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"Businesses need to rethink their customer journeys and become more customer-centric in order to deliver against the modern customer's expectations."

Carolyn Lyimo, country manager, Infobip Tanzania



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Editor's Note

Welcome to our September issue. This month, we bring you all the latest news, insight and analysis from across Africa, including exclusive content and interviews with some of the region's top business leaders.

They include Marc Kleiner, managing director of South Africa's Condra Cranes, a family-run business that's achieving great things supporting mines and other critical projects across much of the continent.

Other high-profile names featured inside include Yusuf Wale, managing director, Wärtsilä Marine & Power Services Nigeria Ltd and Jaco Beyers, managing director, Africa Middle East at John Deere. These are all businesses with a huge footprint right across Africa and playing a vital role in its ongoing economic development.

Other areas covered this month include the spread of data centres in Africa, as demand for technology infrastructure soars, while our power coverage explores smart grids, vanadium energy storage solutions and the sustained growth of renewables.

We're also profiling all the key business events lined up this month, including Propak West Africa in Lagos, and the return of The Big 5, a showcase for the construction sector, which is scheduled to take place in Dubai from 12-15 September.

Crucially, these are all signs of a return to some much-needed normality as the continent pushes forward in its recovery from the Covid-19 era. The hope is that Africa can regain any momentum lost in the past year or so and finally edge closer to its true potential.

Martin Clark, Acting Editor

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Tim Guest reports on the growing stress on Africa's water infrastructure and the efforts on hand to help resolve the continent's water scarcity problems.

Bridgestone and AL Nasr partner to launch electric vehicles in Egypt

Alongside its long-standing local partner Nile Projects & Trading, Bridgestone has entered a partnership with Al Nasr Automotive Manufacturing Company to begin the testing phases of new electric vehicles in Egypt.

The trial operation plan will implement a series of electric vehicles across Cairo and Alexandria. The initial phase of the pilot scheme will include a maximum of 13 electric vehicles, which will be deployed and tested annually. Each vehicle is expected to fulfill a range of 30,000 km of public test driving as part of the pilot scheme.



Image Credit: Bridgestone

13 vehicles will be deployed as part of the operation.

Bridgestone will provide tyres for the test electric vehicles, while Nile Projects & Trading's Fit and Fix Network will focus on ensuring the durability of the vehicles and provide service quality. Fit and Fix Network provides services across Egypt for the electric vehicles at its 40+ national outlets, guaranteeing as safe and comfortable a drive as possible with comprehensive servicing and quality checks.

Stefano Sanchini, regional MD, Bridgestone MEA, said, "We are excited to be working in this project with our partners Nile Projects & Trading and Al Nasr. This is a step we are taking to support safe and secure mobility while contributing to the realisation of a carbon neutral society."

The testing scheme fulfills Bridgestone's strategy to progress into a sustainable solutions company, targeting the provision social and customer value by implementing its Sustainability Business Framework.

Hani El Kholly, managing director, Al Nasr said, "We have been actively promoting the adoption of electric vehicles in line with the government's vision of transitioning to this mobile innovation."

The partnership aims to revive the national pride brand of Nasr, and encourage the Egyptian government to make a statement of Egypt's intent to become a hub for electric vehicles in North Africa and encourage more travellers to choose electric vehicles for safer journeys.

"The partnership with global tyre manufacturer and mobility solutions provider Bridgestone aligns with Presidency directives to localise the manufacture of vehicles used for clean energy," concluded EL Kholly.

MITSUMI APPOINTS DISTRIBUTION PRESIDENT

IT distributor, MITSUMI Distribution, has announced the appointment of Mathew Thomas as president, to help accelerate the business' next stage of development.

Mathew will be responsible for growth across Africa and the Middle East. Along with driving growth, the new appointment will oversee operations, manage existing partnerships and develop new revenue opportunities.

The company has hired a senior business development manager and a number of other team members across different roles and departments as part of its current expansion strategy.

"It's an exciting time for us and we are pleased to welcome Mathew Thomas as the president for the distribution business in Middle East & Africa. As we are one of the fastest growing distributors in this region, his vast experience will be extremely valuable to lead our operations," said Jagat Shah, chairman & CEO, MITSUMI Distribution.

HASSAN ALLAM AWARDED MAGHAGA CONTRACT

The Egyptian Ministry of Housing and Urban Development has awarded the contract for the Maghaga Water Treatment Plant to Hassan Allam Construction.

As part of the award, Hassan Allam Construction will handle the engineering, procurement, and construction for the entire plant, which will handle a daily capacity of 30,000 cubic metres.

As part of Hassan Allam Holding's strategy to leverage the group's synergies, vertical integration and strategy, a joint venture between Hassan Allam Construction and PGESCO (the group's engineering arm) will complete the contract's obligations.

The project is aiming to significantly reduce pollution amongst the local water resources of the five towns surrounding Maghaga. Along with a pollution reduction, the plant will also improve wastewater collection and treatment across the region.

The plant itself plays a role in Egypt's strategy to provide proper infrastructure across rural cities and improve the quality of life among underserved communities.

The current rate of access to sanitation in Egypt's rural areas currently sits at 66%, following a government initiative that connected 85,000 households to sanitation networks.

The initiative increased access to 106 villages across Egypt's governorates in Alexandria, Asyut, Beheira, Beni Suef, Cairo, Damietta, Fayoum, Giza, Ismailiyah, Kafr al-Sheikh, Luxor, Menoufeya, Sahog, Sharqeya, Suez, Qalyoubeya, and Qena.

To facilitate access to low-income households across these governorates, the Egyptian government lowered its tariffs. Families could connect to the sewerage system in instalments of 40 Egyptian pounds. This subscription-based scheme required an investment of approximately US\$19.5mn.

► BRIEFS



Image Credit: Adobe Stock

Barrick wins Egyptian licenses

Barrick Gold Corporation has been awarded four exploration licenses for 19 blocks, after successful participation in the international bid-round led by the Egyptian government.

"The move into Egypt is an integral part of Barrick's exploration strategy. Barrick is a global company and we evaluate opportunities anywhere we see the potential for world-class deposits," explained Barrick president and CEO, Mark Bristow.

19 blocks will be explored.



Image Credit: Adobe Stock

finleap and Batelco partner

The co-operation of finleap and finleap connect have partnered with Bahrain Telecommunications Company (Batelco) to take the first steps to advance open banking in MENA.

The partnership's primary goal is to provide Batelco with the latest technology in open banking and best-in-class digital frontend application to support the next generation of banking.

Batelco is the GCC's first telecom firm to receive licenses for open banking.

The partnership will advance open banking.

H.B. Fuller to build new factory in Egypt

H.B. Fuller, a company that specialises in adhesive manufacturing, is planning to build a new facility in Cairo, to support customers' increased demand in the fast-growing markets of Egypt, Turkey, Middle East and Africa. The new factory will become a regional supply hub and a centre for manufacturing of adhesives.

"Egypt has naturally become a main gateway to the region and with the new plant, we will extend our current leadership in Egypt and Turkey and grow our competitive position across the emerging markets of Middle East and Africa," said Harsh Gupta, H.B. Fuller's managing director for India, Middle East and Africa.

"Our expanded presence in Cairo, with a high-tech site designed with future growth in mind, allows us to double our production capacity and advance our technologies. This investment represents our commitment to better serving our customer base in close proximity to where they operate, for example in the markets for hygiene and packaging," added Gupta.

The two-story building will occupy a gross area of 37,000 sq m, at the CPC Industrial Park. The building project will start on 6 October, and the new production facility will become fully operational in Q4 2022.



Image Credit: Adobe Stock

The new factory will manufacture adhesives that are used for hygiene products, packaging, labelling, paper converting, graphic arts, and other industries.

PPG'S NEW FACILITY IN MOROCCO

PPG has announced the startup of a new facility in Tangier, Morocco, that will produce automotive sealants for local vehicle production. The plant will be the company's first automotive coatings production facility in Africa. The facility will initially supply materials for Renault Group's Dacia brand vehicles, that are produced in Tangier and Casablanca.

"This facility's startup is an important step in providing local supply for automotive original equipment (OEM) vehicle manufacturers in Morocco," said Roald Johannsen, PPG vice president, automotive coatings, Europe, Middle East and Africa. "The country is already one of the largest and fastest-growing vehicle producers in Africa. Vehicle output is projected to increase significantly, with two more production facilities expected to be added by 2030," he added.

PPG's Tangier facility will produce sealants that allow more flexibility in vehicle design and manufacturing. The company is assessing the local production of additional adhesive, sealants and coatings technologies, to supply vehicle manufacturers that are expanding production in Morocco.

The development and expansion of PPG's automotive adhesives and sealants will allow vehicle manufacturers to meet their goals of producing light weight parts, electrification, noise and vibration reduction, and sustainability.

Johannsen further added, "This investment demonstrates our commitment to support our customers and expand in regions that are poised for growth."



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Eskom Medupi's last unit achieves commercial operation

Eskom have announced that Unit 1, the last of six generation units of the Medupi Power Station Project in Lephalale, attained commercial operation status and was thus handed over to the Generation division. This marks the completion of all building activities on the 4,764 MW project, which commenced in May 2007. The planned operational life of the station is 50 years.

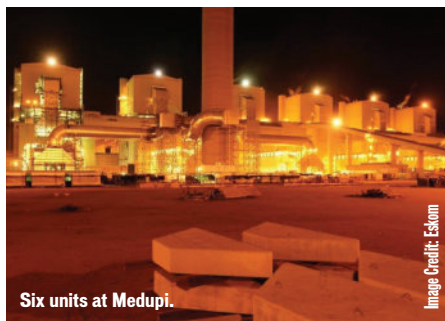
"Unit 1 commercial operation is a historic milestone as it signifies the completion of construction for Medupi Power Station," said Bheki Nxumalo, group executive, Eskom's Group Capital Division.

The unit was officially declared commercial after the completion of the unit optimisation, control demonstration, as well as the 72-hour and the 30-day reliability run. Unit 1 was first synchronised to the national grid on 27 August 2019 and reached the full load of 794 MW on 5 December 2019. During this testing and optimisation phase, Unit 1 contributed intermittent power to the country's electricity supply. On 23 August 2015, Unit 6 was the first unit to attain commercial operation, four other units followed suit in the next six years, providing electricity to the national grid.

The Medupi Power Station uses direct dry-cooling systems due to the water scarcity in the Lephalale area. It enables the power plant to operate with greater efficiency, resulting in better use of natural resources such as water and coal.

Since the construction of the project, Eskom has been working with the nearby communities in the Limpopo province. More than 4,600 artisans, technicians, engineers and managers were formally trained by the company's contractors, exceeding Eskom's local skills development target of 3,071. More significantly, over 60% of the beneficiaries were local residents and from Limpopo province.

As part of the Medupi legacy project, Eskom invested more than R2.9 billion on socio-economic development initiatives to address some of the immediate social needs of the local communities. Since its inception, over R145 million was spent on corporate social investment benefitting over 80,000 people with a special focus on rural development, education and health infrastructure.



Six units at Medupi.

Image Credit: Eskom

VODACOM AND NOKIA GETS HIGHEST TRANSMISSION RATES

Vodacom South Africa and Nokia are working together to transform the operator's nationwide optical transmission network through Nokia's Photonic Service Engine 3 (PSE-3) chipset hardware to deliver high capacity transmission.

Through a recent field trial, the companies achieved the highest data transmission rates and performance across their live optical network, demonstrating a significant increase in transmission network capacity for Vodacom South Africa.

The optical transmission network allows the transference of data on different light frequencies in an optic fibre cable. The deployment of the Nokia 1830 Photonic Service Switch will assist Vodacom South Africa in maintaining high quality data services across the country, to address the ongoing surge in data traffic during the Covid-19 pandemic and beyond.

Beverly Ngwenya, technology director at Vodacom South Africa, said, "Vodacom continuously seeks to provide a world-class network experience for its customers. Initiatives such as these will ensure that our customers continue to enjoy a high quality network service while also allowing Vodacom to optimise its network resources to support the increase in demand for data connectivity services and for the expansion of our 5G network in future."

The live network trial successfully established a high-capacity 500Gbps link between regional data centres in Midrand and a 300Gbps link over a long-distance route between Cape Town and Midrand. This was achieved without any electrical regeneration on a route that spans more than 1,600 km.

Nokia high-capacity muxponder (S4X400) was used during the trial over the live network.

OYSTER BAY WIND FARM READY FOR COMMERCIAL OPERATIONS

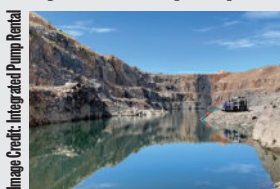
The Oyster Bay wind farm will generate over 568 GWh every year and prevent 590,000 tons of CO2 from being emitted into the atmosphere. It brings the number of operational Enel Green Power RSA wind and solar sites in South Africa up to nine projects, with an overall installed capacity of over 800 MW.

These include Nojoli (88 MW), Gibson Bay (111 MW), and Nxuba (140 MW) in the Eastern Cape; Upington (10 MW) and Adams (82.5 MW) in the Western Cape; Paleisheuvel (82.5 MW) in the Western Cape, Pulida (82.5 MW) in the Free State and Tom Burke (66 MW) in Limpopo.

William Price, country manager, Enel Green Power RSA said, "The Oyster Bay wind farm was one of five wind projects awarded to Enel Green Power in April 2015. The solution is supported by a 20-year Power Purchase Agreement with Eskom, as part of the South African government's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) tender."

BRIEFS

Sykes head pump dewateres pit in Botswana



A Sykes diesel-driven pump set removed 103mn litres of water in just 30 days from an open pit at a copper mine in Botswana.

A Sykes XH150 high head diesel-driven pump recently removed 103mn litres of water from an open pit in northern Botswana in 30 days to enable exploratory drilling to take place. Engineered for reliable performance with low fuel consumption, the pump is able to work in dewatering applications for extended periods of time. Its ability to operate in 'snore' conditions allows for conditions where suction levels may fluctuate.

Vedanta adds a new product line



VZI has added a new product line.

Vedanta Zinc International (VZI) has announced a new iron ore product line. It will be scaling up iron ore production at its Black Mountain Mine operations in Aggeney, South Africa. Laxman Shekhawat, VZI business head, said, "The first part of the project will utilise feed from existing operations and produce high-grade iron ore (67%+) and Dense Media Separation Products (DMS), to be utilised as feedstock for the steel and coal industry, respectively."

Jacobs to support South Africa's nuclear power plant programme

Jacobs, the USA-based international technical professional services company, has been selected to carry out essential engineering modifications as part of a US\$1.2bn programme to extend the operating life of the Koeberg Nuclear Power Plant near Cape Town, South Africa.

Koeberg is South Africa's sole nuclear power plant and generates 5% of the country's electricity.

The project is set to install six replacement steam generators, each weighing around 380 tonnes and around 20 metres long, at the two-reactor plant operated by Eskom.

The current steam generators have been in service since the plant was connected to the national grid in 1984. Their replacement is an essential part of the plan to extend the operational life of Koeberg by approximately 20 years, from 40 to 60 years.

Work on replacing the steam generators for the first of Koeberg's two units is scheduled to start during a planned outage in January 2022, with the overall project taking two years to complete.

Under the terms of the agreement, Jacobs will be responsible for construction management related to modifications to the secondary turbine system. The scope of work includes prefabrication of piping, pipe supports and modification and piping replacement; installation of on-site scaffolding, rigging and lagging; vessel modifications and strengthening; and replacement of forced air cooler units.

According to Karen Wiemelt, Jacobs energy security and technology senior vice-president, this project aims to maintain the pivotal role of nuclear power in South Africa's energy mix.

"To date, this is the largest single contract for our nuclear team in South Africa, which has successfully completed numerous engineering, procurement and construction projects to support operations at Koeberg over the past 30 years," Wiemelt added.



This project aims to maintain the pivotal role of nuclear power in South Africa's energy mix.

Image Credit: ESKOM

SMEC SOUTH AFRICA WINS HUGUENOT TUNNEL PROJECT

South African National Roads Agency Limited (SANRAL) has appointed SMEC South Africa to provide engineering services for the commissioning of the Huguenot Tunnel North Bore and upgrading the Huguenot Tunnel South Bore.

SANRAL identified the need for the Huguenot Tunnel to be upgraded and cited the European Directive on Road Tunnel Safety, EU/2004/54/EC Clause 2.1.2. This clause states that when a 15-year traffic forecast shows that the volume will exceed 10,000 vehicles per day per lane, a twin-tube tunnel with unidirectional traffic shall be in place.

SMEC South Africa regional manager, Western Cape, and functional general manager, roads and highways, Jaco Engelbrecht said, "The Huguenot Tunnel is one of South Africa's most iconic structures and one that remains close to our hearts at SMEC, having previously provided structural design and geotechnical services in the early 1980s."

The four-kilometre tunnel, approximately 60 km northeast of Cape Town in the Western Cape Province, is a tolled tunnel that carries the freeway through the Du Toitskloof mountains that separate Paarl from Worcester.

The tunnel's infrastructure includes a toll plaza, the main control centre structure and tunnel portal buildings that contain extensive electrical, electronic and mechanical systems required to manage and operate the tunnel and the plaza.

SMEC South Africa is set to carry out work for the North Bore and South Bore including preliminary design, detailed design, procurement and construction supervision. The design and procurement phase will take place over an estimated period of 15 months, while construction is set to take 55 months to complete.

RENERGEN SECURES MULTIPLE SALES AGREEMENTS

South Africa's domestic natural gas and helium producer Renergen has secured multiple conditional sales agreements from its phase two plant at the Virginia gas project.

