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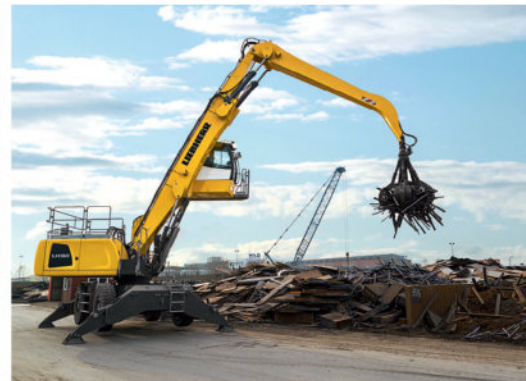


"Natural gas represents a viable solution to swiftly and permanently improve the electrification rate in Africa."

Abdou Poulho Sow, Altaaqa Global Energy Services



Experience the Progress.





Cover picture: The Bridge liquefied petroleum gas power project, currently being built in Tema, Ghana.

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Cover Inset: Abdou Poulho Sow, Altaaqa Global Services
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Editor's Note

Welcome to the August issue of African Review. Our cover story is about Ghana and how it is becoming a West African power hub in the region thanks to its abundant natural resources and number of exciting developments underway, such as the Bridge liquefied petroleum gas power plant in Tema, which is set to be the first of its kind, page 24. The e-mobility revolution has started in Uganda following the state-owned company Kiira Motors deciding to roll out a series of e-buses in a bid to reduce carbon emissions in the town of Jinja, page 20, and e-commerce is rising at a phenomenally successful rate in Nigeria thanks to online platforms, such as Jumia, and is becoming a lifeline for the survival of SMEs during the pandemic, page 18.

We have highlights from the recent Powering Africa Summit and an exclusive interview from Abdou Poulho Sow from Altaaqa Global Energy Services on the critical role natural gas is expected to play in the continent's economic development in the future, page 26.

In this issue, we have included our special construction and mining buyers' guide, page 35, and detailed the latest mini-excavators to enter the market, page 33.

Finally, this will be my last issue after more than four years. It has been a privilege editing the best business to business magazine on the continent that connects companies with the right products and services in the market. I wish you all every success in making a difference to Africa's development now and in the future.

Samantha Payne, Editor

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Many online platforms like Jumia have been crucial to the survival of SMEs in Nigeria. In that regard, Paul Olele looks at the growth of e-commerce in the country, which is expected to rise to US\$75bn in value by 2025.



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20 Manufacturing
Ugandan state-owned Kiira Motors is planning to build 5,000 e-buses every year at its new factory in the southern town of Jinja. It is hoped it will be a step in the right direction to reducing emission levels.



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Ghana is shaping up to be the West African power hub of the region thanks to its natural gas developments. Currently it has enough generation capacity to support its economic growth until 2027.



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Surface mining industry association, ASPASA, has worked with the Committee of Transport Officials to produce a new set of standards for different types of materials to be used on roads. Barry Pearce, who heads up ASPASA's technical committee, explains how the new specifications have helped bring the industry together.

52 Mining
Paul Lilley, sales director for Terex MPS in Europe, Russia and Africa, advises how to select the best cone crushers for certain crushing applications. According to him, the goal is to efficiently and economically produce the target products, conforming with the required specifications.

58 Textiles
A report from the Oxford Business Group shows how African sustainable fashion companies are making a difference in reducing their carbon footprint. The textiles and fashion industry is second-largest industrial polluter behind the oil and gas industry.

Huawei and Mondia Pay enable digital payment options across Algeria and Tunisia

Huawei Mobile Services (HMS) has signed a partnership with Mondia Pay, integrating Mondia Pay's digital payment services into the HUAWEI AppGallery.

The agreement will provide Ooredoo Algeria and Orange Tunisia users with safe and convenient payment options through Mondia Pay's services.

Huawei device users are now able to pay for their monthly subscription-based services, latest games, and favourite applications available on the Huawei AppGallery using Direct Carrier Billing services (DCB) provided by Mondia Pay.

Mondia Pay aims to provide users in North Africa with secure, convenient, and contactless payment options, and the company's agreement with Huawei aims to get one step closer to fulfilling this aim.

The company is currently responsible for handling 2.1 billion global transactions every month. The integration of Mondia's payment options into the Huawei operating system is a result of a strategic partnership that was formalised in September 2020 and has since witnessed an increase of DCB coverage and IAP (In-App Purchase) kit capabilities for global developers.

"We are extremely proud of our continued partnership with Huawei Mobile Services, and to bring Mondia Pay's fully integrated digital payment technology to serve the Africa region. We remain committed to delivering innovative digitalisation and payments solutions that enable the natural progression towards cashless societies throughout the rest of Africa," said Simon Rahmann, chief executive officer of Mondia Pay.

Adam Xiao, managing director of Huawei Mobile Services in the Middle East and Africa, Huawei Consumer Business Group, said, "We are pleased to partner with Mondia Pay to provide Huawei AppGallery users in Algeria and Tunisia with seamless, safe, and secure payment options. This partnership further cements our commitment to enable technology around the world and to provide Huawei users in Algeria and Tunisia with convenient access to services by Huawei Mobile Services."

The service went live with multiple direct carrier billing services providers, such as Ufone Pakistan, Vodafone Egypt and Etisalat UAE, with plans already in place to continue the roll-out.



Image Credit: Mondia Pay

The payment service has gone live with a number of mobile operators.

RADISSON AFFIRMS MOROCCO EXPANSIONS

In an expansion that is set to add more than 1,600 rooms to its portfolio, Radisson Hotel Group has confirmed the signing of seven Moroccan hotels, four of which opened in July.

The new signings bring the group's Moroccan portfolio to ten hotels as part of its strategy to reach 15 hotels in operation or under development in Morocco by 2025.

Elie Younes, executive vice president and CDO EMEA, Radisson Hotel Group, said, "We are delighted to announce this portfolio of seven new hotels, as it not only accelerates our growing presence in Morocco, but also reaffirms our commitment towards the country and its future."

Radisson Blu Resort, a beachfront property consisting of 432 rooms, and Radisson Blu Residences, a new-build 142-unit complex, both opened their doors in July in Al Hoceima. An additional Radisson Blu Resort in Saïdia Beach, also opened its 387 rooms for guests in July.

A further resort, Taghazout Bay Surf Village, was the group's final opening of July 2021.

Younes concluded, "Morocco is Africa's number one tourism destination in terms of foreign arrivals as a bridge between Europe and Africa and is a priority market for our African development strategy because of its vast potential of Morocco. We would like to thank our business partners for their trust in our brands and teams as we look forward to opening these world-class properties across Morocco together."

In the second quarter of 2022, another Radisson Blu Resort in Saïdia Garden, will add 150 rooms to the group's portfolio, as well as Radisson Blu Residences offering 192 units in the same region.

Also, the first quarter of 2023 will see a Radisson Residences property open its 208 units in Taghazout Bay.

STERLING AND WILSON'S PREFAB DATA CENTRE

Sterling and Wilson Pvt Ltd, an engineering, procurement and construction (EPC) specialist and member of the Shapoorji Pallonji group, has delivered its first prefabricated data centre project in Egypt.

The project was executed on behalf of the Faisal Islamic Bank of Egypt, Cairo, in partnership with RZ-Products, a Germany-based company specialising in modular data centre solutions.

Prasanna Sarambale, CEO, Data Centre Business, Sterling and Wilson Pvt Ltd, said, "We are delighted to have handed over our maiden project in Egypt, a first-of-its-kind in the region. It gives us immense pleasure to meet customers' unique requirement of scalable and cost-effective data centre solutions."

Sterling and Wilson's mandate also includes the operation and maintenance service of the US\$2mn project, which comprises of a DC-IT-Room GranTe ECB-S solution for the IT space and a QuartzTe-Room 9.0 for two power rooms.

Image Credit: Altus Strategies

Moroccan projects yield results



Malachite was discovered in Azrar.

Altus Strategies has confirmed the discovery of high-grade copper and silver from three reconnaissance exploration projects in Azrar, Izougza and Tata, Morocco.

The projects, which total 252 km² of land, sit in the western Anti-Atlas region, and are held by the company's subsidiary, Aterian Resources Limited. Steven Poulton, Altus' CEO, said, "These are excellent results from first pass prospecting of our recently granted Azrar, Izougza and Tata projects."

Solar power for Somabay



The solar energy stations will have a total capacity of 5MW.

TAQA Power, a subsidiary of TAQA Arabia has signed an agreement with Abu Soma Touristic Development (ASDC) to build two solar energy stations, with a total capacity of 5MW at the Egyptian coastal destination Somabay. Somabay's CEO, Ibrahim El Missiri, said, "Our aim is to generate the power required using solar energy to reduce electricity and water desalination costs, thereby closing the gap between our consumption and distribution demand."



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Raxio to establish data centre in Mozambique

The Raxio Group (Raxio), a pan-African data centre developer and operator, has announced that it is establishing 'Raxio Mozambique', with a first carrier neutral data centre in Mozambique.

Raxio Mozambique's first facility will be located approximately 20km from downtown Maputo at the Beluluane Industrial Park, which is ideally situated to meet both primary and disaster recovery needs of a wide range of customers. The park benefits from power and connectivity infrastructure ensuring a stable and highly-connected operating environment for the facility. Raxio 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 first facility will be fully equipped with 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. By co-locating in Raxio's facility, customers will benefit from a shared infrastructure model, and substantially reduce their operational and capital costs while improving application performance and flexibility.

Through Raxio's cross connect service, mobile network operators, ISPs and carriers will be able to interconnect to each other and their customers, reducing the cost of access across the country while stabilising connectivity at improved speeds, at a time when new submarine cables will also be providing Mozambique with enhanced international connectivity.

Robert Mullins, CEO of Raxio Group commented, "Over the past year, the number of internet users in the country increased by 25% and we expect this to keep growing across all industries. To support this growth, we are seeing new investment from carriers and subsea cables. We are excited to be able to support the country's digital growth with affordable, high quality, co-location environments. Our data centre in Maputo will be a flagship facility focused on energy efficiency and use of renewable power that will facilitate internet traffic amongst content providers locally and internationally and make the internet experience faster, more resilient, and more affordable for all digital users."



Image Credit: Adobe Stock

Raxio expects all power used by the facility in Mozambique to come from renewable sources.

CELLULANT INTRODUCES DIGITAL PAYMENTS PLATFORM TO ZAMBIA

In an effort to foster growth for both the formal and informal sector in Zambia, pan-African Payments business Cellulant has rolled out Tingg, a digital payments platform, enabling businesses and their consumers to accept and make payments seamlessly.

A single integrated solution, Tingg offers simplified payment tools and processes for a merchant to manage their payments. As a result, businesses can allow their customers to make payments for goods and services using locally relevant payment options.

"In rolling out this digital payments platform, we are slowly removing the dependency on cash and POS terminals. Retailers can accept as many payment methods as possible whilst simplifying the collections and settlement processes. For retail customers, the solution provides a standard and unified payment experience regardless of the payment method," said Gilbert Lungu, country manager for Cellulant Zambia.

