SA likely TO REDUCE DEMAND FOR ZINC

The closure of long steel plants in South Africa could have a notable impact on local zinc usage. The users of long steel from these plants are major zinc consumers, using it extensively in galvanizing, highlights Simon Norton, Director of the International Zinc Association (IZA) Africa.

ArcelorMittal South Africa recently announced it is placing its major Newcastle and Vereeniging long steel operations in care and maintenance due to a lack of demand. The company cited high logistical and transportation costs, energy prices, and loadshedding as the main reasons for the decision. In addition, South Africa's steel consumption has declined 20% over the past seven years. Over 3 500 employees will be affected by the decision.

A decline in steel production due to plant closures would directly translate into reduced demand for zinc by galvanizers. However, Norton notes that since the Covid-19 lockdown in 2020, the tonnage of refined zinc imported into South Africa has slowly increased to 77 000 tons in 2023. "So, steel must be coming into South Africa via imports and not via ArcelorMittal," he points out.

"South Africa, which aims to restore its position as an African industrial giant, grow its employment base and rebuild its decaying waterworks, wastewater works and infrastructure, must have steel mills to convert its rich iron ore into high quality finished steel products. This is followed by the use of zinc galvanizing to protect the steel against corrosion," explains Norton.

He adds: "The blame for our current economic position and the state of the steel industry in South Africa lies fairly and squarely with the government, which has ruined many parastatals and collapsed numerous municipalities. We in industry hope that the upcoming national election will result in employment and industry friendly policy change."

Zinc galvanizing is an indispensable process in the construction industry. "The loss of long steel plants could potentially disrupt the construction market, impacting steel usage. As South Africa grapples with infrastructure challenges and the need for sustainable solutions, zinc galvanizing remains a vital tool to protect and extend the life of critical steel structures," highlights Norton. Corrosion, the deterioration of steel due to its interaction with the environment, poses a significant threat to the longevity and safety of steel structures. Zinc galvanizing effectively combats corrosion by creating a protective barrier between the steel and the surrounding environment. Composed of iron-zinc alloys, this barrier acts as a sacrificial anode, preferentially corroding in place of the steel.

In the realm of rail infrastructure, zinc galvanizing safeguards rails, tracks, and other steel components from the corrosive effects of moisture, salt, and other contaminants. Such protection is particularly essential in regions with harsh weather conditions or at coastal areas, where exposure to salt spray can accelerate corrosion.

Power infrastructure, including transmission towers, substations, and other steel structures, also relies heavily on zinc galvanizing to maintain its integrity. Corrosion of these components can lead to power outages, disruptions in electricity supply, and even catastrophic failures. Zinc galvanizing safeguards these critical structures, ensuring the reliable delivery of electricity.

Beyond its protective benefits, zinc galvanizing offers significant economic advantages. By extending the lifespan of steel components, zinc galvanizing reduces the need for frequent replacements, saving on material and labour costs. Moreover, it minimises the risk of structural failures, which can lead to costly repairs and disruptions to operations.

In the rail industry, zinc-galvanized rails can last up to three times longer than untreated rails, significantly reducing maintenance costs and downtime. Similarly, zinc-galvanized power towers can endure for decades, reducing the frequency of costly replacements.

"However, underlying all zinc galvanizing lies steel. If South Africa can no longer manufacture its own steel, then our industrial, mining and civil engineering sectors will all be the poorer for it and have to battle to import steel products," concludes Norton. ⊙


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