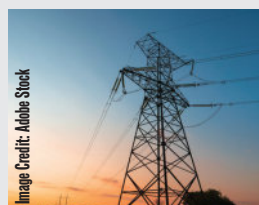
The company's maiden sales agreement for phase two helium was followed by a further three take-or-pay agreements for the supply of helium for periods of 10-15 years. Linde Inc and Messer LLC are the new customers with a 15-year agreement, while Helium24 LLC signs a 10-year contract with Renergen.

With these agreements, Renergen has now completed sales agreements for approximately 65% of the phase two helium production at the Virginia gas project.

Furthermore, Renergen has secured a contract to supply liquified natural gas (LNG) with glass manufacturer Consol Glass. The five-year deal is linked to the floating industry prices of South Africa with supply volumes to be ramped up over a three-month period, reaching an estimated volume of 14 tonnes per day within three months from the start as the necessary equipment is installed and tested.

BRIEFS

Botswana set to emerge as net exporter of electricity



Botswana launched an integrated resource plan (IRP) in December 2020.

Botswana is expected to emerge as a net exporter of electricity from 2027, according to the country's mineral minister.

As reported in Xinhuanet, the 20-year power generation roadmap will use different technologies. Lefoko Moagi, Minister of Mineral Resources, Green Technology and Energy Security, said that from 2020 to 2040, the plan is set to identify the implementation of around two 50 MW solar photovoltaic (PV) projects and 12 grid-tied small solar PV projects.

ReconAfrica partners with NAMCOR



The aim is to establish a working conventional hydrocarbon system.

Reconnaissance Energy Africa (ReconAfrica) and its joint venture partner NAMCOR will provide more comprehensive data confirming a working conventional petroleum system in the Kavango Basin, Namibia and Botswana. This is based on the mud logging report and geochemical analysis. The company has now completed all drilling components to meet the work programme requirements for an extension of the exploration period on PEL 73.

MDXi consolidates position in West Africa

MDXi, a MainOne company, has consolidated its position as one of the leading data centre businesses across West Africa with the launch of its recent Data Center in Appolonia City, Ghana.

The company has used its affiliation with the MainOne Group, presence in multiple countries, and access to all major operators across the region to deliver the best-connected content hubs in West Africa today.

Starting from its entry into the market in 2010 with the deployment of its US\$240mn, 7,000 km submarine cable from Portugal to Nigeria, MainOne's arrival has driven the growth of broadband access in the region. Having attained a leadership position as West Africa's carrier-of-carriers, the company's investments in connectivity, cloud and data centre infrastructure continues to grow, with a presence in more than 10 countries including Nigeria, Ghana, Cote d'Ivoire, Togo, Benin, Senegal, Burkina Faso, Chad, Niger, and Cameroun.

The company is providing businesses in the sub-region with data centre services in Tier III data centres in Nigeria, Ghana and Cote D'Ivoire. These infrastructure investments have led to the development of an interconnected ecosystem of Internet exchanges, content providers and network operators across the entire region.

In Ghana, the company already operates a network connected to all the major operators, ISPs, and the Ghana Internet Exchange (GIX) where MainOne has been a member for over five years, but the addition of the Appolonia Data Center facility in Ghana was the missing piece to the puzzle. This new data centre is already interconnected via dual fiber providers on dual fiber routes through MainOne's network to all West African regional operators.

MainOne's fully operational data centre in Cote d'Ivoire is accelerating the building of the MainOne interconnected ecosystem, delivering wholesale capacity and data centre services to institutions, mobile network operators, major enterprises in the country and neighbouring countries.

The company is not going it alone, as MainOne continues to partner with leading global tech players to enrich West Africa's tech ecosystem and as a leading player in the region, the company is also driving the conversation on recent developments in the West African data centre market.



Image Credit: Adobe Stock

MainOne's arrival has driven the growth of broadband access in West Africa.

KASADA PARTNERS WITH IFC TO SUPPORT THE HOSPITALITY SECTOR

Kasada has secured a strategic partnership with the International Finance Corporation (IFC) to create a large hotel portfolio in sub-Saharan Africa through a US\$160mn debt facility, of which a US\$80mn senior loan was disbursed by IFC and Proparco to finance the first transaction of the fund.

"This innovative partnership with IFC is the first of its kind in sub-Saharan Africa and comes at a time when many commercial banks are retreating from the market. The combination of Kasada's expertise and IFC's commitment have helped derive a creative solution to a major challenge in African hospitality: providing efficient, bespoke financing to a sector facing an unprecedented crisis," said David Damiba, managing partner and CIO, Kasada.

Olivier Granet, managing partner and CEO, Kasada, said, "This transaction is a game changer to accelerate Kasada's development and reinforce our ability to support the hospitality sector in sub-Saharan Africa at this critical time in our industry. I would like to thank Société Générale for initially providing the bridge financing for the transaction, and both IFC and Proparco for their commitment to providing a customised long-term financing solution."

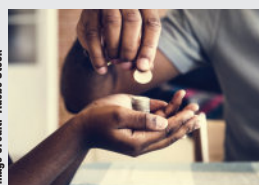
Olaf Schmidt, IFC's manager for Real Estate, Hotel & Retail, Health & Education and Manufacturing Investments in Africa, said, "Travel and tourism are vital to many economies across Africa and the hotel industry is a critical part of the sector supporting job creation. IFC has established this strategic partnership with Kasada to help build a large-scale tourism platform and support the hospitality sector as it navigates the short- and long-term economic impacts of the Covid-19 pandemic."

DECAGON RAISES FUNDS TO TRAIN SOFTWARE ENGINEERS

Decagon, a Nigerian IT company, has raised US\$1.5mn in order to support its mission of transforming exceptional software engineers. The funding was primarily led by Kepple Africa, Timon Capital and Paul Kokoricha, ACA managing partner of United Inc. With this new funding the company plans to continue its aim of training software engineers, many of whom originate from underrepresented backgrounds, and connect them with their dream jobs and funding.

The company has also raised a US\$25mn student financing facility, which was made possible by a partnership between financier Sterling Bank and the Central Bank of Nigeria. As reported by TechCrunch, Decagon claims to be the first to create a merit-based loan financing for students in Nigeria.

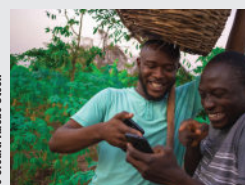
Image Credit: Adobe Stock



The SME programme aims to improve access to finance for SMEs in eight countries of the UEMOA zone.

The International Islamic Trade Finance Corporation (ITFC), a member of the Islamic Development Bank Group (IsDB), granted a US\$11.7mn (approx) Murabaha financing to Bridge Bank Group, Cote d'Ivoire (BBGCI). The facility represents a significant portion of BBGCI's remaining 2021 trade financing requirements and enables BBGCI to support the Bank's growing private sector clients as well as small-to-medium-sized enterprises.

Image Credit: Adobe Stock



YahClick's satellite services now reach more than 60% of the population in Africa.

YahClick partners with GCES for Nigerian mobile network

YahClick, the satellite broadband service from global operator Yahsat and its partner Hughes Network Systems, has signed a strategic partnership with Global Communications Extension Services Limited (GCES) to provide satellite connectivity for 9mobile, one of Nigeria's mobile network operators. The partnership will bring connectivity to hundreds of cellular backhauling sites, delivering 9mobile with a reliable and robust means of rural connectivity.

► BRIEFS

ITFC signs financing agreement with BBGCI

YahClick partners with GCES for Nigerian mobile network



Sudan

Sudan is located in East Central Africa. It is bordered by Egypt to the north, the Red Sea to the northeast, Eritrea and Ethiopia to the east, South Sudan to the south, the Central African Republic to the southwest, Chad to the west, and Libya to the northeast. Sudan is the third largest country in Africa, after Algeria and DR Congo. Sudan's total land area amounts to some 1,886,068km², with 18,630km² of irrigated land.

After agriculture, oil is Sudan's major natural resource. The country also has significant deposits of chromium ore, copper, iron ore, mica, silver, gold, tungsten, and zinc.



Mining Operations in Sudan

Operating and running a mining site with high efficiency is a very challenging job, especially in a country as vast as Sudan. Operators face many obstacles and difficulties, which may well hamper or even totally eliminate your efficacy and effectiveness.

Poor infrastructure is one of the key challenges facing the mining industry in Sudan. The state of the country's transport infrastructure creates an impediment which contributes to inefficient logistical operations by raising cost and creating delays. There are many other factors which also play a role in creating challenges in running an efficient mining site; such as ensuring uptime, providing spare parts for machines, providing fuel for your fleet, providing skilled operators, and managing these cost effectively.

We at DAL Mining ensure customized mining services solutions; from a specific scope of work to a complete turn-key mining operation. DAL Mining has the knowledge, experience, people, and equipment to build an all-needed mine-site infrastructure, as well as the ability to provide a full production mining service. These services enable mine owners to optimize their resources, control and lower their costs, and execute projects more efficiently.



Today, the DAL Mining expert team not only delivers sustainable cost savings for your business, but also provides a wide range of services to help achieve maximum cost efficiency.



Hani Girgis

Sales & Business
Development Manager
DAL Mining



Corporate users in Kenya at risk of malware attacks

According to Kaspersky's research survey, 29% of corporate users in Kenya experienced financial malware attacks in the first half of 2021.

Organisations in Kenya have become more susceptible to cyber security threats and financial malware, as more employees are working outside the safety of their corporate network.

Though the overall number of financial malware attacks in Kenya decreased in the first half of 2021, compared to the same period in 2020; 29.3% of the 7,962 attacks recorded in the country, targeted corporate users, Kaspersky experts revealed.

"As local businesses have continued to adjust to remote work scenarios and the rest of the circumstances surrounding the Covid-19 pandemic, we have continued to witness cybercriminals using this to their advantage, exploiting the situation however they can. When looking at such statistics, we believe it is evident that cybercriminals are more commonly targeting unsuspecting corporate users in Kenya as a way to compromise corporate systems," says Bethwel Opil, enterprise sales manager at Kaspersky, Africa.

The normalisation of a distributed workforce makes it necessary to protect the personal endpoint devices of people, who need to access back-end systems for performing their job functions. In addition, cybersecurity training of employees remains a foolproof way of guarding against the scourge of financial malware, that uses phishing techniques to target individual users.

"It is especially financial phishing that has become one of the most popular tools used by cybercriminals to make money. It does not require much investment or technical expertise from a hacker and can be propagated quickly. In most cases, successful scammers win access either to the victim's money or data that can be sold or otherwise monetised," continued Opil.

Some of the best practices include, installing applications from reliable sources, and closely examining the permissions requested by the applications, installing trusted security solutions on all devices that connect to the Internet, and ensuring all software have the latest security patches and updates installed.



Image Credit: Adobe Stock

Cybersecurity training can help guard against financial malware attacks.

UK ANNOUNCES NEW INVESTMENTS IN KENYA

The UK foreign secretary Dominic Raab has announced new UK investments, worth approximately US\$18.33mn in Kenya. He also launched the Nairobi International Financial Centre, and its formal partnership with the City of London, thus strengthening links between the City of London and Nairobi.

Kenyan President Uhuru Kenyatta, who was on a three-day visit to the UK, witnessed the signing of a new memorandum of understanding between TheCityUK and the Nairobi International Financial Centre Authority, and a closer collaboration with the London Stock Exchange.

The new development will help channel international investment into Kenya and the wider region, making sure firms and investors make the most of trade and investment opportunities.

Foreign secretary Dominic Raab said, "This US\$18.33mn package of new UK-Kenya deals from the UK government and British firms will support investment in the region, including building new green affordable homes, connecting households to clean energy, and boosting manufacturing."

"This package of investments will create new jobs and unlock new opportunities for UK and Kenyan businesses by strengthening the relationship between Nairobi and the City of London," he added.

British insurer Prudential will be the first firm to be set up in Nairobi's new International Financial Centre, while Kenyan mining company Mayflower Gold announced plans to dual list its shares on both the London and Nairobi Stock Exchanges in a deal worth approximately US\$1.9mn.

A new digital customs system for Kenya will make it faster and easier for goods to move between Kenya and the UK, and between Kenya and the rest of the world.

BOLLORÉ AND CZARNIKOW COMMIT TO SUSTAINABILITY

Bolloré Transport and Logistics and supply chain services company Czarnikow, have come together to support and implement the VIVE Sustainable Supply Programme in East Africa.

VIVE is designed to create fully sustainable supply chains, in which all actors commit to sustainable improvement. Through its participation in this programme, Bolloré Transport and Logistics is strengthening its footprint as a player in fully sustainable trade.

As part of this continuous improvement sustainability programme, led by Czarnikow and Intellync, Bolloré Transport and Logistics (in East Africa), will benefit from a sustainability audit and a three-year improvement plan. Bolloré Transport and Logistics' Kenyan and Tanzanian subsidiaries will also take part in the programme.

BRIEFS

First turbine parts for Tanzanian dam

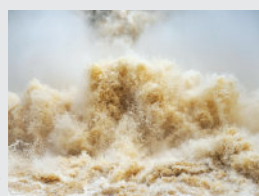


Image Credit: Adobe Stock

The project aims to control flooding, generate power and preserve the environment.

Egypt's Arab Contractors Company and Elsewedy Electric have successfully installed the first turbine parts for the Julius Nyerere Hydropower Plant and Dam in Tanzania.

Dr. Assem El Gazzar, the Egyptian Minister of Housing, Utilities and Urban Communities added that this step comes after the completion of the civil works required to install the parts of the first turbine. Nine turbines are planned to be installed, each with a capacity of 235 MW.

IFC grants loan to Intelvision

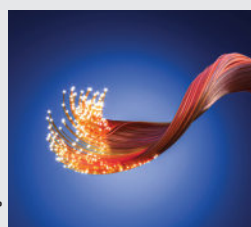


Image Credit: Adobe Stock

The funding will improve internet services in Seychelles.

Intelvision Limited is planning to lease a new cable system to strengthen the broadband internet network and digital service offering in Seychelles.

IFC has granted a loan of up to US\$10mn to Intelvision, a provider of data, Internet, VoIP and pay-TV services, and another loan of US\$10mn. This funding will allow Intelvision to lease a new cable, currently under construction by Vodafone Carrier Services.

Qatar Airways partners with RwandAir

Qatar Airways passengers will now be able to explore even more of Africa following its new partnership with Rwanda's flag carrier, RwandAir via their hubs at Doha and Kigali.

As a part of the strategic partnership, the extensive interline agreement will give customers access to the networks of both airlines and provide the opportunity to pick and choose from more than 160 destinations.

This latest cooperation comes hot on the heels of the airlines' recent loyalty partnerships announcement, giving RwandAir Dream Miles and Qatar Airways Privilege Club loyalty members, access to each other's destinations with the opportunity to 'earn and burn' points across their reciprocal route networks.

Yvonne Makolo, CEO of RwandAir, said, "We are really excited to be opening up more of the world to our customers through the new interline agreement with Qatar Airways. Delivering excellent customer experience is key for us, and we know that any travellers flying with Qatar Airways or RwandAir, as part of the agreement, will continue to receive the same unrivalled level of service they're used to from both airlines."

RwandAir operates services throughout Africa and to long-haul destinations including London Heathrow, from its Kigali-based hub. It was also the first African airline to be awarded the top Diamond status rating for Covid prevention measures. This is the highest attainable level from APEX Health Safety, powered by SimpliFlying.



Image Credit: Adobe Stock

RwandAir operates services throughout Africa and to long-haul destinations.

CELLULANT TO BECOME PSSP IN TANZANIA

The Bank of Tanzania (BOT) has issued an approval in principle to Cellulant Corporation to operate as a Payment Solution Service Provider (PSSP) in Tanzania.

Edwin Kiiru, recently appointed country manager for Cellulant Tanzania, stated that this approval will enable the company to extend its payment solutions across all spectrums of Tanzania's payments ecosystem.

"This approval sets Cellulant into a select group of a few payment aggregators that operate as PSSPs in Tanzania and will help add millions of economically active but financially excluded Tanzanians into the digital payment ecosystem. We are bringing to Tanzania the same top-level performance and seamless payments solutions that have made Tingg Africa's most preferred payments platform," added Mr Kiiru.

Cellulant's single digital payments platform, Tingg, addresses the payments needs of businesses and makes it easy to collect and make payments across multiple payment methods in different currencies.

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Upcoming Events Calendar 2021

SEPTEMBER

14-16

PROPAK WEST AFRICA

Lagos, Nigeria
www.propakwestafrica.com

21-23

NIGERIA ENERGY

Lagos, Nigeria
www.nigeria-energy.com/en/home.html

28-30

6TH SOLAR AFRICA 2021

Dar es Salaam, Tanzania
www.expogr.com/tanzania/solarexpo

OCTOBER

5-7

WINDAC AFRICA 2021

Cape Town, South Africa
www.windac-africa.co.za

11-12

AFSIC

London
www.afsic.net

7-9

7TH LIGHTTEXPO AFRICA 2021: KENYA

Nairobi, Kenya
www.expogr.com/lightexpo

26-29

ECOMONDO

Rimini, Italy
https://en.ecomondo.com/

NOVEMBER

1-3

EGYPT ENERGY

Egypt International Exhibition Centre
www.egypt-energy.com/en/home.html

8-11

AFRICA OIL WEEK

Dubai, UAE
https://africa-oilweek.com/Home

9-12

AFRICAN ENERGY WEEK

Cape Town, South Africa
https://aew2021.com/

15-17

AFRICA ENERGY FORUM

London
www.africa-energy-forum.com

15-21

INTRA-AFRICAN TRADE FAIR 2021

Durban, South Africa
www.intrafricantradefair.com/en

24-26

THE BIG 5 CONSTRUCT KENYA

Nairobi, Kenya
www.thebig5constructkenya.com

Power generation, transmission and distribution key focus at Nigeria Energy in September

According to the International Renewable Energy Agency's (IRENA) comprehensive roadmap to global energy transformation, by 2050, electricity could become the central energy carrier, growing from a 20% share of final consumption to an almost 50% share, and, as a result, gross electricity consumption would more than double. Renewable power will be able to provide the bulk of global power demand (86%).