DP WORLD EYES IMPERIAL LOGISTICS ACQUISITION

DP World has announced that it has put forward an official offer to acquire South African based Imperial Logistics, an integrated logistics and market access company with operations mainly across the African continent and in Europe.

Acquiring Imperial Logistics would enhance DP World's capabilities, particularly in Africa, and will significantly accelerate the company's transformation into an advanced logistics company, offering end-to-end supply chain services to the owners of cargo.

DP World's cash offer of ZAR66 per share implies an equity consideration of around ZAR12.7bn (approximately US\$890mn). This transaction is subject to Imperial's shareholder approval.

Imperial is an integrated logistics and market access solutions provider with a presence across 25 countries, including a significant footprint in the high growth Africa market. It focuses on fast-growing industries including healthcare, consumer, automotive, chemicals, industrial and commodities and has been built on long-term partnerships with cargo owners, in addition to serving as a trusted partner to many multinational clients, principals and customers.

Sultan Ahmed Bin Sulayem, group chairman and CEO of DP World, commented, "The acquisition of Imperial will help DP World to build better and more efficient supply chains for the owners of cargo, especially in Africa. Imperial's operations are complementary to our network of ports, terminals and logistics operations on the continent. Like DP World, Imperial's biggest asset is its people, and we look forward to welcoming employees of Imperial into the DP World team on successful conclusion of the transaction."

Imperial's Integration with DP World will strengthen South Africa's position as a logistics hub for Africa.

BRIEFS

New digital delivery centre for Johannesburg

Image Credit: Adobe Stock



Coca-Cola aims to be a global technology leader.

In an effort to drive its digital transformation, Coca-Cola has been opening new digital hubs across the world and has looked to expand into Africa to complete its global initiative. The service centre in Johannesburg will focus on using digital insights, business intelligence, analytics, and smart digital marketing to enhance customer and consumer experience. A digital hub in Dublin will support Africa's maturation process until the Johannesburg centre is fully equipped.

Geophysical campaign to commence across Zambia

Image Credit: Adobe Stock



Geophex Surveys has been appointed to conduct the surveys.

Identifying exploration potential in Zambia Castillo Copper is set to commence a comprehensive induced polarisation (IP) survey across the Luanshya and Mkushi projects located in Zambia's copperbelt. Having already completed soil sampling campaigns to delineate anomalous areas, the IP surveys will identify targets to test drill. The campaign is expected to take six to eight weeks to complete and fully analyse the results.

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Paterson Simons wins award for Manitowoc parts sales in Europe and Africa

Paterson Simons received the award for the highest-selling parts dealer in Europe and Africa for 2020.

Paterson Simons scooped the honour at the annual Manitowoc Crane Care Awards ceremony which took place virtually. The ceremony was attended by both the parts and logistics team based in Brighton, UK, and the mobile crane engineering team based in Takoradi, Ghana.

Paterson Simons was bestowed with the prestigious award for its continuing commitment to parts availability and customer service over the last year, despite challenges posed by the pandemic. The dealer put robust business contingency plans in place, which allowed teams to minimise disruption to customers.

Following the introduction of lockdowns and travel restrictions, service technicians adapted to diagnose and resolve many of customers' issues remotely – and combined jobs to work as efficiently as possible. Some delays in moving cargo into West Africa could not be avoided but Paterson Simons kept customers on side through constant communication and status updates.

"Thank you to our team for their great work during a difficult year and for a good start to 2021. Thanks also to the Manitowoc teams based in France, Germany and the USA for their assistance in winning this award. It is an incredible achievement to win the award in the most challenging year in living memory and the Paterson Simons directors are very proud of the entire team for their efforts," said John Traynor, managing director of Paterson Simons.

Paterson Simons has been a Manitowoc dealer since 1977, supplying cranes, parts and servicing to customers across 14 markets in West Africa.

Manitowoc is one of the leading providers of engineered lifting solutions, and through its wholly-owned subsidiaries, designs, manufactures, markets, and supports comprehensive product lines of mobile telescopic cranes, lattice-boom crawler cranes, boom trucks, tower cranes, and industrial cranes under the Grove, Manitowoc, National Crane, Potain and Shuttlelift brand names.



Image Credit: Paterson Simons

Paterson Simons supplies cranes, parts and servicing to customers across 14 markets in West Africa.

IIA AND VODAFONE PARTNER TO ADVANCE DIGITALISATION OF SMES IN GHANA

Invest In Africa (IIA), an enterprise focused on growing local small and medium-sized enterprises (SMEs) in sub-Saharan Africa to deliver positive economic impacts and create jobs, has partnered with technology communications company, Vodafone Ghana, to support local businesses, by enhancing their digital capabilities.

The ICT solutions to be provided by IIA and Vodafone to SMEs in Ghana include Red Trader, a simple web and mobile application designed for traders to manage their inventory, track and receive payments, and 'your-business-online', designed for SMEs to increase their market reach via tailored digital marketing offerings, such as website design, e-commerce integration and social media marketing, among others. These and other specialised solutions will fuel local innovation, support digital financial inclusion and stimulate business and economic growth.

IIA, which operates in five countries across the continent (Ghana, Kenya, Senegal, Zambia, and Mauritania), will roll out the initiative in Ghana, for an initial period of two years and will be available to interested local SMEs regardless of size or sector.

Tawa Bolarin, director of Vodafone Business, remarked, "The partnership between Vodafone Business and IIA is a big win for local businesses because both institutions share a joint commitment to transforming businesses via innovative digital solutions. We have a deep-seated passion to see local businesses succeed and now more than ever; in a business landscape impacted by the Covid-19 pandemic, it is imperative for home-grown businesses, and particularly SMEs to be able to operate seamlessly and efficiently using cutting-edge digital solutions to propel market reach, profitability and business growth."

VEHICLE PRODUCTION BASE OPENS IN GHANA

Toyota Tsusho Manufacturing Ghana Co. Limited has become the first Japanese company to start vehicle assembly in Ghana by commencing assembly of Toyota Motor Corporation's Hilux pickup truck. The company also plans to start production of Suzuki Motor Corporation's Swift compact car.

Speaking at the ceremony, Toyota Tsusho COO for Africa Division, Shinichiro Otsuka, said, "To contribute to the social and economic development of Ghana, we will promote the production of high-quality cars that are made in Ghana. In addition, by providing high-quality sales and after-sales service at our distributors, we will continuously support the safe and secure lives and businesses of the people of Ghana."

TTMG is the fifth vehicle production base of the Toyota Tsusho Group in Africa, after Kenya, Egypt, Nigeria, and Rwanda, and is located in the city of Tema. It is Toyota Tsusho Group's first vehicle assembly plant in West Africa, with an annual production capacity of 1,300 units based on an investment of approximately US\$7mn.

BRIEFS

TATA Côte d'Ivoire moves to new premises



The new premises of Tata Côte d'Ivoire.

TATA Côte d'Ivoire's expanded premises in Marcory provides increased capacity for a showroom, sales and administrative services and offices for staff in the Tata Côte d'Ivoire entity. The building is strategically located close to Star Auto and Ivoire Motor, two main partners of TATA Africa Côte d'Ivoire.

Tata began its operations in Côte d'Ivoire in April 2012, and has increased its market share of Tata trucks and buses as well as Daewoo trucks in the country.

ITFC extends financing to Coris Bank International



The financing agreement aims to strengthen SMEs.

As part of the West Africa SMEs Programme, International Islamic Trade Finance Corporation (ITFC), a member of the Islamic Development Bank Group, has entered into a Murabaha financing agreement of more than US\$23mn with Coris Bank International.

This is the fifth of its kind between ITFC and CBI, for a total of more than US\$62mn, which serves to drive private sector development and promote Islamic finance in the West African region.



دال للتعدين
DAL MINING

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.



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Hani Girgis

Sales & Business
Development Manager
DAL Mining



Zipline receives significant funding boost

Five years on since its launch in 2016 in Uganda, Zipline has created the world's largest automated on-demand delivery service and, following this success, the company has announced that it has raised US\$250mn in new funding to help it accelerate the development of a new model for instant logistics.

Through the use of drones, the company provides end-to-end warehousing, fulfilment and delivery services which has allowed it to integrate into and transform supply chains across Africa and the world.

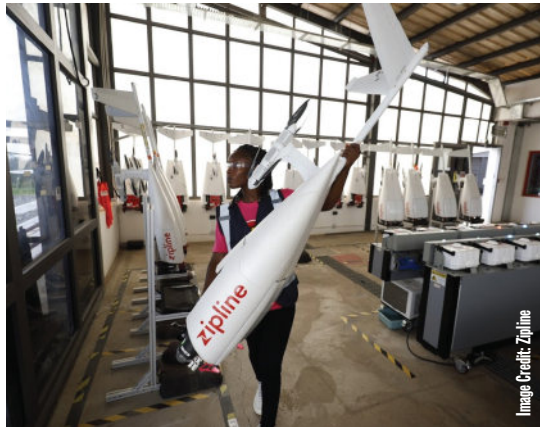
With the new US\$250mn funding, the company plans to continue to advance its integrated service, including its autonomy platform, aircraft, fulfilment systems, and operations. The funding will also fuel continued expansion into new industries and geographies, transforming systems like healthcare and commerce with instant logistics, and strengthening its support of local communities.

The new investors include Fidelity, Intercorp, Emerging Capital Partners and Reinvent Capital in this funding round alongside the ongoing support from leading investors; Baillie Gifford, Temasek, and Katalyst Ventures.

In the last year, Zipline has expanded its service hours in Rwanda to offer the first 24/7 autonomous delivery service in the world as well as sign a partnership with the Ministry of Health in Ghana to scale to four additional distribution centres that will cover 24 million people – 90% of the country's population.

The company has also taken a leading role in the response to the pandemic by helping partners in Africa distribute the Covid-19 vaccine and PPE in Ghana, as well as signing a partnership with Nigeria's Kaduna and Cross River States to deliver medical supplies, including vaccines, blood and medicines.

Zipline has now surpassed ten million autonomous miles flown, two million vaccine doses distributed and over 150,000 commercial deliveries completed.



Zipline team member and aircraft at a Ghana distribution centre.

COALITION LAUNCHES ENERGY PILOT IN UGANDA

Umeme, Uganda's largest power utility, leads the first-of-its-kind integrated energy pilot to provide affordable, reliable, and clean power for the population of Uganda. The Utilities 2.0 Twaake pilot is being coordinated by Power for All and funded by The Rockefeller Foundation, to unite Umeme and several leading Uganda-based distributed renewable energy companies (DREs).

The Utilities 2.0 Twaake pilot will rely on integrated energy, combining centralised and decentralised technology to deliver customer-centric, clean energy solutions to end energy poverty at the lowest cost.

The integrated energy pilot is deployed across two sites. Grid connected Nyenje has been operational since July 2020, with more than 26% of businesses to date receiving income generating assets for the purpose of productive use. Businesses that received asset financing increased their electricity consumption by more than 50% and business revenues have increased by over 70%. In Kiwumu, a non-grid DRE site, the pilot has deployed a 40kWp mini-grid to power 300 households and 60 local businesses. More than 50% of the businesses in Kiwumu will receive asset financing to assist businesses with productive use. The pilot project is expected to deliver jobs and improve incomes across both villages.

Selestino Bubungi, Umeme managing director and CEO said, "Uganda is now facing a challenge of access to clean energy with about half of the population having access, of which 25% are connected to the grid and 26% using off-grid solutions like solar. Twaake is coming in to bridge the gap of delivering clean energy to the households. This partnership will ensure that we deliver clean energy to the population in this pilot phase, pick lessons and use it to scale up. The partnership will assist to drive Uganda's electricity agenda."

BRINGING OFF-GRID SOLUTIONS TO KENYA

InfraCo Africa, part of the Private Infrastructure Development Group (PIDG), and Rural Village Energy Solutions (RVE.SOL), has signed a joint shareholders agreement, committing a total of US\$8mn to support the scale up of RVE.SOL's innovative multi-sector KUDURA Power East Africa (KPEA) business in Kenya.

RVE.SOL will build an additional 22 mini-grids across Busia County, in northwest Kenya, incorporating battery back-up. The mini-grids will range in size from 10-60kWp, totalling 512kWp. A modular design enables the company to respond to changing electricity demand over time. The project will empower over 7,000 new rural electricity connections through a mix of densification of existing sites and addition of new mini-grids.

It is anticipated that the mini-grids will be installed by Q1 2022, with full commissioning expected by Q3 2022. With this approach, KPEA hopes to attract further private sector investment.

BRIEFS



Shanta is on track to complete 35-40% of total planned drilling at West Kenya by the end of 2021.

Shanta identifies gold in Kenya

In an exploration update for the West Kenya Project, Shanta Gold (Shanta), the East Africa-focused gold producer, developer and explorer, has unveiled it has identified visible gold in four different intersections across 15 drilled holes. Phase 1 drilling has now been completed and Phase 2, targeting 200-450 metres below surface, has been commenced with a third rig mobilised to West Kenya. 10% of total planned drilling over three phases has now been reported.

Support for East African businesses



The EAC-EABC TWG has been formed to support the East African private sector.

The East African Community and the East African Business Council, have launched the EAC-EABC Technical Working Group (EAC-EABC TWG) to spearhead initiative that will benefit the private sector in East Africa. The EAC-EABC TWG has a specific mandate to promote activities that will raise the visibility of the EAC, provide a platform for addressing concerns of the business community in the region and generate projects related to private sector support.

Copia to support small and medium enterprises in Uganda

Copia Global, a fast-growing mobile commerce platform built to serve middle to low-income African consumers, has expanded operations to Uganda in order to bring high-quality and affordable products to millions of Ugandans, regardless of location, technology access or connection status.

Copia's model leverages a network of digitally-enabled, locally based agents who operate as order and delivery points to meet consumers where they are, online or offline. Copia agents are existing trusted shopkeepers like a local grocer or butcher, where customers can select and pay for products chosen from a Copia catalogue. After the order is placed, Copia sends an SMS order confirmation to the agent and the customer and in two days, Copia delivers the products to the agent for customer pick up. Through the creation of its agent network, Copia supports the resilience of thousands of small and medium enterprises in Uganda.

While nearly 20 million Ugandans have mobile subscriptions (44% out of a total population of 47 million) only 12 million use the internet, which leaves a large gap in the number of people enabled for the digital economy. While Copia is a technology enabled company through and through, it does not require customers to be tech savvy. The system is flexible to allow people to order anything they need through whatever medium best suits them, whether it be a phone call, text message, app or through a local agent.

"Uganda has one of the fastest growing middle classes in the world with a hard-working population and a dynamic entrepreneurial culture. Copia is designed specifically to serve this high growth but underserved consumer base who want access to high-quality products at the best prices," said Tracey Turner, Copia global founder and chair. "Harnessing mobile technologies, a network of local agents and logistics technology, Copia can transform middle-class and emerging middle-class Africans into empowered global customers. Our expansion into Uganda is the next step in fulfilling that mission."

Copia Uganda is built on the company's success in Kenya where Copia currently serves more than one million customers and is doubling in size every year.



Tim Steel, Copia Global CEO, hands over Copia's first order delivery in Uganda.

UNLOCKING AFFORDABLE INTERNET IN EAST AFRICA

SoftBank Corporation has signed a Memorandum of Understanding (MoU) with Smart Africa Secretariat to collaborate on innovative solutions towards achieving the vision of providing accessible and affordable internet connectivity to Africa's underserved regions, starting with a focus in East Africa.

Through various projects and activities, Smart Africa has an ambitious strategy to double broadband penetration to 51% in Africa by 2025. As part of achieving this vision, Smart Africa is working to implement the Bulk Capacity Purchase Project, an initiative that aims to deliver affordable internet connectivity for African citizens through the large-scale joint procurement efforts of Smart Africa member countries. Meanwhile, SoftBank will deploy its Non-Terrestrial Network (NTN) Solutions to reduce internet costs and build affordable internet infrastructure. The collaboration will also align with the fundamentals of Smart Africa's goal, which is the realisation of a single digital market on the continent through ICT.

The two companies will begin by identifying demand for NTN solutions and conducting further feasibility studies in Kenya, Djibouti and Rwanda as well as countries that have express interest in the Bulk Capacity Purchase Project, such as Morocco and Egypt. SoftBank and Smart Africa will also draw up implementation plans and consider potential market entries in the future.

"We believe our NTN solutions will be extremely effective technologies to provide connectivity to African countries and regions that lack sufficient Internet access. With our NTN solutions powered by OneWeb, Skylo and HAPSMobile, we'll work closely with Smart Africa to provide telecommunication networks," said Hidebumi Kitahara, Softbank's vice president and head of the Technology Unit's Global Business Strategy Division.

ETHIOPIAN AIRLINES CELEBRATES POLE POSITION

Ethiopian Airlines Group has welcomed a report from the African Airlines Association's (AFRAA), which has ranked them the first among African airlines for passenger traffic. Its hub, Addis Ababa Bole International Airport, was also ranked first in freight traffic.

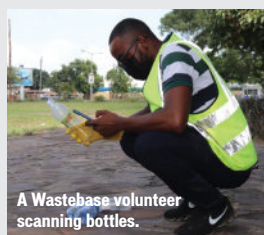
Ethiopian Airlines carried 500 thousand tons of freight and 5.5 million passengers through its main hub, across 2020.

Tewelde GebreMariam, CEO of Ethiopian Airlines, said, "We are honoured to continue our leadership even during the global pandemic crisis, which has devastated the aviation industry. This is a manifestation of our resilience and agility. We are excited about the role we played in the fight against the pandemic by continuing our much-needed air connectivity within Africa and with the rest of the world without any flight suspension. We are saving lives through air transport of medical supplies and vaccines."

BRIEFS

Tracking plastic waste in the environment

Environmental NGOs in Tanzania, Mozambique and Zambia are using Wastebase, developed by unwaste.io, to organise, map and visualise data in order to extract reports on plastic waste in the environment and show producers and consumers where their waste ends up. Using the app, users can sort and scan waste, which will then be handled by data partners to connect each product to information about brand, ownership and distribution. The app is now available for download for Android users in Africa.



A Wastebase volunteer scanning bottles.

SEACOM extends SD-WAN services to Kenya



SD-WAN can help businesses reduce usage costs and strengthen network security.

ICT service provider SEACOM is expanding to bring its software-defined wide area networking (SD-WAN) services to Kenyan businesses. SD-WAN allows businesses to transform their business networks into smart, intelligent, and cloud-ready networks. It simplifies the management and operation of an enterprise's networks by using centralised software to control the connections and services between data centres, computers and cloud-based servers.

Upcoming Events Calendar 2021

AUGUST

23-27

IEEE POWER AFRICA 2021

Virtual
<https://ieeepowerafrica.org/>

24-25

POWER & ELECTRICITY WORLD AFRICA

Virtual
www.terrapinn.com/exhibition/power-electricity-world-africa/index.stm

SEPTEMBER

7-8

2ND ANNUAL AFRICA SOLAR ENERGY FORUM

Virtual
www.leadventgrp.com/events/2nd-annual-africa-solar-energy-forum/details

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

7-9

7TH LIGHTEXPO AFRICA 2021: KENYA

Nairobi, Kenya
www.expogr.com/lightexpo

26-29

ECOMONDO

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

NOVEMBER

3-5

THE BIG 5 CONSTRUCT KENYA

Nairobi, Kenya
www.thebig5constructkenya.com

15-17

AFRICA ENERGY FORUM

London
www.africa-energy-forum.com

5-7

WINDAC AFRICA 2021

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

8-11

AFRICA OIL WEEK

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

15-21

INTRA-AFRICAN TRADE FAIR 2021

Durban, South Africa
www.intrafricantradefair.com

Africa Energy Forum shifted from September to November

The 23rd Africa Energy Forum (aef) has been shifted from September to 15-17 November 2021 in London. The event will unite and assemble governments, utilities and regulators with development finance institutions, commercial banks, power developers, technology providers, EPCs and professional services.

Over the last 22 years, the forum has earned a reputation as the most meaningful gathering of decision-makers in African energy to form partnerships, identify opportunities and move the industry forward.

2021 at a glance

The impact of Covid-19 magnifies the need to be able to deliver energy in times of crises. aef 2021 will look ahead to the digitisation of the energy sector and how to harness technology so humanity can recover better. This theme explores the relationship between energy, technology, purpose and inclusivity, seeking to understand how technological innovation can work hand in hand with humans to enhance energy security, sustainability and energy access in a post-Covid future.

With a vast wave of investment set to sweep Africa for energy, infrastructure and digitalisation, aef aims to help towards harnessing this potential so the continent doesn't just recover – it recovers better.



The aef event will highlight the key trends in the energy sector.

Image Credit: Adobe Stock

2020's 'Digital Energy Festival' success

The 'Digital Energy Festival' united aef, the Oil & Gas Council, African Utility Week and POWERGEN Africa under one banner, bringing together Africa's largest, all-encompassing digital energy platform.

Experts representing upstream oil and gas, power, energy, manufacturing, trade and mining delivered critical business updates and information for Africa's energy professionals, helping the aef community stay at the forefront of innovation as Africa looks ahead to the Fifth Industrial Revolution.

Attendees were able to access a world of

content and AI-powered networking through intimate board rooms, fireside chats, digital dialogues, coffee mornings, online awards, country spotlights, masterclasses, digital-education, certified learning, online sales and lead generation via the digital marketplace.

The 2020 event was a big success. In this year, aef moved online from 20 October to 13 November, providing a digital platform for the community to access content and networking opportunities in the absence of the live event. More than one hundred digital broadcasts were held during aef, featuring the many voices of African Energy.

N'Djamena named most expensive African expat city

Mercer has released their 2021 Cost of Living Survey of 400 global cities which features 14 from Africa in the top 100.

Mercer's rankings provide an insight for multinationals on the cost of recruiting or relocating an expatriate in Africa, and also help human resources leaders to structure a remuneration package to attract the right skills for an assignment. Organisations can also use the cost of living rankings to consider implementing regional pay structures to enable talents to move more efficiently across borders by mitigating some of the key challenges when it comes to cost of living, pay competitiveness and purchasing parity.