Francesco La Camera, director-general, IRENA, said, "The global energy transformation is happening, driven by the dual imperatives of limiting climate change and fostering sustainable growth. An unprecedented decline in renewable energy costs, new opportunities in energy efficiency, digitalisation, smart technologies and electrification solutions are some of the key enablers behind this trend."

In the backdrop of this, Nigeria Energy exhibition and conference is all set to be held from 21-23 September 2021 at the Landmark Centre, Lagos, aiming to reflect the transformation currently sweeping through West Africa's rapidly growing power sector. Held under the patronage of Nigeria's Ministry of Power, the exhibition and conference attracts hundreds of local and international suppliers and thousands of professional visitors.



Image Credit: Adobe Stock

The event provides a unique platform for exhibitors from around the world to showcase cutting-edge products and services.

Organised by Informa Markets, Nigeria Energy caters to the entire value chain, from manufacturers and global industry experts to governments and power industry professionals. Public utilities will be able to meet with consultants, EPC contractors and technology providers to form partnerships and provide solutions for the challenges facing the region's energy sector.

Power generation, transmission and distribution, renewables and energy storage and lighting will be major focus areas during the event. The event provides a unique platform for exhibitors from around the world to showcase

cutting-edge products and services. The exhibition provides an opportunity for buyers and sellers from across the globe to develop international relationships and for investors to discover the opportunities available in the region.

The organisers have confirmed that Nigeria Energy will be organised in accordance with Informa's AllSecure health and safety standard. Informa has developed a detailed set of enhanced measures to provide the highest levels of hygiene and safety at its events, providing everyone with reassurance and confidence they are participating in a safe and controlled environment.

Sustainability centre stage at Propak West Africa

September sees the welcome return of Propak West Africa 2021, the region's foremost event for the packaging, plastics and food processing industry, with sustainability a central theme.

One of Africa's most prominent trade shows, Propak West Africa is due to take place at the Landmark Centre in Lagos, Nigeria on 14-16 September. It will be a huge boost not only for the industry itself, but also Nigeria's business events sector, which has been an important source of revenue for the country in years gone by.

Strategic partners this year include PWC, while industry groups and bodies endorsing the event include the Manufacturers Association of Nigeria, Business Council for Africa and the Nigeria Investment Promotion Commission.

"With many looking to build on the momentum that is returning to the industry in the region, the chance to reconnect and meet with 3,500 professionals over the three days cannot come soon enough," organisers Afrocet Montgomery stated in a pre-show news release.

With exhibitions and conferences noted as a key driver for boosting the economy in Nigeria, the organisers have been given special status in Lagos State to operate with larger capacity than other indoor events.

"This means that while a number of regulations remain in place, the opportunity for the business community to meet in September safely is achievable, and stakeholders are looking forward to it."

The exhibition will be returning with more than 80 companies booked, a strong multi-faceted conference programme and the introduction of an online business matchmaking platform to complement the live event.

One of the central themes of this year's event will be sustainability, which is highlighted in the central conference.

Propak Sustainability Conference:



Image Credit: Adobe Stock

Propak West Africa is the region's leading event for the packaging, plastics and food processing industry.

Being Responsible will provide a forum to discuss key issues facing the sector in an era where the global effort to tackle climate change has taken top priority. The event will showcase opportunities and ways for the industry to limit its impact on the environment, a key challenge as

companies navigate their way out of the Covid-19 pandemic.

The new business matchmaking platform, Grip, will complement the live exhibition and provide the opportunity to access the full pre-registered visitor list prior to the exhibition.

"This will allow registered attendees to reach out and connect with each other ahead of the live event and help focus their attention on the key buyers for their sector, rather than wait for the buyer to come by their stand," according to the organisers. "It's expected this will greatly add to the return on investment by ensuring no one is missed."

Propak West Africa 2021 is the perfect stage for bringing the region's industry back together "and provide the catalyst for it to bounce back after the last year." ■

For further information, go to www.propakwestafrica.com

“With many looking to build on the momentum that is returning to the industry in the region, the chance to reconnect cannot come soon enough.”

AFROCET MONTGOMERY

▶ QUOTES

“I am very proud to inaugurate the fourth Orange Digital Center in Africa today in Mali, which is part of the network of 32 Orange Digital Centers deployed in all the countries where Orange operates to support the start-ups. The main objective is to democratise access to digital technology for young people - with or without qualifications - giving them access to the latest technological trends to improve their employability and give young Africans the ability to write their digital future.”



ALIOUNE NDIAYE

Chairman and CEO of Orange Africa and Middle East

“As more countries affirm their commitment to the 2030 ambitions and 2050 net zero emissions, we hope to see funding made available for large-scale hybrid projects. While we have already seen this happen in countries like Egypt and South Africa, there is still a need to rebalance between the immediate need for power for the population

while also looking at the long-term solutions for renewables.”

KWEKU FREMPONG

Area general manager for West and Central Africa (WACA) at Aggreko

“We are pleased to be supporting access to affordable urban housing, which is a key pillar of Kenya’s development agenda. We are confident that our investment in the fund and our support for the Open Access platform will address some of the critical factors that prevent financial markets from playing a bigger role in affordable housing in Kenya.”

ANNE-MARIE CHIDZERO

Chief investment officer at FSD Africa Investments on the company's commitment to a Kenyan green affordable housing venture

“The future of mining and the transformation of the mining industry depends highly on staying abreast of advancing technology and industry trends. It also depends on the sustainable development of new enterprises, collaborations, and ongoing conversations among relevant stakeholders in the public and private sector and educational institutions. Now is the time to contribute to small business growth, promote job creation and develop critical job skills required for the transformation in the mining industry.”

SABINE DALL'OMO

Siemens CEO for Southern and Eastern Africa

“It’s time for businesses to leverage the sharp skills and fresh perspective that freelancers

infuse into a permanent workforce. Africa doesn’t have a talent deficiency; it has a matching problem and that is what Gebeya is seeking to address through the deployment of a true Pan-African freelance marketplace. Freelancers are part of a smart, agile hiring strategy. We plan to expand our pool of skilled freelance talent to 15,000 within the next 3 years.”



AMADOU DAFTE

CEO and founder of Gebeya on the launch of its revamped marketplace to connect SMEs with professional talent

“The pandemic has demonstrated a lot of work - particularly knowledge work - can be done beyond the four walls of an office. We need to look at harnessing that flexibility with the benefits that offices offer for socialising about work, collaborating, and creating community. What we shouldn’t do is create ‘horrible hybrids’ that mash up the worst of both worlds”.

NICOLA MILLARD

Principal innovation partner, BT

AFRICAN REVIEW / ON THE WEB

A selection of product innovations and recent service developments for African business
Full information can be found on www.africanreview.com

ZAMBIA TO USE AI TO ADDRESS URBANISATION CHALLENGES



The aim is to ensure Zambia's towns and cities are resilient to support economic growth.

Zambia has partnered with Ordnance Survey (OS), the International Growth Centre (IGC) and the Commonwealth Association of Architects (CAA) to use artificial intelligence to address challenges of urbanisation in Lusaka.

The organisations are piloting the

creation of an automated digital base map of Lusaka.

OS mapping data is set to help identify informal settlements, population and density, the number of built structures, the location of transport infrastructure surrounding the formal and informal neighbourhoods, as well as access to electricity, sanitation facilities and clean water.

MOROCCO, KENYA AND GHANA TO BE MAJOR ECONOMIES IN AFRICA IN 2021

Having witnessed its worst recession in half a century in 2020, Africa's economy is forecast to grow at a healthy pace of 3.8% in 2021, driven



Kenya's economy is poised to grow strongly in the coming years.

by rising global demand as restrictions are eased, untapped market opportunities, a rebound in commodity prices, and a rise in oil prices, according to GlobalData.

GlobalData has further noted that the fastest-growing economies in the region will be Morocco, Kenya, Ghana, Egypt and South Africa, which are all

forecast to register above 4% real GDP growth in 2021.

Gargi Rao, economic research analyst at GlobalData, commented, "Morocco has been moving ahead in leaps and bounds in recent years, having provided the world with produce following promising agricultural seasons.

"The country's expected growth of 5.19% was also influenced by its effective vaccination drive, accommodative monetary policies and fiscal stimuli."

Africa's largest economy by GDP, Nigeria, is also forecasted to exit recession. However, the growth will be at a slower pace than other sub-Saharan African nations at 2.3%.

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Transforming legal systems for Africa’s tech start-ups

Dr Nicolas Kyriakides, partner at Harris Kyriakides, Adjunct Faculty at the University of Nicosia, founder of Zenox Public Affairs, explains how African tech start-ups can utilise lobbying to ensure regulatory frameworks are fit for purpose for the evolving market.

Innovation is booming in Africa. A report from Boston Consulting Group recently revealed that between 2015 and 2020, growth of African tech start-ups receiving financial backing was nearly six times faster than the global average. However, many of these start-ups then fail to progress and secure further funding. Why is this? A number of factors have been blamed, and complex and inconsistent regulations across African countries have been cited as a major factor behind why these new businesses fail to find their feet and maintain consistent growth.

In its report, Boston Consulting Group called on “African governments to improve the regulatory environment so that countries can better cultivate hospitable investment ecosystems for start-ups and venture capitalists.” But democracy moves slowly and change, when it comes, might be already out of date. Especially when looking at the tech sector and how rapidly everything moves. At the other end of the spectrum, regulation is sometimes used to stifle innovation and slow change.

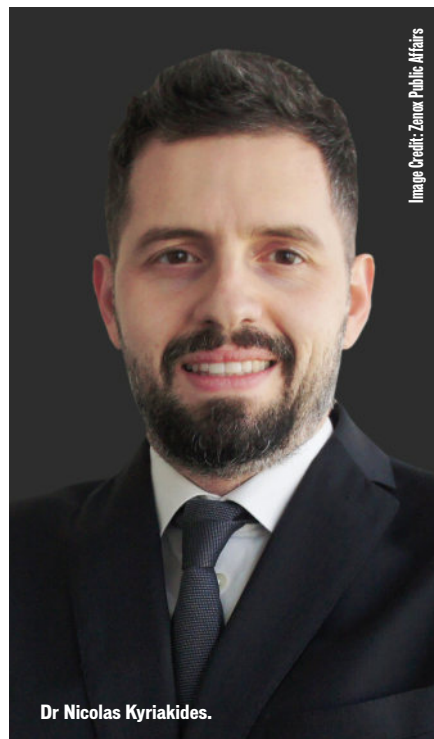
Take Nigeria as an example – one of Africa’s success stories, three out of the four unicorns in Africa (tech start-ups with a valuation of more than US\$1bn) hail from Nigeria. However, ride-hailing start-ups were banned in Lagos last year and the Nigerian Central Bank banned cryptocurrency in February. Understandably, these measures can stunt growth and leave businesses feeling frustrated and as if their hands are tied. However, there are steps businesses can take to positively influence conversations around laws and regulatory frameworks, helping to ensure they are fit for purpose for their business and the wider, evolving market.

The power of lobbying

For businesses across Africa, lobbying can play a vital role in creating a more open, business-friendly legal system which is fit for purpose. However, throughout history, the process of lobbying policymakers has been open to abuse and at times, controversial.

Across Africa, lobbying is still in its infancy and there isn’t much by way of legislation or regulatory frameworks governing these activities.

However, whilst the motivators and ethics



behind certain lobbying activities can certainly be questionable, lobbying does play an important role in democracy. Lobbyists can help educate policymakers and provide information to help inform debate and change. Lobbying often enables government officials to have access to a greater wealth of knowledge and prioritise and organise this information.

Lobbying can also have a particularly important role when it comes to improving a legal system and how it works in practice for businesses, as it ensures the lines of communication between state and citizens are open, and the government decision-making

“Lobbying can play a vital role in creating a more open, business-friendly legal system.”

process is properly accessible.

Arguably, there are lessons African countries can learn from Cyprus. In recent years important steps have been taken to ensure the political system is transparent and open and lobbying is done properly. New bills on transparency in the public decision-making process and related issues as well as introducing a bill against corruption and a bill for the protection of whistle-blowers are currently making their way through parliament.

However, it is not just about legislation. Other initiatives have also helped to ensure Cyprus is viewed as a more open and transparent nation. For example, the establishment of the free to use Nomoplatform, allows users to track the policy-making process.

Professionals can also be brought in to assist with the lobbying process, and having an agency support not just with the lobbying activities, but also communication more generally, can be very helpful.

For instance, Cyprus’ first lobbying start-up, Zenox Public Affairs was established in 2020 to help close the communication gap between businesses and the government and to help boost access to justice at all levels. Zenox has been working closely with Bolt, Lime and other companies in its efforts to modernise the transportation industry including micromobility, ride-sharing, ride-hailing etc. Changes to the law can move at a snail’s pace and lobbying can help speed up the process to bolster business.

The new Cyprus Forum, for which Zenox is a communications partner, is an annual non-profit conference that looks to create change through discussions and subsequent direct action. With a panel of speakers addressing different topics, such forums give a voice to professionals, foster collaborative thinking and help lead to solutions. A Nigeria Forum is due to take place in the second half of 2022 with the same aims.

Although Cyprus is not perfect, the country has certainly managed to start on the path to tackle its issues around transparency and transform itself into a business destination for innovative companies. This roadmap could be helpful for any other African countries starting on a similar journey. ■

A successful data centre transformation

To achieve a successful data centre transformation, scalable and future-proof designs and careful planning are key elements to understanding the performance requirements, potential challenges, and future needs while maintaining smooth and efficient operations, especially with the continuous dynamic technology evolution.

Cloud and edge computing are changing the way data centre infrastructure is designed and managed. Edge data centres will have a presence in less traditional locations than in the past. Therefore, Edge deployments must consider a 'self-sufficient' approach including converged or fully-integrated solutions, incorporating the IT gear, physical infrastructure, power, cooling, and security. Being flexible or scaling up existing deployments may also present a challenge as many of these systems will be dispersed and contesting for space and access.

One way of addressing this would be to incorporate some type of intelligence or visibility to these remote edge deployments. Having the ability to remotely check the power status, cooling thresholds, and ensure the IT investment is locked and secured is extremely beneficial. A primary step in this direction would include deploying the Panduit SmartZone™ solution, which enables a consolidated solution to address power as well as incorporate relevant environmental needs and challenges.

The Covid crisis has accelerated the use of automated tools and systems in data centres, notably where staff have been restricted access to their office location, and thus rely on remote access to monitor and address any issues that arise.

To achieve more automation in the on-premise data centre, moving select workloads, tasks, and applications to cloud-based services where they can be handled remotely and autonomously is an accelerant for on-premise data centres to reach automation goals.

Investing in DCIM software and hardware paves the way to on-premise automation, particularly

when combined with emerging technology such as Artificial Intelligence (AI) and machine learning. An example is data centre managers' ability to optimise operations and improve resilience by predicting equipment wear and tear, regulating temperatures, and predicting where human intervention may be required.

Human 'less' not humanless

Humans are a primary contributor to outages and issues within a data centre. By reducing the number of human interactions and manual inputs, the risk of human error is automatically reduced.

In terms of physical layer cabling infrastructure, investing in an automated or semi-automated patch-cord management and labeling documentation system will help ensure switch ports stay fully utilised and promote more efficient moves, adds, and changes (MAC's). For example, a programme could be used to issue a MAC request to a technician automatically. Once the technician completes the request, the record systems are updated automatically, reducing the margin for human error and lowering time-on-site requirements.

A survey of 500 IT executives conducted by INAP found that 85% of IT professionals anticipate their data centres will be close to full automation within the next four years. Two-thirds even go as far as to say on-premises data centres will be close to non-existent.

AI has emerged as a transformative



Panduit FlexFusion™ Cabinet.

technology, and the new direction is to become more integrated through AI engineering strategy to facilitate integration, performance, and resiliency. As we advance, other key AI trends are expected to emerge, including:

- Integrating production with Machine Learning forming MLOps.
- Making AI accessible to everyone where the concept of AI for Kids had emerged.
- Responsible AI and ethical AI mandate to mitigate dangers.
- Artificial Intelligence of Things.

Most medium-sized data centres are transitioning from 10G or 40G to 100G. This change means all but the shortest cabling will be fiber. 400G has also become a reality at the largest data centre providers and this comes with entirely new optical modules, higher-performing fiber cable, and potentially new interconnects. 400G will rely more heavily on 12 fiber MPO connectors and higher fiber count fiber cabling

(as much as 864 fibers). It also increases the need for fiber cables, like Panduit's Signature Core™, which offers a longer reach than standard OM4 400G and introduces a need for a new 16 fiber MPO and smaller denser 2 fiber connectors like the CS product that Panduit launched in November 2020.

Regardless of which network architecture is ultimately implemented, Panduit suggests as an initial step to collectively assess both the logical and physical infrastructure. The primary reason for this approach is to fully consider what network devices need to connect to all the relevant nodes and what impact the topology will have on things such as performance, migration capabilities, port counts, cabling type, and cable routing.