Chad's N'Djamena has retained its title as the most expensive city in Africa for expatriates and has even moved up two spots in 2021 from 15th to 13th place. The Chadian economy is still recovering from pressures, such as falling oil prices, growing internal and external debts and a relatively small expat market. Despite a relatively low inflation, rentals in N'Djamena remain one of the highest on the continent. In some instances, accommodation prices are similar to what one could expect to pay in much developed cities, such as New York and London.

Southern Africa

South African cities Johannesburg (184) and Cape Town (178) have become less affordable destinations in 2021, mainly due to a stronger rand against the US dollar.

"In September 2020, the rand was trading around 17 against the US dollar as the economy was experiencing a decline in growth of 7%, resulting from the impact of the pandemic. The government started implementing stricter lockdown laws, which in turn limited prospects of economic recovery and growth," said Stevens Kawoubouga, senior associate at Mercer Africa.

Mercer Cost of Living Survey – Worldwide Rankings 2021			
Rank as of March		City	Location
2020	2021		
15	13	NDJAMENA	Chad
18	19	LAGOS	Nigeria
33	20	LIBREVILLE	Gabon
36	24	ABIDJAN	Cote d'Ivoire
49	30	BANGUI	Central African Republic
44	38	BRAZZAVILLE	Congo
24	41	KINSHASA	Dem. Rep. of the Congo
56	49	YAOUNDE	Cameroon
75	56	DAKAR	Senegal
70	66	DOUALA	Cameroon
58	82	DJIBOUTI	Djibouti
68	85	ABUJA	Nigeria
57	87	ACCRA	Ghana
116	99	NIAMEY	Niger

Image Credit: Mercer

The African cities from the top 100 global cities listed on Mercer's Cost of Living Survey 2021.

Lusaka (Zambia) is currently the cheapest city in Africa, according to the Mercer report due to the country experiencing macroeconomic challenges, such as high inflation and tight liquidity. The Kwacha depreciated by close to 47%, making Lusaka a more attractive destination for expatriates in 2021.

West Africa

Nigeria showed some improvement compared to 2020. Lagos and Abuja's ranking moved down following a 4.53% depreciation of the Naira against the US dollar. Yet, Nigeria is slowly recovering from the worst recession in four decades with the government. Following a tough economic year in 2020, resulting

from the health crisis, social distancing regulations and the oil price decline, the government implemented new fiscal reforms to control inflation and an increasing poverty level.

The CFA

In the CFA (Communauté Financière d'Afrique) zone, the most notable moves have been for cities, such as Libreville (Gabon), Abidjan (Ivory Coast) and Bangui (Central African Republic), jumping 13, 12 and 19 positions respectively. Even though their governments managed to control the price levels across the countries, a weaker dollar in 2020 increased the cost of living in US dollar denominated terms. In fact,

the CFA Franc appreciated by 10.79% against the US dollar between March 2020 and March 2021.

Global comparison

Mercer's report listed Ashgabat as the most expensive city for international employees with Hong Kong in second and Beirut in third (which climbed as a result of the economic depression caused by Covid-19 and the Port of Beirut explosion in 2020). The remaining cities appearing in the top ten were split between Europe and Asia.

At the other end of the scale Tbilisi, Lusaka and Bishkek were ranked as the world's least expensive cities for international employees. ■

“Thanks to the continued work with partners over the years, we have many more sustainable IXPs that exchange a considerable amount of internet traffic in Africa. But there’s still work to do to ensure that more internet traffic is exchanged on the continent. A key success factor for IXPs is that governments understand the value that internet infrastructure provides, which encourages the adoption of policies and regulations that enable internet ecosystems to thrive.”

Image Credit: Internet Society



DAWIT BEKELE

Africa regional vice president for the Internet Society, a global non-profit organisation promoting the development and use of the Internet

“Systems are designed to target new customers, financial inclusion, or new sectors that are poorly served. This is exciting in Africa because this for me, is the beginning of a new era for banks, and all banks in the world are looking at what is happening in Africa. Because in Africa you have this situation, which is unique, with the financial inclusion issue where banks need to attract new

customers, therefore you have customers to serve, have the technology to do it, have the dynamism of the culture that makes it possible and that is where we are to build the bank of the future. I often say the Silicon Valley of banking is not in California but in Africa.”

YVES EONNET

Chairman of TagPay

“The African Development Bank has pledged to mobilise US\$25 billion towards climate action on the continent by 2025. The NDCs developed by African countries as part of the Paris Agreement will require an estimated US\$3 trillion of investment by 2030, of which at least 75% is expected to come from the private sector, which has a crucial role to play.”

AL HAMNDOU DORSOUMA

Acting director of climate change and green growth at AfDB

“The European Investment Bank is pleased to support the ambitious and visionary Lusaka Sanitation Program that will transform sanitation, public health, economic and social development in the Zambian capital. The scale of the project being implemented by the Lusaka Water Supply and Sanitation Company has required intensive technical preparations to maximise the impact of the scheme. Today marks a key milestone in the project that enables the first financing to be provided by EIB and KfW for the rehabilitation of two waste water treatment works in the city and complement other parts of the

city-wide scheme already underway. Accelerating high-impact sanitation investment is crucial to strengthen public health resilience to Covid-19 and deliver sustainable urban development.”

THOMAS OSTROS

Vice president of the European Investment Bank

“Refreshing our brand identity is both an acknowledgement of a new chapter as a business but also an affirmation that our mission and commitment to Africa still stands. Cellulant continues to be shaped by a belief that the success of people and businesses in Africa is the foundation of transforming the continent. This belief has seen us scale across multiple countries, evolve and innovate around the solutions we offer to the market and build a great digital payments ecosystem serving millions in Africa.”



Image Credit: Cellulant

DIVINE MURAGIJIMANA

Head of brand, Cellulant, on Cellulant’s rebranding to help it accelerate digital payments across Africa

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

SUSTAINABLE ENERGY FUND FOR AFRICA REPORTS RECORD NUMBER OF TRANSACTIONS IN 2020



SEFA focuses on green baseload, green mini-grid and energy efficiency investments.

(SEFA) has approved seven high-impact projects worth US\$54mn in 2020, despite Covid-19 conditions, according to its 2020 Annual Report.

SEFA, managed by the African Development Bank (AfDB), focuses on green baseload, green mini-grid, and energy efficiency investments. The report, titled: Building Foundations for Success, also details the fund's success in attracting increased donor funding. SEFA secured commitments worth US\$90mn from existing and new donors in the year, including from the German Ministry for Development Cooperation and the Nordic Development Fund.

"SEFA's potential was duly recognised, with the year culminating in a strong endorsement by the Fund's donors," noted vice president Dr. Kevin Kariuki, of the AfDB's Power, Energy, Climate & Green Growth Complex. He said that the additional resources will enable SEFA to establish itself as the leading proponent of Africa's energy transition and energy access agendas in line with the bank's New Deal for Energy in Africa.

The fund responded to the onset of the pandemic by launching its Covid-19 Off-Grid Recovery Platform to extend recovery capital to energy access businesses.

In addition, the provision of catalytic investments in the Spark+ Clean Cooking Fund, the first Africa-focused investment fund to support the clean cooking sector, as well as

the Africa Renewable Energy Fund II, a private equity initiative to develop and invest in baseload renewable energy solutions, involving hybrid renewable energy projects as well as battery storage.

STEFANUTTI STOCKS MOVES CLOUD SEAMLESSLY BACK HOME



Kevin Wilson is the general manager of Group IT Services at Stefanutti Stocks.

Stefanutti Stocks has been able to transform the face of their IT department as an early adopter of the cloud and has managed to face work from home disruptions without missing anything with the migration of their VMware cloud environment from Europe to South Africa. A major listed player in the South African and sub-Saharan African construction market, Stefanutti Stocks employs 7,500 people and earns in billions in annual revenue with projects running from Cape Town to Dubai.

"Our IT group acts like a service provider, or a reseller, providing different services for around 16 companies and 200 to 300 projects at any given point. So, we have to be agile and efficient and ensure access to systems no matter where the construction crew lands," said Kevin Wilson, general manager, Group IT Services.

According to Wilson, the pressure was mounting for IT to provide faster application performance but maintain the construction industry's reputation for being gun-shy with technology investment. This led to an investigation into local certified VMware cloud provider partners that would offer the same VMware experience at an improved cost, had

the skills to support the company, and provide the flexibility to manage, operate and innovate in its environment. It was at this point it selected VMware Cloud Verified and Principal Partner, Routed.

REGISTRATION FOR PROPAC WEST AFRICA 2021 OPENS



This year the Propak exhibition has more than 80 companies booked.

Propak West Africa, the regions largest packaging, printing, plastics and food processing exhibition will return on September from 14-16, 2021 with visitor registration now open.

With exhibitions and conferences noted as a key driver for boosting the economy in Nigeria, they 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.

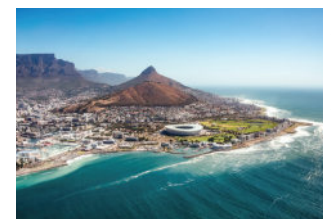
Propak West Africa will, of course, run in full accordance with these measures as well as implementing best practices learnt across the Montgomery Groups global portfolio of events. This is to ensure the safety of all attendees remains paramount while offering the opportunity to reconnect with industry peers.

This year 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 continuing the positive steps to keep on innovating at the event.

The conference programme this year has identified its theme as:

Propak Sustainability Conference; Being Responsible. The organisers feel that with the much needed global effort to tackle climate change the responsibility to promote opportunities and educate on ways to limit the industries impact on the environment is something more prevalent than ever, especially as companies navigate their way out of the pandemic.

AMD PLAYS MAJOR ROLE IN MOVING SOUTH AFRICAN ECONOMY



Aerial view of Cape Town.

The South African Aerospace, Maritime and Defence Industries Association (AMD) is currently playing an important role in South Africa's economy and civil society, with enormous potential to drive positive change even further.

Sandile Ndlovu, interim executive director, AMD, said, "The AMD is a grouping of South African aerospace and defence registered entities whose focus is in high technology capabilities including the design, development, testing, evaluation, manufacturing, operating, upgrading, maintenance, repair and overhaul of air (including space) and sea platforms and their sub-systems - including items that are regarded as 'dual use' for purposes both locally and abroad.

Ndlovu added, "Around the world, the value of a country's defence sector to its economy is enormous. It exists to provide sovereign security, of course, but the offering is so much more than this, which civil society does not always realise. The technology required in this sector is able to drive other innovations which, sooner or later, can have a positive effect on civilian life."

KENYA'S AFFORDABLE HOUSING SECTOR TO PROVIDE OPPORTUNITIES TO INVESTORS

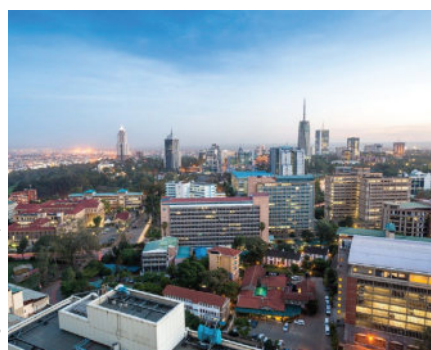


Image Credit: Broll Kenya

Access to socio-economic amenities is a yardstick for private developers.

Buoyed by significant government investment in the 2021-22 national budget, combined with attractive incentives for private developers, the affordable housing sector in Kenya is well set to provide attractive opportunities to investors, according to Vivian Ombwayo, director of research and valuation at Broll Kenya.

“The affordable housing sector in Kenya offers developers an opportunity to diversify their portfolios, especially those concentrating mainly on the commercial-user space. It means they are able to diversify into the residential sector, thanks to attractive government incentives,” commented Jess Cleland, COO outside of SA, valuations and Intel at Broll.

Ombwayo highlighted that the abundant housing opportunities in Kenya allow complementary users to be included in affordable housing projects, such as retail, office, institutional and also medical. This means that, at the end of the day, despite having to manage their revenue and costs carefully, private developers are able to achieve a healthy return from comprehensive affordable housing projects.

She further explained, “It starts off by elevating the living standards of end users, especially with the Covid-19 pandemic, given that health is associated with housing. It also increases the country’s employment rate, reduces the crime rate from the community receiving social revenue from such projects and facilitates overall community integration. The associated training and development programmes are also highly beneficial to local communities.”

While there is no formal definition of what constitutes affordable housing in the Kenyan property market, according to the Kenya Mortgage Refinance Company Plc (KMRC), the ceiling for a typical three-bedroom unit is four million Kenyan shillings (KES), (US\$36,945), “However, it is very much dependent on the developers themselves, who base the definition of affordable housing on cost and the proximity to socio-economic amenities,” noted Ombwayo.

ENI SIGNS AN AGREEMENT TO PRODUCE HYDROGEN IN EGYPT



Image Credit: Adobe Stock

Eni has been present in Egypt since 1954 and operates through the subsidiary IEOC Production.

Eni has signed an agreement with the Egyptian Electricity Holding Company (EEHC) and the Egyptian Natural Gas Holding Company (EGAS) to assess the technical and commercial feasibility of projects for the production of hydrogen in the country.

The study will also analyse the potential local market consumption of hydrogen and export opportunities. In addition, possible development and business schemes will be evaluated to implement the selected projects.

Today’s agreement is part of the path that Eni has undertaken to reach the target of eliminating Scopes 1, 2 and 3 net emissions (Net GHG Lifecycle Emissions) and cancelling out the relative emission intensity (Net Carbon Intensity) by 2050, referring to the entire life cycle of the energy products sold.

It comes in the framework of Egypt’s strategy for energy transition, diversifying the energy mix and developing hydrogen projects in cooperation with major international companies.

TECHNOLOGY AND TRADE: CHALLENGES AND OPPORTUNITIES IN AFRICA

In a webinar series on 12 July, Webb Fontaine, one of the leading providers of customs and trade solutions to governments worldwide, gathered a panel of industry experts to discuss the topic: ‘Technology and Trade in Africa: Challenges and Opportunities’.

The panel discussion explored new thinking and innovative insights on International trade in Africa, the impact of the African Continental Free Trade Area (AfCFTA) agreement and the collaborative role of African nations in achieving economic integration as a continent.

The webinar, aimed at both private and public sector professionals, with its overarching theme of trade and technology in Africa, further explored the implications of geopolitical developments, establishment of free trade zones and its cumulative impact on the continent’s trade policies.

The expert panel included promising industry leaders from diverse backgrounds, such as Agnes Katsonga Phiri, executive director of corporate services at Malawi Revenue Authority and Fridah Kimani, a trade facilitation specialist at Kenya Revenue Authority, and more. Together, they analysed the performance of African trade, the role of different policies and agreements in the socio-economic development of the continent along with the key factors determining a successful strategy for the overall business and trade landscape in Africa.

The webinar also served as a platform for the experts to debate the pros and cons of the African Continental Free Trade Area (AfCFTA) agreement, its influence on the economic integration of the continent along with the time-frame and challenges associated with its implementation. The panelists will also be assessing various factors that contribute to the current scenario of exports in Africa and its prospective growth.

Alioune Ciss, CEO, Webb Fontaine, said, “As the Covid-19 pandemic is accelerating change and innovation like never before, this is the right moment to discuss and tap into the key issues, challenges, opportunities and future projections related to the trade and technology spectrum in Africa.”

The thought-provoking webinars formed part of what is intended to be a larger ThinkTank series aimed at delivering impactful insights, thereby allowing stakeholders and consumers to engage in knowledge-sharing as well as in delivering concrete business strategies.

HAPAG-LLOYD ACQUIRES AFRICA CARRIER NILEDUTCH



Image Credit: Adobe Stock

The acquisition aims to support Hapag-Lloyd’s strategy to grow in Africa.

After signing a sales and purchase agreement in March, Hapag-Lloyd has now formally acquired all shares of container shipping company Nile Dutch Investments BV (NileDutch) after all responsible antitrust authorities had approved the transaction.

The integration is set to be moving at a swift pace and full commercial integration is expected to be completed by the end of 2021, depending on market conditions.

Airport development advances in Zimbabwe

The airport development project of the R.G Mugabe International Airport is set to change Harare's skyline with a new, modern and attractive upgraded and extended international terminal building. Wallace Mawire reports.

The Civil Aviation Authority of Zimbabwe (CAAZ) has reported that it is expecting to complete the development of the Robert Gabriel Mugabe International Airport by the first quarter of 2023, which will increase the passenger handling capacity of the airport from 2.5 million passengers per year to six million, according to Shamiso Makova, engineer at CAAZ, on behalf of Tawanda Gusha, CAAZ, director of airports.

On completion, the terminal building will have four extra air-bridges, for a total of seven, and the airport will have added airspace management systems in the form of secondary surveillance radar, navigational aids and Doppler Very High Frequency Omni Range (DVOR). The runway and taxiways are being rehabilitated as well.

According to CAAZ, construction of the airport commenced in January 2019 with a target completion by January 2022, but Covid-19 complications had an adverse effect on the project.

"It is estimated that the pandemic has extended the completion period by about a year. The project is, therefore, now expected to be

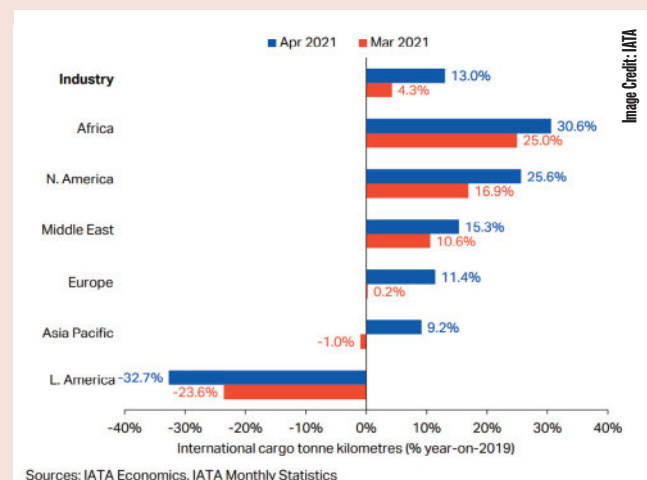
completed by the first quarter of 2023. Work on site has, however, not come to a complete standstill, installation of the roof is now underway," commented Makova.

Currently, CAAZ reports that the extension of the International Terminal building works are at 35% completion, and the installation of the roof, concrete works, electrical and mechanical infrastructure is ongoing. The installation of Airfield Ground Lighting is also ongoing and is targeted for completion by end of June 2021, with the Air Navigation systems implemented by end of the 2021.

The development project of the airport is being supported by China Jiangsu International at a cost of US\$153mn, which is China Jiangsu's second airport development project in Zimbabwe – it also completed the upgrading of Victoria falls international airport in 2016, which trebled the airport's annual passenger handling capacity to 1.5 million. The upgrade of the R.G Mugabe International Airport is expected to see more international airlines opening routes into Harare and a corresponding increase in tourist arrivals. ■



AFRICA'S AIR CARGO DEMAND ON THE RISE



Sources: IATA Economics, IATA Monthly Statistics

International CTK growth versus the same month in 2019 (airline region of registration basis).

Progress of the R.G Mugabe International Airport development project could not have come at a more promising time for Africa's aviation industry as the latest statistics published by the International Air Transport Association (IATA) show the continent is one of the strongest regions in growth for air cargo demand.

Africa has emerged as the standout region by recording a fourth consecutive month of growth of CTKs at or above 25% versus 2019. In April, the continent's international CTKs rose by 30.6% compared to April 2019, a rise that has largely been attributed to the expansion of the Asia-Africa trade lanes. International capacity for the continent also rose (by 0.6%) compared to April 2019, whereas most regions experienced a decline.

Across the globe, according to IATA data relating to April 2021, air cargo demand continued to outperform pre-Covid levels with demand up 12% from April 2019. Measured in cargo tonne-kilometres (CTKs), air cargo demand displays a steep upward trend which began when strict lockdowns were slowly lifted in May 2020. Since that time, seasonally adjusted volumes rose 4.0% in April across the globe, which is the highest growth rate since September 2020. Currently CTKs are approximately 5% higher than the pre-pandemic peak in August 2018.

IATA states this growth has largely been driven by a rise in global trade in March (of 4.2%) and increased competitiveness against sea trade. In the latter case, air cargo rates have stabilised since a peak in April 2020 while shipping container rates have remained relatively high. Additionally, as economic activity across the globe is beginning to rise, the speed of air cargo provides a distinct advantage in recovering lost time in the production process.

The rise of e-commerce in Nigeria

Although the pandemic has caused a global economic downturn, many African countries, particularly Nigeria have turned to e-commerce to help local businesses in the country. Paul Olele tells us more.



Image Credit: Adobe Stock

According to Women’s World Banking, the current spending on e-commerce by Nigerian customers is estimated at about US\$12bn per year. This number is expected to increase to US\$75bn by 2025. Nigeria’s turn to e-commerce during a period where lockdown and social distancing were enforced has been very beneficial for customers to purchase items through online merchants without the hassle of going to stores.

There are many online platforms that have been involved in shaping the e-commerce story in Nigeria. One of these online platforms is Jumia. Since its start in 2012, the online marketplace has been a one stop shop for Nigerians to buy electronic and clothing items, while also offering logistics services, which makes it easier for the company to deliver items to customers through shipping, and also carry out online payments for transactions. In 2020, Jumia announced its intentions to

expand its platforms to more advertisers and according to This Day Nigeria, Jumia’s plan was to attract more advertisers, who want to access a larger audience, through their platform. It also stated the impact of Jumia in Nigerian community has been pivotal and it ranks as one of the top 10 most visible websites in Nigeria.

Another pioneer in e-commerce growth in Nigeria is Konga. Like Jumia, Konga was established in 2012 as an online retail outlet, which sells electronics, books, phones and many more items. It further expanded following the acquisition by Yudala, another online platform. The major success of Konga over the last couple of

years was the roll out of its retail stores. Currently it has about 30 locations in Nigeria, according to Konga.com. Konga has also been able to improve their infrastructural investments by strengthening the warehouse facilities, which are located in various parts of the country to ensure that items are adequately delivered to customers promptly.