There is a significant difference in the amount of cabling required when comparing two-tier and three-tier topologies as well as the amount of data that traverses to and from each port or network link. Without this logical and physical coordination, the performance and operational outputs may yield positive or negative results. Panduit helps reduce potential risks on creating and validating best practices for the customer to migrate to higher network speeds over multiple technology refreshes or upgrades.

This article was composed by: Bassel AlHalabi, managing director of Trident Technology Services, Panduit Authorized Representative in Middle East & Africa; Jeff Paliga, director global data centre business development at Panduit; Steve Morris, senior product manager, data centre solutions, Panduit; and Bob Wagner, manager group products for connectivity and pathways, Panduit. ■

“ Investing in DCIM software and hardware paves the way to on-premise automation.”

The Lomé Data Centre – the first of its kind opened in Togo.



Image Credit: Liquid Intelligent Technologies

Africa demands more data centres

New data facilities are set to open across the continent as demand continues to soar.

Africa needs a lot more data centres than is currently available. This is the assessment of the Africa Data Centres Association and Xalam Analytics' report on the continent's data centre ecosystem that was released earlier this year.

Broadband adoption on the continent is booming and Covid-19 has shown individuals and businesses the importance of connectivity. These reasons, coupled with the fact that the continent has the fastest-growing population in the world (according to UN estimates), have meant that the demand for data centre infrastructure has never been greater. Whilst Africa's capacity as a whole has increased considerably in the last few years, with more than 30 Tier III facilities coming online since 2016, this is unevenly distributed, so that more developed countries represent the majority of this. As the report continues, of Africa's eight-odd metropolitan areas with a population of more than one million, only a third have at least one built-for purpose data centre facility at Tier III standard.

Xalam Analytics and Africa Data Centres Association suggest that Africa

will need up to 700 additional facilities at an average of 3MW to hit South African and Indian benchmarks. This is a tall order but is essential to reducing latency, optimising intra-African traffic flows and slashing operating costs in the African economic supply chain. In recent months, a number of developer and operators have been attempting to meet this growing demand.

Paratus Group

To add to their data centre operating in Angola since 2019, Paratus Group has unveiled its newly constructed facility in Lusaka, Zambia.

Marius van Vuuren, MD of Paratus Zambia, said, "We have really pushed the boundaries for this data centre, and we have ticked every box of requirements and assurances. We will store and protect client data 24/7; house and physically protect all equipment and computer systems; handle the off-site migration; and offer an array of add-on services and features."

Paratus Group will also soon open a data centre in Namibia, which will be Tier III by design and incorporate green building design elements to reduce environmental impact.

Raxio

The Raxio Group (Raxio), has announced that it is establishing and investing in 'Raxio Mozambique' with a first carrier-neutral data centre in Mozambique. The facility, which is set to be commissioned during 2022, will be located approximately 20 km from downtown Maputo at the Beluluane Industrial Park.

In line with Raxio's other facilities across the continent, the data centre will be fully equipped with the industry best in cooling technology, security, caging, AC/DC power compatibility and redundancy in a 99.982% uptime environment. Customers will be able to cross connect with local and international carriers and other customers in specially designed meet-me rooms. The company also expects all power used by the facility to come from renewable sources, with a combination of hydro-generated grid power and a local solar supply.

Raxio Mozambique's facility in Maputo is the fourth data centre in the Raxio Group's growing portfolio, which includes Raxio Uganda, Raxio Ethiopia, and Raxio Kinshasa, in the DRC. Raxio's planned investment in the Ivory Coast later this year will

establish a strong foothold in francophone West Africa, and serve as a hub for the region, while its expected investment in Tanzania will consolidate its position in East Africa. The Group expects to complete up to 10-12 data centre investments across Africa to meet the increased demand for high quality local storage and data hosting in the region.

Africa Data Centres

Africa Data Centres, part of the Liquid Intelligent Technologies Group, has the honour of managing the Lomé Data Centre, the first of its kind opened in Togo.

President Faure Gnassingbé inaugurated the complex (which was funded by a US\$30mn loan supplied through the World Bank's West Africa Regional Communications Infrastructure Program) capable of housing state databases, public and private websites and cloud services. It is equipped with computers, storage arrays, servers, routers, switches, and network interface controllers. The facility has been under construction since 2019 and its completion has been touted as the start of the country's digital sovereignty. ■



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Data hosting and collocation services at Galaxy Backbone's Tier III data centre

Galaxy Backbone continues to provide effective communication services in a challenging environment.

In a nation where power is still a major issue and has caused a lot of businesses to lose revenue, reduce their potential to deliver more services or in some cases send them out of the market, Galaxy Backbone (GBB), a limited liability company set up by the Federal Government of Nigeria, has stood firm in the last 10 years as it has managed its data centre in such a way that it has never been down for even a second.

GBB moved from its Tier II data centre to a world class Tier III data centre in 2017, and has continued to deliver exceptional services to the public and private sector organisations it serves. One of the major functions GBB performs beyond ensuring connectivity and effective communications across public institutions is in the hosting of government data.

This sensitive role has been played successfully over the years in a secure and highly efficient environment. As custodians of data for the government and for some of



Customers can host data or collocate servers at the GBB Tier III data centre which is secure and accessible.

Image Credit: GBB

“ Regarded as one of Nigeria’s critical pieces of infrastructure, the GBB Tier III data centre is the only one of its kind within the nation’s public sector.”

Security Management Systems (ISMS), Service Management System and the Payment Card Industry Data Security Standard (PCIDSS) certifications amongst others. Consistently maintaining these global standards continues to be at the forefront of its operations so that customers are happy with services being provided.

Instead of taking data out of the country, customers can host data or collocate servers at the GBB Tier III data centre, which is secure and accessible. Data centre and network experts and engineers are always available to ensure effective monitoring and prompt resolution of possible issues when they occur.

Also, business continuity, disaster recovery storage as a service and security as a service solution are provided to the growing list of customers through the help of global and local partners. ■

Image Credit: GBB



Experts and engineers are always available to ensure effective monitoring and prompt resolution of possible issues when they occur.

the private sector organisations they work for, the company consistently ensures the principles and processes of managing data centres globally is strictly adhered to.

GBB's Tier III data centre
Regarded as one of the Nigeria's critical pieces of infrastructure, the GBB Tier III data centre is the only one of its kind within the nation's public sector and was recently commended (at the annual Beacon of ICT Awards) as the 'data centre with the largest certification in Nigeria'. The data centre is annually recertified with the Information

A strategy to power Africa

A new scientific article, published by The International Institute for Applied Systems Analysis (IIASA), outlines how to undertake the much needed expansion and modernisation of Africa's electricity sector.

Over the last decade, efforts to expand Africa's energy sector have been redoubled and yet, despite this, at least 250 million people in Africa still live without electricity. In order to meet the demands of a rapidly growing population, a major transformation is still required.

According to new research, published in *Science*, five sets of complementary actions could help put Africa's electricity sector on track to sharply increase electrification rates and secure long-term access to affordable and cleaner energy.

These recommendations include:

- Introduction of a combination of supply-side incentives and demand-side subsidies to help expand electricity markets.
- Digitalisation of energy sector planning and management tools to help deliver energy at the right time, in the right place, at the lowest cost.
- Integration of local content requirements in renewable energy policies, to capture employment benefits, and ensure that state-of-the-art technologies are fully adopted by African countries.
- Strengthening and expansion of regional power pools through African-led international partnerships to expand electricity access and reduce electricity bills.
- Expansion of investments in off-grid and interconnected clean-energy mini-grids to account for the different socioeconomic realities across urban, peri-urban, and rural areas.

Sustainable Development Goals

The IIASA article continues by noting that achieving universal access to clean and affordable energy, as



At least 250 million people in Africa still live without electricity.

Image Credit: Adobe Stock

outlined in Sustainable Development Goal (SDG) 7, is a precondition for reaching most of the other 16 SDGs. Access to energy positively affects everything from health, the fight against poverty, pollution, opportunities for education, and climate action.

"Investment in, and integration of, clean energy across Africa can enable the full suite of SDGs and make the future of the continent one that facilitates equity and climate justice. But there is a need for international support and

partnerships to ensure funding in the information systems required to make this happen," commented Daniel Kammen, chair of the Energy and Resources Group at the University of California.

An independent champion

Power, agency, and politics play out in ways that are not necessarily conducive to meeting key societal goals related to environmental quality, employment, and equity. Specifically, the article lists incumbents in the energy sector

resisting change, information asymmetries among different stakeholders invariably punishing prospective new entrants in the energy sector, and priorities and procedures on the part of bilateral and multilateral lenders that are unduly rigid.

The authors conclude that an independent entity is needed to champion a transformative expansion and modernisation process for the African electricity sector – a process that is not captured by short-term agendas or the interests of any one stakeholder group.

"The time is right. Earlier this year, the African Single Electricity Market was launched. We need to capitalise on the opportunities it offers to leapfrog to an electricity sector for the future. Africa has the energy endowment to do so, and the technologies are there," said Yohannes Hailu, an economic affairs officer for the United Nations Economic Commission for Africa. ■

“ There is a need for international support and partnerships to ensure funding and investment in the information systems required to make this happen.”

DANIEL KAMMEN, CHAIR OF THE ENERGY AND RESOURCES GROUP AT THE UNIVERSITY OF CALIFORNIA

Bboxx and Geocoton Advens Group partner to bring clean energy to Burkina Faso

Bboxx, a next generation utility, is partnering with agriculture company Geocoton Advens Group to bring clean energy to Burkina Faso. Together they are targeting energy provision in the established cotton farming market, the wider value chain and distribution networks within these communities, and the broader Burkina Faso population.

The Burkina Faso Government has ambitious plans to ramp up energy access, with electrification rates currently at 18%, falling to 5% for the rural population. Through this partnership, Bboxx and Geocoton Advens Group aim to bring access to clean, reliable and affordable energy to two million people in the country. They will employ more than 500 people locally, spurring economic development and local opportunities.

As well as its Pay-As-You-Go (PAYG) Solar Home Systems (SHS), Bboxx will look to introduce additional services in the future such as PAYG LPG clean cooking services and solar-powered water pumps for farmers.

Mansoor Hamayun, CEO and co-founder of Bboxx, commented, "While energy access rates in Burkina Faso are very low, the potential to positively impact people's lives for the better through clean energy is immense. Forging strategic partnerships is core to how we bring together the financing and momentum required to provide millions of people with much-needed clean energy. This market entry is the first of many, and we've got an exciting pipeline of activity ahead of us on our mission to transform lives through access to energy."

Karim Ait Talb, COO of Geocoton Advens Group, said, "The Geocoton Advens Group is delighted to diversify with its partner Bboxx in the provision of solar energy. This aligns with our desire to improve the living conditions of village cotton producers. Providing renewable energy to the rural population is a major challenge, so it is important we take advantage of the technological progress by Bboxx."

"Together we will help to tackle the challenges faced by many in Burkina Faso. We are also looking forward to expanding our partnership with Bboxx into other countries."



Image Credit: Bboxx

The partnership will bring clean energy to rural cotton producers.

PROJECT TO CONNECT 55,000 PEOPLE TO ELECTRICITY IN NIGERIA

PowerGen, the leading developer in Africa of on-grid and off-grid distributed energy, has secured long term project financing to connect 55,000 people to electricity in rural Nigeria from CrossBoundary Energy Access, with US\$9mn construction financing provided by Oikocredit, Triodos Investment Management (Triodos IM) and EDFI Electrifi (the EU-funded Electrification Financing Initiative). The project is supported by grant funding from the World Bank and the Nigeria Rural Electrification Agency's Nigeria Electrification Project (NEP).

The electricity will be provided by 28 distributed renewable energy (DRE) systems, designed as solar PV and battery-powered mini-grids. Once operational, CBEA will become the long-term owner of the systems. PowerGen will build the systems and continue to act as the long-term operator of the project after the transfer to CBEA.

The transaction is facilitated by CBEA's project finance structure, which proves a model for bringing long-term infrastructure capital into the mini-grid sector at scale.

The project will serve a base of residential, commercial and productive use customers. PowerGen has already commissioned six sites, including the pilot site, Rokota.

Alastair Smith, co-founder and country director of PowerGen in Nigeria, said, "We're very excited to continue scaling up distributed renewable energy systems in Nigeria in partnership with Oikocredit, Triodos IM, EDFI Electrifi, and CBEA."

"With their support, alongside that of Nigeria's REA, the World Bank, Power Africa's Nigeria Power Sector Program, and the communities themselves, we are eager to continue transforming lives through smarter power."

VOITH HYDRO REFURBISHES GENERATORS

Voith Hydro, part of the Voith Group, has modernised three generators of the Drakensberg pumped storage power plant, South Africa's second largest pumped storage facility, and successfully put them back into operation. The generators in the underground power plant, which has a total installed capacity of 1,000 MW and has been in operation since 1981, are now designed for another 40 years of operation.

"We were able to reduce the operating temperatures and vibrations of the machines, so that their lifetime has been significantly increased," said Anton Harris, managing director at Voith Hydro in South Africa.

Pumped storage power plants contribute considerably to grid stabilisation. They react quickly to fluctuations by generating required energy or storing a surplus.

The company received the order, including design, installation and commissioning, back in 2016. A special feature was that all works were carried out during normal plant operation of customer Eskom.

► BRIEFS

Mammoet supports wind farms



Image Credit: Mammoet

The laydown area.

Mammoet South Africa has supported construction of three wind farm projects in South Africa: Roggeveld, Garob and Copperton.

Contracted by global logistics company Drewes Group, Mammoet's scope for these projects included the receiving, port handling and transport to laydown area of components for 127 wind turbines. Once in operation, the wind farms are expected to generate more than 1,000 GWh of electricity.

Zest WEG launches new motor



Image Credit: Zest WEG

The new IE4 motor.

Zest WEG Group has introduced the WEG IE4 super-premium efficiency motor, which is available across its WEG W22 range either directly from the company, or from one of its Value-Added Resellers across the African continent. The WEG IE4-rated motors are more cost effective to run, and are available in the size range between 37 kW and 330 kW. The innovative frame design allows maximum heat dissipation. The IE4 motor is fully interchangeable with the existing IE3 motor.

DRC Minister of Hydrocarbons to speak at AEW

H.E. Didier Budimbu Ntubuanga, Minister of Hydrocarbons for the Democratic Republic of the Congo (DRC), has been confirmed as a speaker for African Energy Week (AEW) 2021 and will use the platform to showcase the significant oil, gas and renewable potential of the DRC.

The DRC holds the second largest crude oil reserves in central and southern Africa after Angola, with proven reserves sitting at 180 million barrels while estimated reserves are as high as five billion barrels. Primarily located in the four major lakes, these reserves have the potential to dramatically increase production and exports, initiating sustainable economic development for the region.

In addition to significant oil reserves, the DRC has approximately 30 billion cubic metres of methane and natural gas. With little to no development in this field, the DRC has the opportunity to leverage these resources for power generation, with methane in particular providing a unique power opportunity.

The DRC also holds some of the largest hydropower potential in Africa – estimated at 100,000 MW – leading to a renewed focus to further capitalise on its significant resources through the expansion of existing hydroelectric facilities.

By showcasing the immense potential of the DRC energy sector in Cape Town, H.E. Minister Ntubuanga will take the opportunity to engage with investors, financial institutions, and private sector executives, and drive growth across the country's burgeoning energy sector.



Image Credit: African Energy Chamber

Democratic Republic of the Congo's Hydrocarbon Minister H.E. Didier Budimbu Ntubuanga.

AFDB TO PROVIDE RECOVERY CAPITAL TO ENERGY ACCESS BUSINESSES

The African Development Bank (AfDB) has reached financial close on financing agreements for a US\$20mn concessional investment from the Sustainable Energy Fund for Africa (SEFA) for the Covid-19 Off-Grid Recovery Platform (CRP).

The concessional loan agreements were signed with fund managers Lion's Head Global Partners, Triple Jump and social investment managers and advisers, following approval by the board of directors of the AfDB in December 2020 for a US\$20mn concessional investment from the Sustainable Energy Fund for Africa (SEFA), to establish the platform.

The platform supports businesses commercialising solar home systems, green mini-grids, clean cooking, and other renewable energy access solutions in mitigating the impacts of the pandemic and ensuring a robust commercial recovery of the industry.

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Action agenda for renewable energy in Africa

Barry Mansfield looks into the continent's latest renewable energy projects, including Ivory Coast's plans to construct a biomass plant that runs on cocoa waste.



Cocoa waste can be burned to power a turbine and generate electricity.

Image Credit: Adobe Stock

Cocoa waste is set to become an important part of Ivory Coast's move to renewable energy. The country plans to construct a UK£173mn (approximately US\$235mn) biomass plant in the southern city of Divo that runs partly on bean shells, pod husks and cocoa sweatings (a yellowish by-product of fermentation that is usually discarded). This technique will see cocoa waste burned to power a turbine and generate electricity, much like a conventional power plant.

The new facility, developed by Soden with support from the US Trade and Development Agency, should be completed by 2023. It will generate up to 70 MW of electricity annually - enough for 1.7 million homes.

But the plans do not end there — Soden intends to build nine other similar plants nationwide which will be placed in cocoa growing regions where the waste material is in

abundant supply. It is hoped that this new drive to turn cocoa waste into energy will help reverse the fortunes of the nation's 600,000 cocoa

“Soden intends to build nine other similar plants nationwide which will be placed in cocoa growing regions where the waste material is in abundant supply.”

farmers, as many have seen their margins squeezed in recent years (mainly due to an oversupply of cocoa, causing them to switch to more profitable crops like rubber or banana).