Today, the pioneers of e-commerce have paved the way for other online platforms, who have gone on to make strides that are crucial in aiding Nigerian SMEs. Flutterwave is a typical example of the new face of e-commerce in Nigeria. It is regarded as the first African based fintech company that helps to provide easy and reliable

payment solutions for businesses. Recently, Flutterwave announced their partnership with American company, PayPal, to allow African merchants, particularly in Nigeria, to receive payment from PayPal customers globally using the Flutterwave platform. The partnership with PayPal will help support SMEs in overcoming payment issues presented by the highly complex banking framework in Nigeria. In addition, Flutterwave stated in their press release that the partnership will help connect SMEs in Nigeria and other parts of Africa with more than 377 million PayPal users on a global scale. Flutterwave has also been impactful in creating an online digital store for businesses like Roving Heights bookstore in Lagos, Nigeria, which was closed down during the first initial outbreak of Covid-19 in March 2020. The online digital store by Flutterwave store helped small businesses to display and sell their products online.

“ Nigeria’s e-commerce market continues to grow with its current net worth around US\$1.3bn.”

“The future of e-commerce in Nigeria will be pivotal in reshaping the business structure in the country.”

Food deliveries

The coming of e-commerce in Nigeria has also had an impact on the food delivery system in the country. Gokada, a ride-hailing company, was launched in 2018 in Lagos State, Nigeria and according to TechCrunch, the company in 2020 started to offer logistics and food delivery services following the ban of motorcycles by the Lagos State Government. However, on 1 June, 2021, Gokada launched their app which combines their logistics and food delivery services in one place. This made it easier for the company to have all its services in one platform and for the customers to easily navigate the application. Currently, Gokada has made more than US\$100mn in their annualised transaction value, while helping out over 30,000 merchants and carrying out more than 1 million food delivery and e-commerce orders, according to TechCrunch. Apart from food delivery services, fast growing supermarkets in Nigeria, such as Prince Ebeano supermarket and Hubmart, have developed an online retail platform, making it easier for customers to order goods through the platform and have it delivered to their doorstep.

There are hundreds of transactions going on other platforms – Facebook, Whatsapp, both individual and group platforms, as well as Instagram. These transactions happen often among Nigerian youths, who augment their meagre monthly paycheck with a side hustle. On 19 March, 2019, Instagram announced it will run a trial of a check out feature which will be an all in one platform for customers to purchase products without leaving the app. This feature is a huge bonus for many local businesses like @accessories_by_dunnicolors. The

owner, Olamide Okuneye, spoke to Techpoint Africa about Instagram’s plan, which she praised highly because it makes easier for customers to purchase goods through the business page on the platform without sending a direct message to order the items.

Challenges

Although e-commerce has changed the lifestyle of doing business in Nigeria, there are still some challenges the country faces as it plans to further adapt to e-commerce. The first problem is the issue of patronage as it relates to doing business online. A study conducted by representatives from Konga and Jumia found that 70% of Nigerians prefer going to physical stores rather than shopping online, according to a report in This Day Nigeria. Another problem will be the issue of internet access. Though more and more Nigerians are getting connected to the internet, DataReportal states that internet penetration was at 50% in January 2021, which is not enough for Nigerians to buy purchases online all the time. There are other issues like the readiness of the Nigerian workforce in the e-commerce field, the need to step up e-commerce capabilities through training for MSMEs that account for more than 48% of the country’s GDP, and the growing restrictive policies, like the digital tax laws which some fear may increase counterfeits in the e-commerce supply chain. Though these problems exist, Nigeria’s e-commerce market continues to grow with its current net worth around US\$1.3bn, according to the Nigeria’s Guardian. The future of e-commerce in Nigeria will be pivotal in reshaping the business structure in the country. ■



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Uganda joins the e-bus revolution

Kiira Motors opens a new electric vehicle manufacturing facility in Jinja this year. Barry Mansfield finds out more.



Image Credit: Kiira Motors

One of the Kayoola EVS buses.

Chinese leader BYD shifted over 9,000 of its popular electric buses last year, but many African countries are opting to manufacture their own vehicles domestically. Uganda is the latest to join the e-mobility revolution, with state-owned Kiira Motors planning to build 5000 e-buses every year at its new factory in the southern town of Jinja.

Few places are more badly in need of the environmental boost, with Kampala frequently hitting records for all the wrong reasons: the capital regularly tops OpenAQ's most polluted city rankings, with readings often

“Uganda is looking to tap into its excess generating capacity for the power needed to drive its electric fleet.”

breaking through the 160 (ug/m3) level – six times higher than those recommended in the WHO's air quality guidelines.

Like other African pioneers in electric mobility (such as Kenya and Ghana), Uganda is looking to tap into its excess generating capacity for the power needed to drive its electric bus fleet. The background is a total installed capacity last year of just over 1,250MW, while domestic consumption stands at close to 770MW. An impressive 80% of installed capacity is from hydro-electric power. The clean air boost should be welcome, but Kiira Motors plans to go further by using 90% locally sourced materials, including Ugandan copper, steel and lithium, bamboo floors and banana fibre seats. It has identified over 100 suppliers that it can work with domestically, covering auto paints, filters, body panels, interior plastics and aluminium.

Massive fuel consumption comes at a considerable financial cost to motorists and public transport providers in Kampala, in addition to the environmental cost. The Uganda National Environment Management Authority (NEMA) estimates that 140,000 litres of fuel are used by idling cars

The production facility reached 83% completion in early July.



Image Credit: Kiira Motors

“ The production facility should generate 14,000 direct and indirect jobs.”

in the city daily – wasting UGX500mn (approximately US\$140,000). Since 2018, the Kampala Capital City Authority (KCCA) has run a multi-stakeholder air quality working group for Kampala City, encouraging residents to walk more and cut down on the number of journeys taken by car. Kampala’s appalling air pollution record is caused not just by vehicles, but also dust from unpaved roads and the open burning of waste. KCCA seeks to educate the population on cleaner methods for waste disposal.

Kiira Motors

The Kayoola EVS e-buses, designed by Kiira Motors, have a range of 300 km and charging time of 90 minutes when using a fast charger rated at 200kw. Testing has been well underway for some time; the buses covered 2,000 km in first the pilot alone.

Paul Isaac Musasizi, CEO of Kiira Motors, confirms that the buses have already been in use from summer last year to provide shuttle services for Uganda’s Civil Aviation Authority. The EVS model has room for 90 passengers and offers state-of-the-art safety and smart technology for travellers with special needs, including custom-designed seats and a ramp for easy access and departure of passengers in wheelchairs.

The Kayoola EVS buses even feature on-board Wi-Fi, so travellers can stay connected; a CCTV system to boost security; USB charging ports for passenger’s devices; display boards for journey status updates and other information; air conditioning; and smart revenue accounting technology. Additional safety features include three-point seatbelts for the driver and

two-point seatbelts for the passengers; supports and latches for the stability of standing passengers; and sophisticated on-board diagnostics. The vehicle is available in several variants including 12.5-metre, 12.0 metres, and 10.5 metres.

The production facility, which reached 83% completion in early July and was built with assistance from the Uganda Peoples’ Defence Forces, should generate 14,000 direct and indirect jobs. Additional support for the EV plant came from Chinese manufacturer CHTC Motor, the former owner of Dutch truck manufacturer GINAF. Its construction has proven a boon to the local community as the new infrastructure required to support the plant has already brought new roads, power lines and water pipelines to the local villagers, in an area previously used only for the light subsistence farming of seasonal crops.

Long tradition

Kiira Motors was taking orders for the bus 18 months ago, but the company also plans to venture into trucks and utility vehicles. The Kayoola bus is not the first electric vehicle from Kiira: way back in 2011, this same team produced the Kiira PHEV, a two-passenger prototype and the first EV to be designed and built entirely in Africa. However, the origins of the Kayoola bus itself can be traced back to 2007, when students and staff at Kampala’s Makerere University joined an initiative headed up by MIT to design a five-passenger plug-in hybrid vehicle. Long after that initiative expired, the Ugandans kept working independently on their own electric mobility project, which eventually resulted in an e-bus that charged itself in real time through roof-mounted solar panels.

Kayoola will be sold to private and public companies that cover transport routes in and around the capital city. The company has already established several service centres across the country to address technical issues in case of emergency. ■

First commercial mini-grid in Mokoloki leads the way in distributed generation

Mokoloki, often plagued with power shortages, is now at the forefront of a scalable energy solution that could transform lives across Africa.

The rural village, based in Ogun State, Nigeria, has partnered with Nayo Tropical Technologies, Ibadan Electricity Distribution Company (IBEDC) and Rocky Mountain Institute (RMI) to install Nigeria's first commercial under-grid, mini-grid project.

The solar hybrid project has the potential to provide reliable, sustainable and affordable electricity to hundreds of under-grid Nigerian communities.

Speaking at Enlit's Africa virtual event, James Sherwood, principal, RMI Africa Energy Program, said, "It is an exciting project as it is the first of its kind, where a utility and developer were working together to come up with a tripartite solution, in a rural community like Mokoloki, and we feel that this is a really scaleable model."

David Riposo, USAID energy access officer, said it was great to see this type of energy access project being installed in a village and creating further business.

"The impact that this project had in facilitating business creation and creating the conditions of economic opportunity; a health clinic, bakery, metal workshop and several other businesses were able to stand up, as a consequence to access to reliable energy, is very validating to see, because we have invested in these spaces since 2013. Similarly, I was compelled by the way new businesses seem to be attracted to the village as a consequence of access to reliable power. It really speaks to the ability of reliable power access serving as an engine of economic growth," Riposo added.

The other aspect of this project was the developer and utility working together to make it a success.

Albert Butare, CEO Energy and Climate Change Expert, added, "This struck me as an innovative idea and the courage of the developer to approach the big grid operator for this kind of partnership and both covert their thinking and come back up with this synergy has been successful. Likewise to see the trust and readiness of the grid operator to allow the developer and the under-grid mini-grid to use his network, cooperating rather than competing is not usual, and thirdly, I was impressed by the commitment of the grid operator to ensure communities were saved."



The Mokoloki mini-grid project in Nigeria.

Image Credit: Nayo Tropical Technology

FINANCING AGREED FOR HYDROELECTRIC PLANT

Gabon Power Company (GPC), a portfolio company of the Gabonese Strategic Investment Fund (FGIS), and investment company Meridiam have signed an agreement for the financing of the Kinguélé Aval hydroelectric power plant.

Located 100 km east of Libreville on the Mbei River, bordering the Crystal Mountains National Park, the new facility will have a capacity of 35 MW. The plant, which is expected to be commissioned by the end of 2024, is expected to supply the national network with up to 205 GWh per year including 13% of the electrical needs of Libreville. It will lead to the replacement of existing thermal capacity and will save more than 150,000 tonnes of CO2 emissions per year. It will also benefit the electrification of rural areas such as Andock Foula, contributing to social inclusion in Gabon.

The total funding required to build the dam amounts to EU 179mn (approximately US\$212mn), under a 30-year concession agreement. Kinguélé Aval is being developed by Asonha Energie, a project company owned 60% by Meridiam and 40% by GPC, and is supported by the IFC, the African Development Bank, the Development Bank of Southern Africa and the Emerging Africa Infrastructure Fund.

Alain-Claude Bilie-By-Nzé, Minister of State and Minister of Energy and Hydraulic Resources, said, "The financing of this project is excellent news for Gabon. The mobilisation of these stakeholders is an incentive for other African and international partners: Gabon is presenting structuring projects with a strong social impact. As an essential component of the Transformation Acceleration Plan set out by the President of the Republic, His Excellency Ali Bongo Ondimba, the Kinguélé Aval hydroelectric power plant will reduce the price of energy supply and contribute to Gabon's economic development."

FUNDING FOR DESERT TO POWER INITIATIVE

The African Development Bank Group has approved a US\$6mn grant to launch the initial phase of the Desert to Power West Africa Regional Energy Program.

The grant funding will go to the West African Power Pool (WAPP) to conduct pre-feasibility studies for the construction of the Sahel Transmission Backbone that will link regional solar parks in all five countries (Burkina Faso, Chad, Mali, Mauritania, and Niger).

The Economic Community for West African States (ECOWAS) Centre for Renewable Energy and Energy Efficiency (ECREEE) will also receive financing to expand decentralised energy systems.

The financing will also help de-risk energy investments by preparing transmission infrastructure to link countries in the Sahel region and harness a larger share of electricity from solar power. This is expected to pave the way for power trading on a regional electricity market.

► BRIEFS



Image Credit: Nidec Leroy-Somer

The LSA 47.3 industrial alternator.

New alternator launched

Nidec Leroy-Somer has announced the launch of the LSA 47.3 industrial alternator with increased performance and an optimised cooling system. It offers increased efficiency and starting kVA over its predecessor, and benefits from the implementation of the latest technologies developed by the company. It delivers a rated power between 410 and 660 kVA at 50 Hz (495 to 825 kVA at 60 Hz) and features a SHUNT excitation system with a R250 regulator as standard.

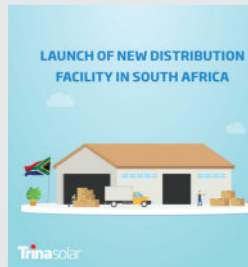


Image Credit: Trina Solar

The new facility will cater to the growing demand for solar energy.

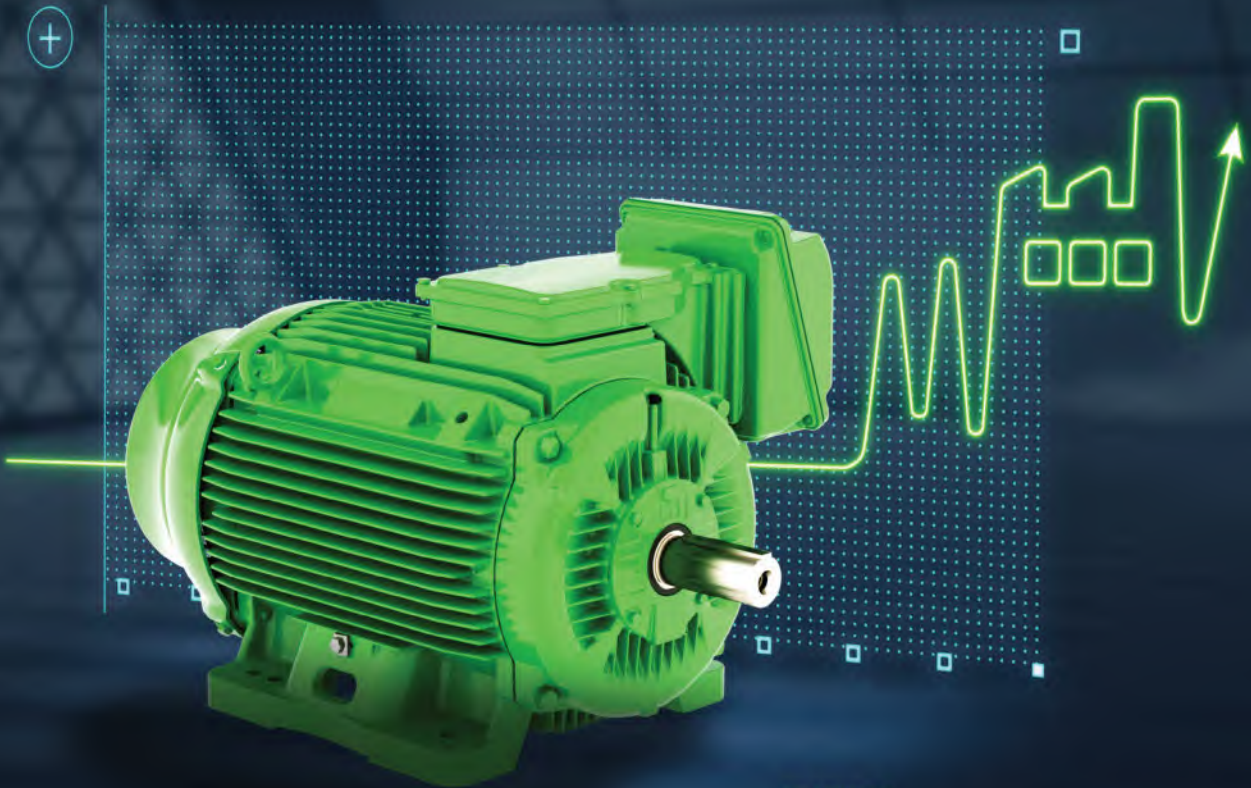
Trina Solar expands in Africa

Trina Solar, a world-leading PV and smart energy total solution provider, has announced that it will launch a distribution facility in South Africa. This comes as part of Trina Solar's commitment to further increase its footprint and presence in Africa to cater to the rapidly growing demand for solar energy for residential, commercial and industrial needs, in addition to farming and agriculture. The company hopes to become a key player in Africa's solar energy market.

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Ghana: The power hub of West Africa

Despite Ghana's power shortages of the past, it is now emerging as a power hub of West Africa thanks to its eclectic mix of energy sources, including natural gas, which is destined to play a major part in the nation's industrial growth.

Ghana is in a unique position with its energy supply, with natural gas playing a pivotal role in the nation's energy mix over the next decade, alongside other fossil fuels and renewables.

Notable gas projects to date include the recent delivery of the offshore Tema Liquefied Natural Gas (LNG) import terminal, which will be able to receive, store, regasify and deliver approximately 3.4 million tons of LNG per day, according to the African Energy Chamber. Ghana is now the continent's second largest LNG importer after Egypt.

The chamber said that the US\$350mn terminal, which received its first LNG cargo in May, was constructed two years ago thanks to financial backing from Helios Investment Partners and Africa Infrastructure Investment Managers. It will enable Ghana to exploit its vast gas reserves estimated at 0.80 trillion cubic feet (Tcf), ranking 72nd in the world, and making it less dependent on heavy fuel imports.

Shell is keen to develop new LNG markets such as Ghana, and is supplying the LNG at the Tema terminal under a long-term contract, according to reports.

In a press statement, Maarten Wetselaar, integrated gas, renewables and energy solutions director at Shell, shared how global demand for LNG remained relatively high, especially during the Covid-19 pandemic, with volumes rising toward the end of 2020.

Natural gas emits between 45% and 55% fewer greenhouse gas emissions and less than one-tenth of the air pollutants than coal when used to generate electricity. In Ghana, it now accounts for around 70% of generated power in 2021 compared to less than 10% around five years ago.



Image Credit: MYTILINEOS

The 1,000MW Sankofa Gas Project is providing a reliable electricity supply to more than 1.6 million households, as well as helping Ghana to meet its 100% universal electricity access target by 2030, the African Energy Chamber added.

Over the years, Ghana has often been plagued by power shortages due to its overreliance on hydropower, which has led to questionable PPAs being commissioned, causing a surplus of power which has led to higher costs for customers and large debt woe, something the government is still navigating its way through today. But the oversupply of power, especially with natural gas added into the mix, is turning Ghana into a power hub in the region, opening up more export markets.

It also remains a very important market to many power companies, such as MYTILINEOS, who want to cement their position on the continent. The firm has executed three projects in succession with a total capacity of 650MW and an investment value of around US\$1bn.

MYTILINEOS' projects

The company's first project in Ghana was the Takoradi 250MW mobile gas turbine plant, using GE's TM 2500 aero-derivative gas turbine technology integrated with their unique modular balance of plants for fast track implementation. The second project was the 192MW Amandi thermal plant, a combined cycle plant using GE's Frame 9E.04 technology in a 1-1-1 configuration with associated balance of plants.

"Our third project is Phase I of the Bridge power 400MW thermal plant. It is our current project in Ghana and is a liquefied petroleum gas (LPG) fuelled combined cycle power plant – the first of its kind – using GE's TM2500 Gen 8 aero-derivative gas turbine technology in a 5-5-1 configuration using LPG as the primary fuel," a MYTILINEOS spokesman said.

In the short- to medium-term, Ghana has enough generation capacity to support its growth until 2027, when there will be a need for additional thermal power.

The spokesman added, "Our confidence in the power sector remains positive since our initial

investment in 2015. Though there are challenges within the industry, the government continues to show commitment in resolving the issue, ensuring a more sustainable and viable industry. We continue to seek more opportunities in the market."

Also, Ghana's renewable electricity generation is projected to reach 1400MW by 2030 and there are distribution energy companies bringing solar solutions to people.

Henry Osei, general manager of Puma Energy in Ghana, which has recently installed solar systems at sites and depots, said, "Africa, and Ghana in particular, has a great potential of solar power and we are establishing the first steps to transforming this potential into a more sustainable and energy efficient system to power our sites."

There are opportunities in the transmission and distribution sector as well in the short-medium term as the country seeks to improve its network system efficiency.

Ghana has a lot of work to do and it begins now. ■

By Samantha Payne

MYTILINEOS: Ensuring sustainable energy while creating social value in sub-Saharan Africa



MYTILINEOS, the leading global industrial and energy company with a strong presence in all five continents, is working hard not only to ensure access to sustainable, affordable, reliable and modern energy in sub-Saharan Africa, but also to create incremental value to the local communities through its operations.

With a presence in Ghana since 2015 and Nigeria since 2017, MYTILINEOS has already been awarded three successive thermal power plant projects with overall capacity of 650MW in Ghana.

Twin City Energy (previously Amandi Energy) is an EPC project, comprising a 192MW combined cycle power plant with a General Electric 9E.04 tri-fuel gas turbine, and Doosan Heat Recovery Steam Generator and a GE steam turbine in a 1-1-1 combine cycle configuration, for Endeavor/Amandi Energy Ltd.

The GoG T-10 in Takoradi, a five-year BOOT project with a 250MW capacity, was executed and managed successfully and was delivered to the Ghana government on February 2021, and the Bridge Power project in Tema, is an EPC 200MW power project with five General Electric Gas Turbines through 5 to 1 Steam Generators and one custom-built GE steam turbine in combined cycle (CCGT) configuration, for Early Power Limited.