A community cooperative will help local farmers save money and access loans, as well as receiving dividends to support their families and businesses.

Ivory Coast is not the only cocoa producer to put its waste to use in this way. In Ghana, cocoa husks are now used to generate power on a micro-scale after researchers at the University of Nottingham developed a small 5 kW husk-burning generator. Supported by the Bio-Rural Energy Scheme (IBRES) and the UK's Global Challenges Research Fund, they have been exploring ways of bringing power to the country's rural areas, where only 50% of people have access to electricity.

Fortune would have it that Ghana is currently the second highest cocoa producer worldwide, with every 900 kg of cocoa beans harvested yielding well over 9000 kg of cocoa pod husks. Plans are also afoot to convert husks into biodiesel.

African solar wave set to break

The Africa Solar Industry Association reported nearly 2 GW of large scale project announcements since the beginning of June this year, with 18 countries planning new clean power infrastructure and energy storage facilities. Many are aiming for greater self-sufficiency.

For example, Cameroon's recently completed 10 MW Lavusima solar PV plant, the country's very first grid-scale solar utility, was built to reduce the country's energy dependence on neighbouring states like South Africa and Mozambique. As for South Africa itself, Norwegian developer Scatec

has been awarded projects to deliver 540 MW of solar generation and 1.14 GWh of storage to address grid failings.

In early August, Solarcentury Africa and Gaborone-based Shumba Energy signed a partnership agreement to jointly develop solar power sites across southern Africa, including a 100 MWp facility on 300 hectares of land in Tati, Botswana.

Solarcentury Africa itself is now gearing up to embark on much larger-scale, grid-tied solar projects, having just been acquired by British oil and gas trader BBE. The solar power provider already boasts an installed capacity of 2.1 GW, mainly provided to mining operators and large commercial and industrial clients in Africa — and the company will be looking to build on this rapidly.

In July, Botswana's Sturdee Energy revealed its plans to invest US\$5mn in the construction of two

large solar plants at Bobonong and Shakawe with a combined capacity of 4 MWp. The electricity generated by the former will feed into Botswana's grid from a 66/33 kV substation, while the northern Shakawe plant (with capacity of 1 MWp), will feed into the grid from a 33/11 kV local substation.

Gaining autonomy from South Africa is the objective, since Botswana is limited to 450 MW of installed capacity from Morupule's B coal-fired station. Current demands reach 550 MW, with Botswana importing the remainder from South Africa, a country that faces load shedding.

Perfect fit

According to the Solar PV report by the International Renewable Energy Agency (IRENA), installed costs for power produced by utility-scale solar PV on the continent have plunged by 61% in the last decade to US\$1.30 per watt, compared to the worldwide average of US\$1.80 per watt.

Mini-grids utilising solar PV bring more dependable services at a similar or even lower cost than alternatives — often as low as US\$1.90 per watt for installations above 200 kW. An off-grid residential solar system can satisfy the householder's electricity needs for as little as US\$56 annually, which is lower than the average price for often substandard services provided by local utilities. ■

“An off-grid residential solar system can satisfy the householder's electricity needs for as little as US\$56 annually, which is lower than the average price for often substandard services provided by local utilities.”



The Africa Solar Industry Association reported nearly 2 GW of large scale project announcements since the beginning of June 2021.

Image Credit: Adobe Stock

The key to powering Africa?

With so much of the African population living in energy poverty, the answer to lighting up the continent could lie in a combination of smart grids and vanadium energy storage solutions. Robert Daniels reports.

There have been many solutions suggested to help mitigate the energy deficit problem in Africa, but one that has recently garnered much attention is the introduction of mini- and smart grids which could prove vitally effective if used in conjunction with cutting-edge battery technology.

Smart grids help ensure reliable and secure electricity through the combination of new technology and practices. The inter-connected elements are monitored to enable two-way communication between the utility and customers and ensure optimal electrical usage. The benefits, such as more efficient energy transmission, reduced peak demand, reduced management costs and therefore lower prices for consumers, are enormous and could help underserved Africans access affordable and reliable electricity.

Vanadium batteries

Alongside the rise of such grids, is the need for effective connected energy storage systems to allow for time and peak shifting, enhance the quality of power and ensure a continued and sustained energy supply in case of network disruptions. This market has of course been dominated by traditional minerals used in batteries such as lithium, but this is a competitive and still nascent field, giving rise to new technology, and one that is gaining a lot of excitement for international and African applications is vanadium batteries.

Bushveld Energy, a subsidiary of Bushveld Minerals, is a company which was launched to develop and promote Vanadium Redox Flow Batteries (VRFB) into the energy storage market. The company explained to *African Review* that



Bushveld Energy will start construction at the Electrolyte manufacturing plant in 2021 at Eastern Cape, South Africa.

Image Credit: Industrial Development Corporation

with most electrochemical batteries, the chemistry of the battery degrades from use/cycling, whereas this is not the case with their VRFB technology. Because of this, the limit on cycles is infinite and the lifetime is only limited by wear and tear on components (so is given a usual limit of 20-25 years). If a consumer had a use case that could fit three cycling charges per day, a 25 year lifetime means that they could use more than 27,000 cycles from one system.

The company also explained why

they believed mini and smart grids were an excellent fit for the African continent, which in many regions lacks electrical infrastructure such as transmission wires etc. VRFB can be used in minigrids to provide electricity when disruptions occur and, when used in conjunction with solar power, it can help provide round the clock, clean and reliable power to businesses and people across the continent.

This is why the company invested in CellCube, an expert in incorporating energy storage

systems into minigrids. In one case example on Kitobo Island in Lake Victoria, Uganda, four CellCube FB 15-130s were used in conjunction with solar power to help generate power for more than 2,000 citizens. Bushveld Energy is now building a solar and VRFB minigrid at one of its Group's mines in South Africa.

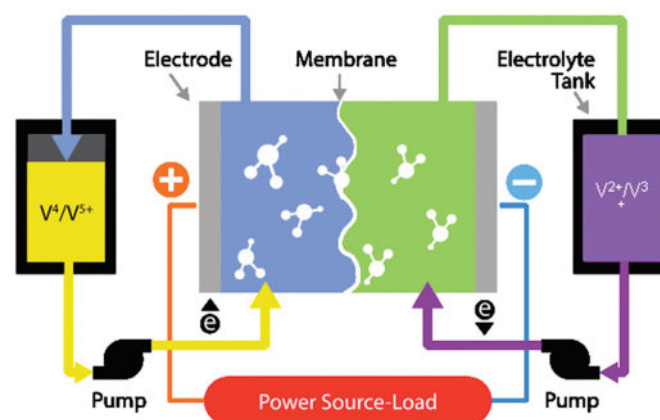
Spreading the message

Vanadium-based technology is on the rise, but it has a way to go in terms of uptake, and Bushveld Energy believes the main thing holding it back is simply a lack of awareness that renewable energy and long duration storage minigrid solutions are available already.

The company noted there are minigrids in Africa that are currently relying on diesel or heavy fuel oil which is both expensive and has an enormous carbon footprint. The introduction of solar power on its own will only displace 20-30% of the energy from these fossil fuels.

Additionally, short duration batteries, which are being included with PV, only cover the energy fluctuations and ramp rate required to switch between PV and gensets. However, solar power deployed in conjunction with long duration batteries such as VRFBs (alongside diesel gensets to cover days when there is limited sunlight) could allow for much more solar generation during the day, since these batteries could then shift that energy into the night time. It could also reduce diesel used by 70-90% (depending on the location and design).

While this is currently more expensive upfront to build, it means much lower emissions and, importantly, lower lifetime energy costs, which could help make electricity much more accessible to people across the continent. ■



Overview of Vanadium Redox Flow Battery Technology.

Image Credit: Bushveld Energy



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By developing a balanced thermal portfolio, the power system will be capable of integrating a high level of renewables.

The need for flexible power plants

Yusuff Wale, managing director, Wärtsilä Marine & Power Services Nigeria Ltd, says that without flexibility, Nigeria will face difficulties integrating large amounts of renewable energy into the grid.



Image Credit: Adobe Stock

As the largest economy in Africa, with huge gas reserves and high solar energy potential, Nigeria has all the natural resources necessary to meet the growing demand for electricity. However, the inadequate energy infrastructure still leaves a significant part of the population without power, or relying on oil-fired back-up generators. If Nigeria can improve its energy infrastructure and unlock its gas-to-power generation potential, it paves the way to integrating low-cost renewable energy, bringing electricity and development opportunities to rural villages, driving industrial growth and employment, and increasing prosperity across the country.

There is no doubt that gas has an important role to play in meeting Nigeria's electricity demand, but to achieve this, there is an urgent need to reform the gas and electricity sectors. The poor condition of the gas transmission and distribution

system is a major constraint, as domestic supply shortages and insufficient pressure severely affect the reliability of the power supply. Poor planning has resulted in stranded generation assets and transmission bottlenecks. Inadequate maintenance of an ageing and inefficient infrastructure means that peak generation is well below its full potential. Without structural reforms and integrated energy planning, the ability to meet the growing electricity demand is challenging.

However, advanced power system modelling, which helps to identify the lowest total cost energy solution while considering system constraints, shows that Nigeria is indeed in a position to achieve its ambitious targets by 2030. By developing a balanced thermal portfolio combining baseload gas and flexible gas power generation, the power system will be capable of integrating a high level of renewables and operating

efficiently. But significant flexibility needs to be built into the power grid, to make it capable of responding to daily variations in demand and withstanding the intermittent nature of renewables.

Not all gas-fired power plants are the same

Even if from a pure cost perspective, reciprocating gas engine and combined cycle gas turbine technologies offer comparable results. Gas engine technology adapts faster to balance the intermittency and unpredictability that characterise the addition of renewables into the power generation mix, and thus facilitates their growth and integration into the system. In addition to being robust and versatile to manage the current generation and transmission side disturbances in an efficient manner, there are three important advantages that international combustion engine (ICE) technology offers for the future; the first is

flexibility, the ability to quickly adjust load in response to supply fluctuations from renewables; the second is modularity – gas engine plants can be sized to requirements, for a city, for manufacturing industries, or for local micro-grids; and the third is low water consumption, which is an important consideration in view of Nigeria's long dry seasons.

To maintain a balanced system, flexible forms of electricity must be available to ramp up output at the same rate that wind or solar output fluctuates. Systems need to respond across different timeframes, from seconds, to minutes. This is not the case for conventional power plants based on combined cycle gas turbine technology which can take several hours to reach operation at full capacity. Even if gas turbines can provide some level of flexibility by being run at partial load, this mode of operation is inefficient, driving up costs and carbon emissions.

On the other hand, flexible gas engine power plants are the perfect ally of renewable energies. Made up of multiple engines which can be fired-up instantaneously, these plants offer a large range in power supply availability which complements renewable energy without sacrificing efficiency. If a sudden rainstorm, for example, cuts the supply of solar energy and drives up electricity demand as lights are switched on, a number of internal combustion engines can be turned on within minutes to supply the required electric demand. They can be turned off just as quickly when the storm passes.

Expert studies conducted around the world show that flexible power

“Gas engine technology adapts faster to balance the intermittency and unpredictability that characterise the addition of renewables into the power generation mix.”

plants based on internal combustion engine technology can unlock the full potential of renewable energy assets in the fleet, generating annual cost savings above 5%, reducing CO2 emissions, as well as reducing overall water consumption. Indeed, flexible power plants

consume nearly 50% less water than similarly sized combined cycle gas turbine plants and 75% to 85% less water than a coal or nuclear plant with cooling towers. In a context of global warming and hydric stress, water consumption is a parameter that cannot be ignored.

For the country to successfully integrate the planned addition of ~3.5 GW of Hydro and ~5.2 GW of solar projects into the grid by 2030 and increase access to affordable and reliable electricity, a balanced power generation mix will be required. Gas is abundant, affordable, and offers a clear solution to meet the growing power demand in Nigeria. But most important is the need for long-term integrated energy planning. By deploying an integrated energy strategy with a focus on flexibility, Nigeria has what it takes to achieve a successful energy transition. Without it, Nigeria's power sector will most likely remain inefficient and unreliable. ■

LEADING THE TRANSITION TO ECO-FRIENDLY FUELS IN WEST & CENTRAL AFRICA

As countries in West and Central Africa face a rising demand for power, fuelled by growing populations and industry, there is an opportunity to introduce an improved energy mix to aid them on their journeys to reduce carbon emissions.

According to Kweku Frempong, recently appointed as area general manager for West and Central Africa (WACA) at Aggreko, it is critical for countries to look at flexible commercial and technical solutions that incorporate a mix of thermal and renewable resources.

“As Aggreko we are leading the journey on transitioning to more eco-friendly fuels to generate electricity,” he says. “As a global organisation we have already made a commitment to reduce our carbon emissions and use of diesel fuel with customers by 50% by 2030 and achieving net-zero across our fleet by 2050. We are also working closely with our partners to deliver flexible and cost-effective financing models for most of our customers, as a sustainable financing model is a key ingredient in solving the energy issues in the region.”

Kweku adds that along with the move to using alternative fuel sources in the region, there is also an aggressive push for decentralised power on the continent, especially in remote areas with small populations where it is not cost-effective to connect them to the grid. “We have seen growth in micro and mini grids in most parts of Africa and this is playing a critical role in ensuring energy security and supporting failing infrastructure.”

Countries such as Cote d'Ivoire, Ghana and

Nigeria have long faced long periods with no investment in the grid and transmission and distribution lines.

“The lack of investment into the grids in these countries have led to a lot more power outages,” Kweku says. “It is estimated that there is a 60% funding gap between the current demands and the funds available to bridge that gap. I must add, however, that we are beginning to see changing economic models and structures, with more countries moving to service and cost-reflective tariffs. Historically, we have lived with energy subsidies from government in most parts of Africa, but these cost-reflective tariffs will open up most of these economies for the funding that is required.”

Kweku says another noticeable trend is that of regulatory changes around decentralisation. “We are seeing a lot of economies moving to a willing seller, willing buyer model. We saw this recently in South Africa and Nigeria, where the countries have relaxed the traditional models of transmission and distribution to the consumer, as well as to key sectors such as manufacturing and mining who have significant power needs. They can now also contract directly with independent power producers (IPPs) to meet their power demands, which in turn opens up these economies for private sector investment in the power sector.”

He says that while it was anticipated that Africa would leapfrog into renewables, the transition has been modest to date. “Often where the demand is urgent, countries look for immediate solutions, which is often thermal.

While there are strategies for the long-term transition to renewables, many countries remain focused on addressing the immediate need, and this sometimes puts renewables on the backburner. There is, however, scope to move along this journey faster than anticipated. As more countries affirm their commitment to the 2030 ambitions and 2050 net zero emissions, we hope to see funding made available for large-scale hybrid projects. While we have already seen this happen in countries such as Egypt and South Africa, there is still a need to rebalance between the immediate need for power for the population while also looking at the long-term solutions for renewables.”

“As Aggreko we have become more focused on long-term power solutions rather than temporary solutions,” concludes Kweku. “We are equipped with commercial and technical solutions, which can be used to alleviate the immediate pressures that countries are facing, while helping our clients transition to medium and long-term solutions to help them toward their long-term renewable goals.

“We are clear on our commitment to reduce our diesel footprint by 2030 and can work across industries including data centres, mining companies, manufacturers and those in the oil and gas sector, to provide them solutions that incorporate other fuel sources to reduce their carbon footprint. We can assist with a variety of hybrid solutions incorporating flare to power and renewables to support the economies in the region as well as industry towards their long-term renewable goals.”

Underground tunnelling at LHWP II diversion tunnels makes progress

Construction of the Polihali diversion tunnels on Phase II of the Lesotho Highlands Water Project has reached another milestone, with excavation inside the two tunnels reaching substantial completion in June 2021.

Excavation at the intake and the outlet portals of the two Polihali diversion tunnels was completed in August 2020. Erosion control and flood protection work on both the inlet and the outlet portals have been completed, with excavation inside the diversion tunnels advancing from the outlets at the rate of about five metres per tunnel per day. The inside walls of both tunnels have been lined with concrete for approximately 35m from the upstream end. Floor lining is halfway through completion and will cover the full length of the tunnels. Construction of the intake structures is in progress.

“The construction team encounters challenges resulting from geology, groundwater and Covid-19 restrictions. Despite the contractor having to work with reduced staffing per shift, and the flooding of the works earlier this year, much has been accomplished,” stated Ntsoli Maitetso, LHDA (Lesotho Highlands Development Authority) Phase II divisional manager.

The Polihali diversion tunnels are excavated by drill and blast method and are supported by rock bolts and welded mesh reinforced shotcrete. The two tunnels, seven metres and nine metres in diameter respectively and almost a kilometre in length each, run parallel to each other from the intake portal to the outlet portal. They will divert the waters of the Senqu River away from the natural river bed to create a dry foundation and work area needed for the construction of the Polihali Dam.

Ntsoeleng Mohale, the chief resident engineer from Metsi, a Senqu-Khubelu Consultants Joint Venture (MSKC), indicated that the construction of the diversion tunnels is approximately 85% complete, with the breakthrough projected at the end of August 2021 and overall completion planned for the end of this year.



The construction of the diversion tunnels is around 85% complete.

Image Credit: Adobe Stock

LOW-COST HOUSING MODEL FOR SIERRA LEONE

Jobomax, West Africa's leading homebuilder, has announced their first model in the critical US\$10,000-US\$20,000 price range in Sierra Leone. With these projects, Jobomax aims to grow and develop its Guinean-based business staff, increase its local labour force, and create cost-saving building innovations.

Jonathan Halloran, co-founder and CEO, said, “The new US\$10,000 starting price means we expand our ability to serve much more of the local market in West Africa. Our new two-bedroom, one-bath house is our first real mass-market offering and is a natural extension for Jobomax. We are proud of our team's incredible work in establishing a local business that builds to international standards.”

Co-founder and chief financial officer Robert Hornsby added that the company is looking forward to working with local financial partners to serve local resident buyers in West Africa with a combination of housing products and housing finance services that expand the notion of what 'affordable' can mean for them.

Senior vice-president of Finance, Alex Tounkara, said, “This new model takes us one step closer to significantly tackling the West African housing crisis and moves us squarely into the sweet spot for institutions looking to impact affordable housing in Africa while also having the comfort and benefit of working with an experienced management team and institutionally managed business.”

Jobomax plans to start offering this model as part of a new low-cost project in suburban Freetown, Sierra Leone. The development is near Jobomax's existing, mid-level housing development in Newton. Each semi-detached home will feature integrated, independent solar power driving a smaller carbon footprint than traditional reinforced concrete builds.

NEW AIRPORT COMMISSIONED IN ZAMBIA

Zambia has commissioned a new international airport financed by China, reports xinhuanet.com. President Edgar Lungu said that the Simon Mwansa Kapwepwe International Airport, financed by the Exim Bank of China and designed and built by the AVIC International Holding Corporation, will play an important role in facilitating the country's tourism and industrialisation agenda as well as in elevating the development agenda to another level. The project will help to transform the country through infrastructure development and reposition it as a major aviation hub in Africa, he commented.

“My government is fully committed to driving the country's development agenda and harnessing the country's economic potential. Today marks a key milestone in the transportation sector and the aviation sub-sector, in particular, as we continue on our journey to repositioning Zambia as a major aviation hub in Africa,” he said during a ceremony for the commissioning of the airport.

BRIEFS



The road will be expanded into a three-lane expressway.

UK support for Ghana road

The UK's export credit agency, UK Export Finance (UKEF) has agreed to provide support to Ghana's Ministry of Finance and Economy and the Ministry of Roads and Highways for upgrading a 17 km stretch of the existing Tema-Aflao Road in the greater Accra region of Ghana.

BHM Construction UK Limited will supply design and construction services. The project will convert the existing single carriageway into a three-lane expressway.



The construction sector could find itself short of workers.

Need to prioritise retention

Njombo Lekula, Southern African managing director of Pretoria Portland Cement (PPC) has said that South Africa could find itself short of skilled construction workers in the next decade unless retention and skills transfer are prioritised, according to a report in News24.com. Speaking at a PPC roundtable on localisation, he explained that South Africa's construction industry is losing skilled workers to other countries, while young people are choosing not to study construction.

BAUER Maschinen GmbH presents the innovative BAUER Cube System

As part of their BAU ERLEBEN days in July, BAUER Maschinen GmbH presented the BAUER Cube System, which will open up new possibilities for the production of diaphragm walls.

The innovative milling system was developed together with a strategic partner, the Belgian tunnelling expert Denys.

"It is designed as an electrically driven milling system that contains a lot of proven BAUER know-how, but which has been completely rebuilt," explained Dr. Rüdiger Kaub, managing director of BAUER Maschinen GmbH. The whole system was developed exactly to the dimensions of the container. This means that it can be used without problems in micro-tunnels with a diameter of just 3.8m, for example.

The underground expansion of cities, the construction of drinking water storage tanks or the relocation of cloud servers including the necessary cooling technology underground are possible uses.

The system sets new standards of sustainability, with the effects of construction sites on traffic, shops and, above all, residents reduced to a minimum, since the minimally invasive cube system needs a comparatively small access to an already existing micro or auxiliary tunnel. The actual



Image Credit: BAUER Maschinen GmbH

The BAUER Cube System was developed to container dimensions.

machine technology, logistics or external influences on the construction site in advance. On this basis, many good ideas have already flowed into the system at an early stage of development."

The first successful tests of the prototype under the most realistic conditions possible on the BAUER factory premises in Arising near the company headquarters in Schrobenhausen have already been completed. This test phase will now be continued over the next four to six months, with the practical application expected to take place towards the end of 2021.

Further information, impressions and videos can be found at <https://cubsystem.bauer.de/>

Image Credit: BAUER Maschinen GmbH



Dr. Rüdiger Kaub officially presented the new BAUER Cube System in early July.

work takes place underground, invisibly, so to speak. The electric drive also significantly reduces the environmental impact of a milling construction site. The compact dimensions of the system also offer a great advantage from a logistical point of view: Instead of laborious, heavy transport, the individual elements of the BAUER Cube system are easily transported to their place of use as standard containers.

"I would like to highlight the trusting and very constructive cooperation with our strategic partner Denys as well as with our in-house specialists," said Rüdiger Kaub. "This cooperation provided important input in the development phase in order to examine almost all aspects of process and

Image Credit: BAUER Maschinen GmbH



The minimally invasive BAUER Cube System reduces the surface impact of cutting sites to a minimum.

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Supporting big construction

Modular formwork and sophisticated scaffolding systems are crucial enablers for some of the most demanding and high-profile construction projects in Africa. Tim Guest looks at some of the players in this space.



Sophisticated scaffolding systems are crucial enablers for some of the most demanding and high-profile construction projects, providing a temporary system that supports work crews and materials.

Image Credit: Jay Eo, Unsplash

Across Africa, from South Africa (SA) to North African markets such as Algeria, Morocco, or Tunisia, modular formwork and scaffolding systems are widely used in major construction projects. While both systems are often offered by the same specialist makers and suppliers, they have completely different uses. Manufacturers such as Acrow with its HQ in Johannesburg, and Peri in the Western Cape, as well as industrial services company and supplier Waco, which operates in countries including SA, Botswana and Ghana, and another SA lead supplier, KIT, are just some of the specialist players in this space, with the emphasis on 'specialist'. That is because the importance of formwork and scaffolding in major construction, no matter how 'temporary' systems are during a project, cannot be understated.

Formwork is employed when construction teams need to mould wet concrete or hold it in place while it hardens to a precise, desired shape, or form. It is removed once the concrete is set. For such applications it must be strong enough to withstand huge weights and forces; its additional

attributes include its re-use capability for different projects, together with ease of set-up and relative ease of dismantling and cleaning once its work is completed. Increasingly sophisticated formwork trends include the growing use of wireless concrete sensors that monitor concrete condition over time from companies like Wiehahn Formwork Solutions SA; there is also an increased use of aluminium formwork, which is safer and easier to handle, in

“The importance on formwork and scaffolding in major construction, no matter how temporary, cannot be understated.”

turn helping accelerate project timeframes.

Scaffolding, on the other hand, another temporary system, supports work crews and materials, aiding construction, maintenance and repair of buildings, bridges and other man-made structures.

Scaffolding is named after its area of application: on the front of a building, narrow facade scaffolding is used, on construction sites, working platforms are normally used, as well as reinforcement scaffold. Industrial scaffolding is the name given for providing access and work platforms on industrial installations.

Both systems use standard sections and construct that can be used for a variety of different construction projects, from road building, such as the trans-Saharan Highway, to bridges, hydro-electric sites, power stations, waste water treatment plants and more. However, versatility and value for money must not impact safety, hence products must meet stringent safety standards and be manufactured in line with relevant standards bodies to ensure quality and reliability. In SA, for example, the SA Bureau of



Image Credit: Toit Oluobode, Unsplash

Working scaffolds create higher-positioned working areas for construction site activities, on buildings as well as on industrial facilities and ensure working areas can be safely accessed.

Standards (SABS) and the National Home Builders Registration Council (NHBC) Certification, are two organisations which stamp their approval on products meeting the right standards. And while sub-standard product, supply and services can put both project and workers at risk, (as well as risking litigation should either system fail), engaging the right specialist companies can mitigate any risks. Choosing the right scaffolding and formwork is extremely important for any contractor and should be an integral part of planning any construction project.

Notable players

There are several players in this space in Africa. Waco Africa (in this instance its Form-Scaff division), recently entered into an exclusive relationship with Doka GmbH of Germany, one of the most technologically advanced formwork companies in the world, giving Form-Scaff sole distribution rights across sub-Saharan Africa and the Indian Ocean Islands and, reportedly, making Waco Africa the largest formwork provider on the continent in terms of presence and capacity through Form-Scaff, which will work with Doka as its engineering and technology partner. Doka’s relationship with Waco Africa has given it access to a continental

footprint that covers more than 30 branches in nine sub-Saharan countries and the chance to draw on Waco’s more than 57 years of African project experience and engineering expertise. Form-Scaff has integrated Doka’s existing SA branches located in Johannesburg, Cape Town and Durban, as well as the Mozambique and Nigerian operations into its own branch network, extending its overall African footprint to 19 local and 13 African branches. Doka’s innovative products and systems will support Form-Scaff’s delivery of suitable, cost-effective solutions that make construction sites safer, while ensuring projects are delivered on time.

Another, SA’s KIT, formerly operated under the RMD Kwikform name, a UK-based company, which was bought out by the SA management team in September 2020. KIT continues to use RMD Kwikform products, including special and bespoke formwork system options that have been used in major projects of all kinds, including water retaining structures, tunnels and culverts, and including airport, highway, building and water treatment projects in Libya, as well as projects in other parts of Africa where its special formwork solutions have, for example, supported the building of phosphate hangars on industrial mining sites. ■

“ Doka’s relationship with Waco Africa has given it access to a continental footprint that covers more than 30 branches in nine countries.”



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More Possibilities. The Scaffolding System.

The Cat 426F2 - a superior backhoe loader

The Cat 426F2 Backhoe Loader has received a Mantrac customer's approval on price, reliability and durability.

When it comes to providing the best in class backhoe machines, you could say the Cat 426F2 is the cream of the crop. For more than 35 years, from the A series to the new F2 series, Caterpillar have been listening to their customers' feedback and designing and perfecting their machines with the operator's needs in mind. Hence, the Cat 426F2 machine truly delivers on reliability, durability and productivity.

Paul Waweru, project manager Cheriez Properties limited, Kenya, has high praise for his new Cat 426F2 backhoe loader, having switched from a competitor backhoe product to the Cat version. Working under pressure, in a challenging Kenyan housing development project, Paul said the three key things they considered when purchasing a backhoe were:

1. Price
2. 100% reliability
3. Durability

Waweru said, "We are pleased to report that across all three of these, the Cat 426F2 backhoe came out trumps. We purchased the machine over a year ago, and so far the 426F2 backhoe loader with Side Shift delivers all the power, performance and productivity we need, together with features to beat the heat and the dust and keep the operator comfortable. After all, the key to increased productivity, is increased operator satisfaction!"

Caterpillar agrees that improved productivity starts with the operator. Hence, the new 426F2 cab design is more spacious, allowing the operator to move freely when turning from one mode to another and providing comfort and ease of operation. The cab has been purpose-built for the African and Middle Eastern markets. Greater visibility is ensured with flat tinted glass and a curved front windscreen. Other cab features include easy-to-reach controls and a high pump flow superior hydraulic system, that

delivers excellent performance at the operator's fingertips.

Maximising machine performance is also simple. Product Link provides quick access to vital information such as machine location, hours worked, machine error codes and fuel burn.

Waweru reported that they found the backhoe could do even more jobs on-site than they had at first anticipated. In addition to the usual tasks such as shifting materials, digging trenches etc, Paul says the backhoe even managed to quickly and efficiently excavate over 1,500 cubic metres of bowel digester peat.

The Cat F2 series comes with an excavator style boom, which provides greater reach and digging depth. The 205° high-rotation bucket linkage ensures superior material retention and exceptional material removal when excavating. The machine's narrow 2.2m-wide frame with Side Shift offers superb manoeuvrability and performance in confined spaces. In addition, dual brake pedals also allow for split braking in tight corners for increased manoeuvrability.

Available in either two or four-wheel drive, the 426F2 features a

100% differential lock in the rear axle. This provides maximum traction in poor ground conditions, but it can equally achieve road speeds of up to 40 km/h, aided by its four speed Power-Shuttle transmission.

When it comes to service and maintenance, a flip-open hood provides easy access to all daily check points, and removable engine side panels offer access to the engine at ground level.

An externally mounted engine pre-cleaner offers quick filter servicing for customers working in dusty operating conditions, such as those in the Gulf and Middle East. The enclosed rear axle and wet multi-plate braking system also guards against the ingress of dust in the system and ensures the machine can operate reliably in the harshest conditions. And the laborious job of greasing has been eradicated with sealed for life axles.

But power alone is nothing without efficiency. Waweru said, "Not only is it versatile and easy to service and maintain, its fuel efficiency is very high. We are already seeing big returns on our investment. In one year, it saved us more than US\$2,500 in fuel alone. And our experience with Mantrac's aftersales team has been second-to-none."

Richard Maddocks, Backhoe product application specialist at Caterpillar, reports they have sold more than 1,000 426F2 machines in Africa alone, with customer feedback supporting Caterpillar's claims that the machine is easy to service, very reliable and offers fantastic fuel efficiency. ■

For more information about the Cat 426F2 Backhoe Loader, visit www.mantracgroup.com.

The Cat 426F2 backhoe loader.





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Setting the pace for the African construction market

Jaco Beyers, managing director – Africa Middle East at John Deere explains why the company is pursuing further expansion into Africa and what this means for the development of the continent.



Image Credit: John Deere

John Deere is firmly established as one of the top suppliers for agricultural equipment across the African continent and is now using this impressive foundation to expand their construction offering. In March 2021 the company announced its extension in its construction lineup to 18 countries across southern and western Africa, making available a range of Deere-branded products and providing access to the John Deere dealer network. An enormous new African customer range is now set to access the latest John Deere backhoe loaders, excavators, wheel loaders, motor graders, crawler dozers, and more, supported by trained and certified sales representatives and technicians operating from a network of dealers distributed across Africa.

Perhaps no one is more proud and excited about this development than Jaco Beyers, who has been

serving as the John Deere managing director for the Middle East and Africa since October 2020. He spoke with African Review to explain why the company has pursued further movement on the continent and how this will help develop the lives of those living there.

He said, “We have been expanding quite rapidly. We previously operated in sub-Saharan Africa, and recently moved into North Africa and Middle East, and now we are expanding into 18 countries with Deere-branded and manufactured

equipment. We are coming in with a full product line with backhoe loaders, excavators, wheel loader, crawler dozers, motor graders and our articulated dump trucks will join the lineup very soon.”

An opportunity not to be missed

Beyers continued to explain why the company had decided on this expansion, noting that one of the big drivers was from John Deere Global desiring to drive local African leadership and business.

“We have independent dealer channels in each of the new countries and it is critical to have strong African leaders running the organisation supporting them. Having local leadership has helped us develop as a successful market share leader on the agricultural side and now we want to replicate this on the construction side as well,” Beyers noted.

“At this point, the execution is going perfectly to plan. We are very methodical in running out the right equipment through the right dealers. We are committed to creating the best customer experience and support for our construction clients with the same backbone that we have on the agricultural side.”

Finding the right dealers

To facilitate this expansion, John Deere has a number of strong dealer partners across the continent who

“ We are expanding into 18 countries with Deere-branded and manufactured equipment.”

JACO BEYERS, MANAGING DIRECTOR – AFRICA MIDDLE EAST AT JOHN DEERE

share the company's passion for delivering world-class service to Africa. Beyers said, "We call it the One Deere approach – the dealers of tomorrow have invested heavily in this. Many of them have been involved in our agricultural side and are turning to the construction side."

"One of the thoughts I want to share is the mentality of the John Deere dealer network. That sense of urgency – that time is money. This concept of 'African Time' does not exist when it comes to John Deere and, for our dealers, that is the mantra that they live and die by. These are the ones we have selected in order to move forward. Ensuring we have the right dealers with the right mentality is part of the journey that we have been on for the last fifty years on this continent. Now we have added construction to the mix and look forward to taking it to the next level."

Beyers also listed some of the dealers with which they will be working within the new countries including AFGRI Equipment, Mascor and Senwes in South Africa; TATA Group in West Africa; DEM group in Senegal and Ivory Coast. In the next 60 days, John Deere also hopes to share more names of dealers as well as some other countries that could potentially be added to the list, insinuating further expansion.

Beyers added, "This is a long-term investment for John Deere and our dealer partners. We have been in business since 1837 and we want to grow a thriving business not just for 2022 but for the next 50-100 years."

Bringing innovations to Africa

With this expansion, John Deere will be bringing its long history of expertise and professionalism as well as its range of cutting-edge equipment. Beyers outlined four key advantages which the company will bring to customers on the continent:

1) Industry-leading support: Consistent and strong parts supply and technical capabilities to keep equipment up and running.

2) Technology: Things like JDLink: Allows the customer, no matter where in world they are, to monitor



Jaco Beyers, managing director – Africa Middle East at John Deere.

equipment and see what is happening and implement preventative maintenance. It will drive a shift from reactive to proactive maintenance and ensure equipment continues to run. John Deere recently announced JDLink subscriptions are now offered free of charge all over the world.

3) World-class products: Not just with cost-effective equipment, but with equipment that helps improve productivity and uptime.

4) The biggest dealer network: Leveraging a strong agricultural footprint and building on it to deliver a total Deere business lineup.

Beyers added, "I believe competition is a good thing because it drives efficiencies and effective ways of doing business. That is what John Deere will bring to the mining, construction, quarries, etc. We are bringing that competitive edge to the environment; the customer knows there are a few players he can choose from but that John Deere will bring the support, reliability, and productivity that is needed to the market."

New equipment on offer

Taking the time to outline some of the latest equipment which will be

available to the African market, Beyers said, "The new series 2 excavator with a 100% John Deere design and build machine is all new for Africa. It is an impressive excavator and we are confident the machine will make a lasting impact on the continent.

"We are going to bring articulated dump trucks, with quite a few surprises and solutions for our customers, that will showcase some new technologies to boost productivity and lower cost.

"In West Africa we have been selling the 1050K dozers and we can announce to eastern and southern Africa that we are bringing a complete product line of dozers. Not to mention skid steers are also a new one for the complete market and some new loaders will become available as well," Beyers added.

Electric machinery on the horizon?

In much of the world electric machinery is being quickly implemented to help reduce carbon emissions and such advancements can often take a little while to permeate the African market. The managing director, however, was very optimistic and commented,

"We sometimes underestimate the African market and I think our customers will start demanding these kinds of technologies that move away from hydraulics and mechanical axles to electrically run independent motors on the wheels without axels. I was fortunate that in a previous role I was in a future marketing position in the USA and worked first hand with some of these technologies. In the not-so-distant future there is some groundbreaking things coming to electrification on construction equipment and this will be the same for Africa as well."

Developing Africa

To ensure that such innovations permeate the African market Beyers advocated the need for private public partnerships (PPPs). He said, "We see a lot of governments wanting to create more jobs and build up factories. We are trying another approach where, we just need strong PPPs driving a contracting scene. What we are seeing on the continent is there is a strong medium scale mining and contracting operation on the construction side and we think with our portfolio we offer, we can really tap into that segment and take that to the next level. This is what Africa needs. Everyone needs some help to develop that medium mining segment – little villages that want to grow their GDP. By having an excavator and wheel loader, some dump trucks and a grader you don't need a massive amount of equipment, but the right package can start a lot of job creation and drive prosperity on this continent."

Beyers concluded by adding that what makes him most excited by their expansion on the continent is the ability to help develop the continent – to feed, clothe and build it. He said, "We believe in Africa and we are looking forward to setting the pace in the market. We are already the lead when it comes to agriculture but we want to be on the construction side as well and drive that competitiveness to take Africa to next level." ■

“ I believe competition is a good thing because it drives efficiencies and effective ways of doing business.”

JACO BEYERS, MANAGING DIRECTOR – AFRICA MIDDLE EAST AT JOHN DEERE

Connecting global construction players

The in-person event will include exhibitors such as Caparol, Saudi Ceramics, Climatech, Gulf Extrusion and Emirates Steel, among others.

Dmg events has announced that The Big 5 will return to the Dubai World Trade Centre (DWTC) from the 12-15 September as the only live in-person event to connect the global construction industry in 2021.

Celebrating its 42nd year, the Middle East, Africa and South Asia (MEASA) region's largest event for the construction industry has so far confirmed more than 1000 exhibitors from 45 countries and 20 country pavilions, and features an online networking and meeting facilitation add-on to help organisations kick-start their businesses wherever their location.

In a recent report released by MEED Projects, the Projects Data and Intelligence Partner for The Big 5, it has been revealed there were US\$163bn worth of contracts awarded in 2020 in the Middle East and Africa despite the impact of Covid-19, and US\$1.9bn worth of projects are currently in execution in the region.

Josine Heijmans, vice president at dmg events, the organiser of The Big 5, foresees that powerful face-to-face connections between industry stakeholders is key for the sector's continued development. He said, "With US\$5.06 trillion worth of projects planned and unawarded across all sectors in the Middle East and Africa construction market it is more important than ever to offer a safe environment for the regional and international community to come together where they can boost business activities, rebuild partnerships, and discuss vital lessons learnt all in one place."

High-level summits at The Big 5 this year include the highly anticipated Global Construction



Leading brands will showcase the latest construction products and solutions covering the full construction cycle.

Image Credit: The Big 5

Leaders' Summit, the Future of Facades Summit, and the FutureTech Construction Summit, all designed to shed light on crucial developments in the construction sector. Additionally, the popular free and CPD-certified talks series will continue at the event, with 70 sessions set to cover vital industry topics.

Christian Witsch, chief executive

officer of Gulf Extrusion, said, "For many years, we have been representing our products and innovations at The Big 5, which is a very important and great event for our industry. We are very excited about the possibility to meet and engage with our important customers and the interested community about our products at The Big 5 once again."

Celebrating Industry Excellence

The Big 5 Women in Construction Awards return to highlight the positive socioeconomic impact a gender-balanced workforce has on transforming the construction industry, while the new The Big 5 Impact Awards have been created to recognise sustainable development, technological and digital achievements in the industry.

Organised by dmg events, The Big 5 runs from 12-15 September 2021 at the Dubai World Trade Centre alongside The Big 5 Heavy, Middle East Concrete, Windows, Doors & Facades Event, Gulf Glass, HVAC R Expo, The Big 5 Solar, Middle East Stone, Urban Design & Landscape Expo, FM Expo. ■

“ It is more important than ever to offer a safe environment for the regional and international community to come together.”

JOSINE HEIJMANS, VICE PRESIDENT AT DMG EVENTS

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Paving the way to development

A flagship roads project in Africa's newest country, South Sudan, will provide a pathway to food security and future economic benefits.

Landlocked South Sudan, a country only founded a decade ago, in 2011, following a protracted and devastating Sudanese civil war, has long struggled with communications and infrastructure challenges.

The fledgling nation's roads network is improving, however. The United Nations Office for Project Services (UNOPS) is among the agencies ringing in the changes.

UNOPS' work in South Sudan shows how the development and maintenance of road infrastructure can encourage local economies and help mitigate food insecurity, another pressing issue facing this and neighbouring states.

In South Sudan, nearly seven million people (60% of the population) struggle to get enough food to meet their daily needs, despite the fact that 75% of its land area is suitable for agriculture.

Feeder network

According to an article published on the UNOPS website, this problem, in

part, stems from farmers lacking access to markets and the ability to move too far outside of their local community due, primarily, to poor road conditions.

Development in South Sudan, it notes, is prohibited by a lack of existing roads and the deterioration of existing roads in the country which means that when the rainy season hits – which lasts for more than half of the year – around 70% of roads are rendered inaccessible. In order to meet this challenge and improve food security, UNOPS has undertaken the construction of feeder roads – secondary roads designed to funnel traffic to major roads – using funding from the European Union (EU). As part of the project, more than 170 km of feeder roads in Warrap State, Lakes State, Northern Bahr El Ghazal State and Western Bahr el Ghazal State have been constructed, connecting to four newly built markets.

This new infrastructure network has been constructed using materials mostly sourced from local

communities and has dramatically improved the flow of goods and services, helping to combat food insecurity and boost local businesses, as well as improving security for those travelling late at night.

Maintaining the benefits

It's a huge boost for the local economy. Now the roads can be used all year round – and farmers can get their goods to markets regardless of the weather or time of year.

To make sure that the benefits of these feeder roads are felt far into the future, UNOPS has also undertaken the training of South Sudanese state engineers so that they will be prepared to take over the maintenance of the feeder roads.

"UNOPS works alongside communities and institutions to ensure the transfer of skills and knowledge needed to sustainably maintain this infrastructure," said Peter Mutoredzanwa, UNOPS country director and representative in South Sudan.

Members of the community from

local villages worked on the roads together and continue to maintain these vital links. This experience has provided young people, in particular, the opportunity to learn the skills needed to work as drivers, construction equipment operators, masons and surveyors.

As well as a better road network today it also lays a platform for tomorrow.

Long-term boost

While South Sudan still remains chronically under-developed, there is a will to bolster infrastructure which could yield long-term positive effects.

Christian Bader, the EU's ambassador to South Sudan, said the group remains committed to helping the country as it finds its feet in the world.

"The EU is committed to help in making sure feeder roads connect to main roads," he said. "This will improve security and allow goods and services to reach all parts of the country." ■



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Asante Gold acquires Resolute's Bibiani Gold Mine in Ghana

Asante Gold Corporation has entered into an agreement with Resolute Mining Limited (Resolute) to purchase 100% of their Bibiani Gold Mine in Ghana

Asante has agreed to buy all of Resolute's interest in Bibiani, through the purchase of 100% of the shares in Mensin Bibiani Pty Ltd, by paying to Resolute total cash consideration of US\$90mn.

The agreement has received ministerial consent, having been approved by the Ghanaian Honourable Minister of Lands and Natural Resources, with completion expected soon (subject only to no material adverse change over this period).

To fund the initial payment, start up and working capital, Asante has accepted subscription receipts from accredited investors for C\$80,000,000, which on completion will convert to 118,857,143 Asante common shares at C\$0.70 per share. A finder's fee of 4% of the total subscription receipts, is payable in shares. No new control blocks will be created as a result of this financing.

Resolute's managing director and CEO, Stuart Gale, commented, "The transaction is consistent with our strategic focus on our core operating assets and strengthening the balance sheet, with the initial cash receipt of US\$30mn to be applied to the voluntary repayment of debt."

The Bibiani share sale agreement is otherwise on customary terms and conditions for a transaction of this nature, including pre-completion obligations, termination rights and warranties provided by the parties.

Asante's president and CEO, Douglas MacQuarrie, commented, "Asante is already exploring on site and building the management and operations team with a view to bring the Bibiani mine back to production within the next year. Further discussions are underway to fully fund the acquisition and its development using non-dilutive financing."



Image Credit: Adobe Stock

Asante aims to bring the Bibiani mine back to production within the next year.

SANDVIK CONSOLIDATES RESOURCES WITH NEW FACILITIES IN SOUTH AFRICA

In a move intended to further enhance its service to customers and consolidate resources, Sandvik Mining and Rock Solutions has moved its South African headquarters to brand new, purpose-designed premises in Kempton Park near Johannesburg.

According to Simon Andrews, managing director at Sandvik South Africa, the Khomanani facility includes three large workshop areas and office space on a 62,000 square metre site.

"As the Tsonga name Khomanani reflects – 'hold each other together as a unit' – our new home unites us under one roof to collaborate, adapt and learn as we strive towards higher standards," said Andrews. "The technical synergies of the workshops add to our commitment and capacity for local production that meets global quality requirements."

Two of the workshops are dedicated to refurbishment and rebuilding of local equipment for the southern African region – mainly Botswana, Namibia and South Africa. This is where new standard-format equipment is configured for local use – typically including features like safety systems, lighting, toe-hitches and decals to customer specifications.

The first workshop has 23 bays for machines to be refurbished, while the second is specially equipped with 100 tonne capacity flooring for the heavier tracked equipment such as underground continuous miners and surface drill rigs. The third workshop focuses on local assembly of equipment for both South African as well as global markets to Sandvik's well known high OEM standards.

THOR EXPLORATIONS ANNOUNCES FIRST GOLD POUR AT SEGILOLA GOLD MINE

Thor Explorations Ltd has announced the first gold pour from its Segilola Gold Mine located in Osun State, Nigeria.

The process plant ramp up will continue over the coming period with commercial production targeted for September 2021.

At commercial production, the plant will run at a processing rate of 715,000 tonnes per annum, targeting approximately 85,000 ounces of gold per annum.

Segun Lawson, president and CEO of Thor Explorations, said, "The first gold pour at Segilola, our first mine and the first commercial gold mine in Nigeria, is a significant achievement for the company. This mine has been built in line with the budget and largely on schedule through a global pandemic. I want to take this opportunity to once again commend our team's commitment and hard work in achieving this milestone."

BRIEFS

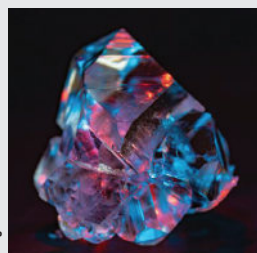


Image Credit: Adobe Stock

The plan is to add 220,000 to 270,000 carats of diamonds to group production for the year.

Petra to restart operations in Tanzania

The UK-based Petra Diamonds is aiming to restart operations of the Williamson mine at Mwadui in Shinyaga region, Tanzania, in Q1 2022.

According to chief executive Richard Duffy, the plan is to add 220,000 to 270,000 carats of diamonds to group production for the year. He further stated that the company is discussing with the Tanzanian government to reach agreement on various issues at Williamson.



Image Credit: Adobe Stock

The NUM is effective from 1 July 2021 and terminates on 30 June 2024.

Pan African signs multi-year deal at Barberton Mines

Barberton Mines Proprietary Limited has concluded a three-year wage agreement with the National Union of Mineworkers (NUM) and a five-year wage agreement with the United Association of South Africa (UASA).

The NUM is effective from 1 July 2021 and terminates on 30 June 2024. The UASA agreement is effective from 1 July 2021 and terminates on 30 June 2026.

Lucara announces Karowe underground expansion project update

Providing an update on the Karowe underground expansion project, Lucara Diamond Corp stated that the Karowe UGP plans to extend the mine life to at least 2040, mining predominately from the highest value EM/PK(S) unit, and is forecasted to contribute approximately US\$4bn in additional revenues.

The Karowe UGP is a fully-financed project, receiving funds from the US\$220mn senior debt facilities package, which recently closed with an equity financing of around US\$41.4mn. Although Covid-19 related delays have impacted the original schedule, no material variances between the 2019 feasibility study (2019 FS) and current project design have resulted following the completion of detailed design and engineering work undertaken in 2020 and 2021.

Total capital expenditures, including contingency, have increased marginally by approximately 4%, to US\$534mn, due to the increase in the production shaft diameter and additional mine development.

Around US\$51.4mn has been spent to date out of the total budget, primarily on engineering and procurement of long lead items; total planned spend for 2021 is up to US\$120mn. The schedule to reach 75% of full production has increased by 1.3 years, driven mainly by Covid-19 related delays to commence the shaft pre-sinking, and additional planned time for development.

Eira Thomas, CEO, commented, "Lucara has made tremendous progress on the Karowe underground expansion project over the last eighteen months, despite the challenges imposed by the global pandemic. The project is fully financed, allowing us to move into high gear during the second half of the year. Using conservative diamond price assumptions, the project delivers strong economics projected to pay back capital in under three years and add approximately US\$4bn in revenues from an extended mine life out to at least 2040. The project also comes at a time when the outlook for the diamond market is stronger than it has been for many years representing an exciting growth opportunity for our shareholders and stakeholders in Botswana."

The Karowe Mine is an existing conventional drill and blast open pit operation, with diesel excavators and trucks providing an average annual 2.6 million tonnes of kimberlite feed to the mill. The open pit mine operation is expected to terminate mid-2026.

ALTONA COMPLETES FIRST EARTH ACQUISITION AT MOZAMBIQUE MINE

In its audited final results for the year ended 30 June 2021, Altona, an earths exploration, development and mining company, announced that it has completed first rare earths acquisition at Monte Muambe Project, Mozambique.

In addition, Altona raised a total of US\$1.52mn via four placings. Christian Taylor-Wilkinson, chief executive of Altona Rare Earths, commented, "Following our first acquisition of the potentially significant Rare Earths mining project in Mozambique, the board is now focused on commencing maiden exploration work by the end of September, while expecting to complete further acquisitions by the year end to help mitigate shareholder risk and increase our chances of entering into the production of this critically important group of metals."

The company entered into an agreement on 23 June 2021 with Ussokoti Investimentos Limitada (Ussokoti) to acquire up to 70% in the Monte Muambe Rare Earths Project.



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A Condra 5-ton single-girder overhead crane. There are several of these at Gamsberg Zinc Mine, as well as one 40/8-ton and two 10-ton double-girder machines. BB Cranes' latest order is for a 20-ton double-girder electric overhead travelling crane to be manufactured in Cape Town.

African-made cranes built for the rugged African market

African Review talks to Marc Kleiner, managing director of Condra, a family-owned business in South Africa making cranes that are built to last in some of Africa's toughest environments.

Image Credit: Condra

There's no doubt that international equipment can be world-class, but nothing beats the rugged durability and resilience of products designed and built in Africa, specifically for the African market.

Condra, a South African-based business that produces cranes for mining and other clients, has built a much-envied reputation for performance and dependability spanning several decades.

Its machines are made in South Africa, though the company also has manufacturing facilities in Bulgaria and Chile, reflecting its increasingly global ambitions.

It is present in these and other overseas territories and has a growing footprint across Africa that spans from its home South African market up to the Democratic Republic of Congo (DRC) and beyond.

Incredibly, despite this international reach, the company remains family owned, dating back to 1966 when it was founded by Josef Kleiner, now 91.

Today, his son, Marc Kleiner, holds the reins as Condra's managing director. He told *African Review* in an interview that the company is always exploring new markets and opportunities.

Right now, that includes areas further north, including Ghana, Nigeria and Morocco.

Its clients benefit not only from half a century of experience, but also machines purpose-built for the African market.

"The European products are very sensitive, and the African market is very rough, so it's difficult to maintain the sensor-driven equipment that comes from Europe," said Kleiner.

There's also immense pressure from China, which is supplying cheaper products and is very competitive.

Condra has found a niche by supplying sophisticated equipment that's tailor-made for the unique challenges of the continent.

"We tend to build our machines more for the rugged African environment," commented Kleiner.

Contract wins

It is a strategy that has brought with it enduring success. In recent months, the local South African market has generated about two thirds of new business, Kleiner said, while the rest is predominantly export markets within Africa.

One recent order will see Condra supply its fourteenth overhead crane to be installed at Gamsberg Zinc Mine in Northern Cape Province, which is owned by Black Mountain Mining.

There are currently two 10-ton

double-girder overhead cranes in service, one 40/8-ton crane also of double-girder configuration, a number of 5-ton single-girder machines and various hoists and lifting beams.

The latest machine for Gamsberg Zinc will be a 20-ton, double-girder electric overhead travelling crane once again of Condra design, but this time manufactured by BB Cranes at its Cape Town factory (Condra is BB's parent company), with delivery scheduled for September 2021.

It will span 18.2 metres and deliver a 12 metre lifting height over a long-travel distance of 40 metres.

It is not only the mining industry either where Condra has enjoyed success.

Paragon Steel Structures' construction of a rubber processing factory in the KwaZulu-Natal Midlands will soon involve the installation of two overhead cranes to work the floor area of the soon-to-be-completed plant.

The two cranes, also to be delivered by Condra in September,

“ We tend to build our machines more for the rugged African environment.”

MARC KLEINER, MANAGING DIRECTOR OF CONDR A



Image Credit: Condra

Very wide-span double girder overhead crane nearing completion in Condra's Johannesburg factory. The two 40-ton cranes for Paragon Steel Structures, which will each have a span of 28 metres, are similar to the crane in this photograph.

will span the full 28 metres of the factory floor, moving raw rubber from the receiving area to the processing area, then transferring processed material to different points within the plant for specific value-adding procedures.

Crane lifting heights are a little over nine metres.

Condra and Paragon Steel Structures have worked together on a number of other new factory projects before, at Pietermaritzburg in South Africa, and at Luanshya in Zambia.

African company

As well as creating machines ideal for African markets, the company prides itself on being there for its clients, from initial sales right through to aftercare service and support.

The group is organised around four main divisions: design, manufacture, service and sales.

Cranes are designed and manufactured at its two South African factories up to and including heavy duty Class 4,

and to the standards of ISO, GOST and other internationally-recognised quality control bodies.

And they are machines that are built to last, whatever conditions or demands are thrown at them.

When service or support is required, Condra technicians are right there.

There's in-country support in key markets such as Zambia and Botswana, and even in more remote territories like the DRC, help is never far away

"We're in a central, Johannesburg location so we have quick access to anywhere. We can usually fly a guy out in the morning and then he's back by the end of the day."

Sometimes Africa's patchy infrastructure presents a challenge, however.

Kleiner said he would like to see improved access to more remote mines, highlighting a recent crane order from Cameroon, where the road giving access cannot

be negotiated by abnormal-load vehicles.

The only way to deliver this crane will be to design it for containerisation, splicing girders almost 30 metres in length for bolting together on site at the mine.

"It's quite common for us to do this, but it does increase the price," he said.

Nonetheless, Condra remains a proud African company and one committed to the continent's future prosperity.

"Africa could do better by taking more pride in the fact that it is Africa and not Europe," said Kleiner.

"By this I mean that customers requesting the latest electronic refinements in use abroad should recognise that these are often poorly suited to the power outages and fluctuations that are typically African. That said, we continue to give the customer the machine performance that he wants, while engineering the crane to be as immune to these problems as possible."

It's clearly a blueprint that is working well, as the company makes in-roads into new frontiers, including highly sophisticated mining markets like Canada and Australia.

"However, Condra was born African and remains African. We understand Africa, so our success is likely to continue." ■

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“Condra was born African and remains African. We understand Africa, so our success is likely to continue.”

MARC KLEINER, MANAGING DIRECTOR OF CONDR

METSO OUTOTEC COMPLETES CRUSHER HEAD PORTFOLIO

Metso Outotec has introduced a new crusher head to complete the portfolio for Nordberg MP800, MP1000, MP1250, HP800, and HP900 crushers. The Xtreme head is the most robust head on the market designed to handle the most demanding applications.

“Metso Outotec now has a complete range of crusher heads in the portfolio and our customers can choose the level of durability based on their application and needs. The new Xtreme forged head is the most reliable crusher head in the industry. The OEM design ensures optimal crushing even where equipment may be pushed beyond design limits,” said Chad Smallwood, senior vice-



Metso Outotec complements crusher head portfolio with the robust solution for large Nordberg crushers.

Image Credit: Metso Outotec

president crushing products at Metso Outotec.

Increased reliability for the most extreme conditions

The new Xtreme head provides customers with an option for the most extreme conditions. The Xtreme head complements the Enhanced (heavy duty) head and the Elect (traditional cast) head in this comprehensive range of crusher heads.

The customer can match their price point and duty level to get the most life out of their components. Maximising and extending the life of the components allows for a more sustainable operation overall.

ANOTHER LOKOTRAC LT120 FOR SPH KUNDALILA

The Lokotrac LT120 mobile jaw crushing plant, acquired in 2021, has been added to SPH Kundalila’s crushing fleet at an opencast platinum mine near Rustenburg in South Africa’s North West province. The company has been conducting crushing operations for the customer on that site since 2013, although it was contracted for other activities there since 2010.

The crushing fleet on this project processes 350,000 to 400,000 tonnes of platinum ore per month for the mine’s mineral processing plant. Material entering the crusher can be sized up to 800 mm in size, which is reduced to a product of 250 mm or less for transportation to the plant.

The mobility of the track-mounted LT120 provides the necessary flexibility that the mine requires to maintain a consistent grade for the plant, moving crushers when necessary to treat ore from different locations on site.

This disciplined approach allows these mobile crushers to be completely refurbished at SPH Kundalila’s rebuild workshop in Potchefstroom at long-term intervals. This enhances reliability and lowers the total cost of ownership.

According to Francois Marais, director sales and marketing at Pilot Crushtec, the Lokotrac LT120 includes a Metso C120 jaw crusher with a 1 200 mm by 870 mm feed opening, providing excellent capacity even in the toughest applications.

Bentley Systems unveils Seequent’s acquisition of Imago

Bentley Systems, the infrastructure engineering software company has announced that its Seequent business unit has acquired Imago Inc, a developer of cloud-based software for the capture and management of geoscientific imagery

The acquisition will expand Seequent’s technology solutions portfolio while boosting cloud capabilities to help geoscientists and engineers solve earth, environment, and energy challenges. Imago’s cloud-based platform enables the capture, cataloguing, and review of drilling core and chip images from any source, to support every aspect of the geological process from exploration to grade control. Continued development of Imago’s machine learning will lead to a step function in the interpretation of geological data.

Mining companies around the world apply Imago’s solution in conjunction with geology data management and modeling tools to enable teams to make more confident, profitable decisions using instantly available, high-quality images. Seequent already integrates its Leapfrog, Oasis montaj, Target, and Minalyix MX Deposit with Imago’s solution, making it easy for geologists, engineers, and other stakeholders to extract knowledge and learn from geoscientific imagery. The goal is to unlock significant potential for mining and other industries, transforming image data into meaningful insights for geological activities.

Graham Grant, chief executive officer of Seequent, said, “It’s an exciting step to welcome the Imago team on board to help advance Seequent’s progression into the cloud. This acquisition demonstrates Seequent’s continued growth and our commitment to make a positive contribution to the industries we serve globally.”



Imago assists companies to deploy processes that improve core image capture.

Image Credit: Bentley Systems

TEREX FINLAY 860 SCALPER PRODUCTION UNIT STRAIGHT INTO OPERATION

The new Terex Finlay 860 tracked scalper is a compact and aggressive forward facing heavy duty screen. This highly versatile and flexible



Image Credit: Terex Finlay
First Terex Finlay 860 scalper production unit tracks off the Terex Dungannon production lines.

machine excels in primary and secondary screening applications such as aggregates, sand and gravel, top soil, construction demolition and recycling applications where site space is at a premium.

The fully self-contained plant can be hydraulically folded and ready for transport in less than 30 minutes and can be fed by a crusher, screener or loader making it the ideal machine for contract screening and small scale operators.

The first Terex Finlay 860 scalper production model has tracked off the Terex Dungannon production line and gone straight to work in a recycling application in Europe.

KWATANI'S ROBUST CUSTOM-DESIGNED SCREENS CONTINUE TO ENJOY SUCCESS

Kwatani's success in developing custom vibrating screens for a range of scalping, sizing, dewatering, drain and rinse and desliming applications is built on decades of experience and practical research, according to CEO Kim Schoepflin.

"We focus on the detail of every project, so that the screen performance suits the customer's mined product and expected output. This means working with all screen operating parameters like velocity, stroke, angle of stroke and deck inclination – as well as the appropriate screen media – to deliver results," stated Schoepflin.

A vital aspect of the engineering process is the testing of material in Kwatani's laboratory, using wet or dry test screens and other equipment to outline options for the customer. This allows a differentiated approach to each category of screening required in mining and other sectors.

The company also has an enviable track record in custom grizzly feeders – for scalping run-of-mine material varying from fine particles to one-metre lump sizes – across heavy duty applications in commodities including gold, manganese and diamonds.

Sizing is a broad category of screening, with wet or dry applications, where mines aim to achieve their required cut-off while maximising process plant efficiency, product quality and production tonnage.

Kwatani's desliming screens effectively remove slimes (fine particles) from larger particles in mineral processing, and Schoepflin says large multi-slope screens are a fashionable choice in this application.

"We design specialised counter frames for each custom screen, to minimise the transmission of forces into the support structure. We have a range of screen mounting options – such as rubber buffers and torsional springs – to optimise this isolation effect," Schoepflin concluded.



Image Credit: Kwatani
Kwatani banana screen designed for a large diamond mine operation.



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Worsening water scarcity

Every continent faces water scarcity to a greater or lesser extent, and the UN estimates some 2.3 billion people currently live in water-stressed countries, a figure that is only set to get worse. Tim Guest reports.



Children fetch water from the well in the Internally Displaced Persons village just outside of Mopti in the central region of Mali.

Image Credit: UN Photo/Marco Dormino

Demand for water around the world is increasing as the human populace continues growing at alarming rates, and even where water supplies have been historically abundant, demand for this precious, finite resource outstrips supply. Of the 2.3 billion people estimated (UN-Water) to live in water-stressed regions, 733 million live in places, many in Africa, classified as critically water-stressed. In 2013 the Global Water Institute predicted that by 2030 some 700 million people across the globe would be displaced by intense water scarcity; the implications of such movement of so many desperate people can only be imagined...at this time.

Today, water scarcity manifests

itself as either an actual physical scarcity, or an access-to-water scarcity caused by the failure of 'responsible' agencies to ensure a regular supply. A lack of adequate infrastructure, poor maintenance of existing water treatment systems – whatever the reason, even where fresh water is readily available water scarcity can still exist. In many parts of Africa, reasons for water scarcity are often socially-induced and bolstered by ineffective government. They can result from such factors as

ethnicity discrimination, income-based exclusion, gender-based bias, political affiliations, and others, all of which fall under the term 'fourth-order water scarcity'. They can often be hard-to-determine reasons, but they exist.

Water scarcity levels

In terms of water scarcity levels, first-order refers to situations where water scarcity stems from a lack of water in the local natural environment. Second-order results

from such things as poor investment in water treatment or water transportation infrastructure, resulting in limited water access even in places where natural supplies are abundant. Third-order scarcity scenarios can result from questionable decision-making in local governmental agencies resulting in some segments of an urban populace experiencing water scarcity, while others do not, with supply often determined by neighbourhood economics – wealthy area, regular supply; poor area, erratic supply.

Such scenarios must be addressed, because Africa's population and demands for water are only set to increase dramatically in the years ahead. Its population

“ Africa's population and demand for water are only set to increase dramatically in the years ahead.”

now stands at over 1.2 billion, having doubled between 1990 and 2016, and its urban population is more than 570 million (it was 27 million in 1950, OECD figures), all creating even greater water stress on Africa's water infrastructure.

Efforts at hand

While the efforts of agencies and NGOs such as UN-Water, the World Bank, the Water Project, the World Resources Institute (involved with the ground-breaking Aqueduct project, which is part of the WRI's Water Programme and Corporate Water Stewardship initiative), WaterAid, Water.org and others, offer strategic-level hope, it is often local companies and industry players that help address more localised issues, in turn, helping resolve wider water scarcity problems.

Du Pont Water Solutions, for instance, has activities across Africa managed through its Du Pont de Nemours South Africa (SA) office. In Ethiopia, for example, the company has been working with USAid and CARE Ethiopia to revive capped and unsafe boreholes, some in the Great Rift Valley including the town of Serdo, where underground water can contain dangerously high levels of salinity and fluoride. As part of the project, Du Pont Water Solutions has worked with Israel-based Puretec Water Engineering to install a reverse osmosis water treatment facility, and CARE Ethiopia together with regional government coordinated



No running water means hundreds of people travel long distances to get drinking water, or buy it from resellers like these in East Africa.

Image Credit: Unsplash/Solen Feyissa

the project and its logistics. Today, the Serdo water scheme produces over 5,000 litres per hour of safe water for the community.

But while important projects like this attract wider attention, even more straightforward issues of managing local water supplies can mean the difference between water

availability or scarcity for a community. For example, water treatment facilities installing the right pumps, turning to established makers, such as Caprari, to upgrade older pumping systems; its activities across Africa are coordinated from its Tunisian offices. Or local authorities ensuring water is not lost

through ageing infrastructure and pipe network failures by employing effective leak detection strategies and expertise from the likes of the Hermann Sewerin company. And in cases where there is scope for water usage by industry – the biggest water consumer – to be cut, companies like Germany's ENEXIO and SA's Kelvion Thermal Solutions have collaborated in recent years. SA and Morocco boast the largest concentrated solar power plants (CSPs) in Africa, but these use massive amounts of water and the two companies, backed by the EU, have worked towards reducing evaporation in small and large CSPs by up to 95%. ■

“ It is often local companies and industry players that help address more localised issues, in turn, helping resolve wider water scarcity problems.”

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Adopting a holistic approach to CX through CCaaS

Carolyn Lyimo, country manager, Infobip Tanzania, provides an insight into the evolution of the Tanzanian market landscape as consumers demand effective digital platforms to meet their needs.

Despite the relatively low smartphone penetration rate in Tanzania, consumers are increasingly moving towards purchasing products and services using digital platforms that meet their needs. As a result, businesses need to rethink their customer journeys and become more customer-centric in order to deliver against the modern customer's expectations.

To put this into perspective, the country's internet penetration rate reached 49% of 28.5 million internet users in 2020, and out of 51.3 million mobile voice subscriptions registered in 2020, only about half of these devices were used to access the internet. This, according to the regulator March 2021 report, indicates the comparatively high number of feature phones used throughout the country.

However, there are collaborative initiatives underway within both the private and public sectors' institutions to position Tanzania for a digital future and enable the country to participate in the global digital economy. For instance, from one of the telcos, in addition to investing and rolling out network infrastructure for bridging the digital connectivity gap and supplying affordable smartphones to the population, there is a commitment drive from Vodacom Tanzania to connect 5 million new smartphone users in the next 5 years.

Traditionally, the most effective communication channel used by businesses to engage with customers has been SMS - with gradual adoption of digital messaging channels.

This gradual move towards omnichannel is at a very preliminary stage in the country, but we're seeing businesses already adopting

alternative digital channels such as WhatsApp for Business and Chat applications as per their digital transformation roadmaps, with some testing chatbot platforms and Contact Centre-as-a-Service (CCaaS) solutions over the past year.

Growing appetite

The banking sector specifically has shown an increasing appetite for omnichannel solutions with some organisations pushing to become more tech-savvy to meet the demands of an evolving market by positioning themselves to become digitally progressive businesses. At this stage, all of Tanzania's top tier banks have begun implementing convenient digital CX through digitising some of their current products and services.

These organisations realised and considered the importance of improving and evolving their digital customer journeys, shifting away from traditional approaches towards meeting current customer engagement expectations. At the same time, adopting Contact Centre as a Service (CCaaS) solutions also forces businesses to innovatively rethink their entire customer journey touch points – from when the customer first engages with the brand right through to final service resolution.

When reshaping and enhancing the customer experience (CX), organisations must keep in mind that a significant portion of their growing customer base are



Image Credit: Infobip

Carolyn Lyimo is the country manager for Infobip Tanzania.

millennials. Hence, it is pivotal to keep up with this significant demographic's behavioural trend that wants services and products that are convenient, simple, fast, and personalised.

On the organisations' side, investment in next-generation technology solutions can be incorporated into their existing Customer Relationship Management (CRM) systems – practically on a plug and play basis – to enhance the CX with omnichannel platforms.

Infobip's Conversations solution is a one-of-a-kind omnichannel contact centre offering that provides a simple, convenient and unified workspace for interactions between service support agents and customers across a diversified list of communication channels. It includes WhatsApp for Business, Google Business Messages, Facebook Messenger, SMS, voice, video, email, mobile apps and other additional

customer preferred digital communication applications. In addition, contact centre solutions can be enhanced with the deployment of chatbots to handle the more mundane customer interactions and requests.

Choosing the right tech partner

Businesses in Tanzania that are looking to implement digital transformation and advance their CX should look to a technology partner that has vast experience and has already invested in omnichannel solutions, as opposed to taking the more timely and costly approach of developing its own in-house solutions. The right partner will provide Software-as-a-Service (SaaS) solutions that are flexible and scalable to meet business units' changing needs and can reduce an organisation's OpEx and CapEx.

While the recent global pandemic has propelled businesses to start rethinking their traditional customer journeys, it is also important that they map out and evaluate their own business units' goals and objectives so as to flexibly address new market disruptions prior to implementing the right and coherent digital transformation strategy. This will not only give them a better idea and direction of the solutions they want but will also help with choosing the right technology partner.

Infobip Tanzania is the right partner with unmatched expertise to help implement and improve appropriate emotive digital customer journeys by creating, contextualising, and personalising the CX for businesses through omnichannel platform in our CCaaS solution, leading to happy employees and happy customers. ■

“Businesses need to rethink their customer journeys and become more customer-centric.”

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