These projects have been implemented with the support of a workforce of more than 2,200 employees, who are trained and qualified by MYTILINEOS experienced professionals. With health and safety being an utmost priority and aligned with its ESG commitments and targets, MYTILINEOS is really focused on creating a working environment defined by safety, equality, and stability.



The Twin City Energy 192MW combined cycle power plant.

Image Credit: MYTILINEOS

Being committed to being proactive rather than reactive, the company has set strict Environmental, Health and Safety (EHS) indicators, policies and interventions having achieved zero incidents in fatalities, severe accidents (on and away from sites) and injuries as well as zero environmental incident occurrence in a total of 27 million manhours in sub-Saharan African EPC projects.

In the beginning of 2021, MYTILINEOS committed to minimising its carbon footprint, with the aim of reducing the total direct and indirect CO₂ emissions by at

least 30% by 2030 in comparison to 2019, while by 2050 it is committed to achieving net zero emissions across its entire business activity. With these commitments, the company paves the way for a sustainable future for all the areas in which it operates.

MYTILINEOS has a long history of commitment to social responsibility and environmental sustainability. Apart from the significant power plants and other infrastructure projects, the company supports and contributes to the needs of local communities, acting as an enabler of growth and progress. During 2016-2019,

MYTILINEOS invested more than GHS1mn (US\$168,000) to support environmental initiatives, such as the Haulage Truck Terminal as well as helping young people and women in Ghana. MYTILINEOS ensured that 160 students at St Nicholas School, an institution founded to educate children living in extreme poverty, would have access to a fully-fitted canteen and dining hall as well as better and safer learning conditions in three new and fully equipped classrooms. In addition, the company has provided scholarships to district community children shelters, aiming also to increase employability and support equal opportunities for women by creating a new market for women traders in Takoradi and providing more than 50 internships to young local professionals. ■

“MYTILINEOS has a long history of commitment to social responsibility and environmental sustainability.”

Powering Africa with natural gas

Abdou Poulho Sow, sales director, West and Central Africa at Altaaqa Global Energy Services, discusses the role natural gas could have in Africa's future energy mix.

The steady progress being made to narrow the energy deficit in Africa recently was disrupted by Covid-19. According to the latest statistics published by the IEA, sub-Saharan Africa is currently home to three quarters of the almost 800 million people who live without electricity. Participants at Powering Africa Summit 2021 discussed ways to redress this issue so that in future years electricity would not only become available, but affordable for all people living on the African continent. Much of this discussion focused on renewables, however a number of participants also singled out the importance of natural gas, touted as a 'bridge fuel', which has the capacity to help more Africans gain access to electricity and have less of an environmental impact than other fossil fuels.

On the continent, many countries have this resource in abundance – according to statista, there is more

than 600 trillion cubic feet of natural gas reserves in Africa, with countries such as Nigeria, Mozambique and Algeria claiming the lion's share. Many in the energy industry, therefore, view it as a vital fuel to help meet the challenges posed by the continent. After discussing such issues at EnergyNet's Powering Africa Summit, Abdou Poulho Sow, sales director, West and Central Africa at Altaaqa Global Energy Services, spoke to *African Review* to explore these issues in more detail.

African Review: How important is the role of gas in contributing towards Africa's energy mix?

AS: The importance of natural gas in Africa's energy mix cannot be understated. In my opinion, it will be highly crucial in reducing the price per kilowatt hour to a value acceptable to both national electricity companies and industrial companies.

AR: Do you agree gas is the most sensible 'transition fuel' at the moment to meet low carbon targets of many countries?

AS: Indeed. Natural gas has been proven to have lower emissions compared to other fuels. This has increasingly been confirmed across the African continent where natural gas is being used in power generation. The general observation is that the emission levels of natural gas have remained very low throughout the years.

AR: Natural gas seems central to African governments' strategy to develop cleaner energy production, as part of their post-Covid green, climate resilient recovery plan? Would you agree?

AS: I had the privilege of being part of an important 'boardroom' on gas power generation at the Powering Africa Summit. A good part of the discussions revolved around the energy and



Abdou Poulho Sow, sales director, West and Central Africa at Altaaqa Global Energy Services.

environmental strategies of various African countries, where we were unanimous in saying that natural gas will indeed play a key role.

Natural gas represents a viable solution to swiftly and permanently improve the electrification rate in Africa. Therefore, it is important to create synergies among the different stakeholders in order to secure investments towards power and energy. Investments will allow for more power plants running on natural gas, which will be instrumental in delivering power to as many territories, business and

Altaaqa Global's natural gas power plant in Africa.



Image Credit: Altaaqa Global Energy Services

Image Credit: Altaaqa Global Energy Services

households as possible, through the West Africa Power Pool. This will promote a tangible difference and the fulfilment of Africa's development goals.

AR: Many African countries are endowed with enormous gas reserves and there is talk in Nigeria that gas could help transform the country into a first world country. Do you agree? What is preventing progress?

AS: Across the African continent the amount of gas reserves is phenomenal. Countries like Nigeria and Mozambique come to mind. However, we also have to recognise that there remains polarising issues related to natural gas projects. We have crucial challenges for sure, but governments and key stakeholders are progressively taking the necessary steps in favour of natural gas power generation in consideration of its numerous economic and social merits.

AR: Do you think investors will be turned off from investing in insurgency-stricken nations with gas reserves in favour of investing in other cleaner energy sources?

AS: I wouldn't say it will deter investors, but it will make them consider the situation with utmost caution and calculation before they decide to push through with the venture. As I said earlier, gas has become essential. There is an opportunity for the various decision-makers to agree on the way forward in order to succeed in these various gas projects. If these come into fruition, they will definitely change the configuration and the future of the African continent.

AR: What other key challenges are preventing gas powered developments from emerging on the continent? Is it a lack of private or public sector funding?

AS: It is true that the private sector is very cautious, but they are within reason in order to avoid any risk on short- and medium-term investments. I also see other major



A birds eye view of Altaaqa Global's natural gas power plant in Africa.

Image Credit: Altaaqa Global Energy Services

challenges, including the establishment of synergies and the various links on these ventures, and the profitability of the gas-to-power projects. In terms of profitability, it is important to set the amount of energy to be produced at any time, and the suitable customers to cater to.

AR: Is there room for more public and private partnerships emerging in the future to develop more gas-powered infrastructure?

AS: The figures from the various simulations on gas availability and readiness drive us to consider public and private partnerships. Now it will

be a matter of having a representative case to demonstrate the implications of these projects to the different parties. Thereafter, we can bring them together around a table and negotiate on financial and technological considerations so that, in the end, end users can benefit from the best solution possible.

AR: How does Altaaqa Global's energy solutions fit in with enabling African governments to make the transition from diesel-powered to gas-powered plants a reality?

AS: Altaaqa Global has an offer that

is excellent both in the context of kilowatt-hour price and investment opportunities – our BOOT solution with advanced technology transfer and O&M involved. Our energy solutions are highly reliable and they provide peace of mind to our customers who will see additional gains with achievable and proven savings.

AR: Recently, the company successfully installed 50MW temporary natural gas power plants at the Logbaba power plant site in Douala, Cameroon. Does the company have any more gas-powered plants in the pipeline across Africa?

AS: We are in the process of finalising another such project for a large refinery in West Africa. In addition, we are in discussions with other clients who are themselves looking into the gas supply and realising the savings to be made, thanks to our energy solutions and the availability of gas. ■

“ Governments and key stakeholders are progressively taking the necessary steps in favour of natural gas power generation in consideration of its numerous economic and social merits.”

Powering Africa Summit highlights

The need to build back greener

At the opening session of EnergyNet's virtual Powering Africa Summit 2021, innovation and inclusivity took centre stage as a host of panellists discussed why Africa should look to renewable energy to meet its growing energy demand and deficit.

As Ariel Yopez, energy division chief at the Inter-American Development Bank, noted, "Building back greener [after the pandemic] is not a luxury but a necessity. Not only does it create opportunity for decarbonisation but economic opportunities, such as the creation of jobs and affordable energy."

In order to do so, some participants noted partnerships would be essential. Enoch Ebong, acting director of US Trade and Development Agency, said, "In Africa, we have been building our portfolio based on renewable energy, energy efficiency, smart grids and distributed renewable solutions. The impetus is there, but this is where partnerships come in both in a micro way and in a broad international perspective."

Mark Carrato, coordinator, Power Africa, echoed these sentiments, "If we don't work together these things won't happen. You need a good regulatory environment and to get all the pieces coming together and partnerships are a way to do this."

While there was much encouraging talk on utilising renewable energy, Lyse Doucet, chief international correspondent for the BBC pointed out there is still a long way to go before Africa can be powered through such means. With only 5-6% of energy being produced on the continent coming from renewable sources, it is going to take time.

Carrato, however, was unperturbed and said, "Kenya has 85-90% of energy demand met by renewables. There is an exponential acceleration towards this and they have shown how it can be done. The potential is clear especially with things, such as battery storage and other technology becoming available and with people putting serious money into this."

The potential of battery storage

Key panellists were joined by a host of industry experts to discuss the potential of energy storage for the African continent at the *Financing and Deploying New Technologies: Battery Storage* session of EnergyNet's Powering Africa Summit 2021.

Yann Tanvez, upstream lead – infrastructure West and Central Africa and mini-grids Africa, IFC, said the energy landscape is opening up as battery storage technology is lasting for longer and costs are falling.

Clare Sierawski, climate change co-lead and regional manager for West Africa, US Trade and Development Agency, noted that battery storage technologies could solve the need for peak shifting (as more renewables are integrated), spinning reserves and frequency regulation, by bringing them all to energy systems on the continent.

The participants noted that in many regions there remained barriers, which was restricting the deployment of battery storage solutions. For example, ineffective regulations and a lack of local knowledge around the technology was deterring private investment and making it difficult for governments to integrate storage into their master plans. To counter these issues, the panellists suggested improved communication, stronger planning and well-defined commercially viable models will enable locals to understand and implement the technology.

Carlo Brovero, CEO, StorEn Technologies, took the opportunity to discuss vanadium flow battery technology. He said, "Vanadium technology has a number of advantages that makes it suitable to the environment of Africa. It is a local mineral and is easy to recycle (close to 100%). In terms of cost per cycle they are 60-70% lower than lithium because they can do around 15,000 full cycles (which will last for about 25 years) whereas lithium can usually manage 2,000-3,000. With our technology we will have to manufacture the stack, but the rest can be built by local partners with very little investment on their side."

Altaaqa Global identifies African energy trends of the future

Speaking at the *Captive Power & Corporate PPAs* session, Scott Craig, director of operations and engineering at Altaaqa Global Energy Services, discussed the energy trends emerging in Africa over the next five years.

He said, "Five years ago people wanted to be seen doing something, greenwashing if you like. But now there is a real push towards the implementation of clean technology, especially with corporates. With their policy and ownership structures, there is a need to embrace renewables. This is a big focus for us as we go



Scott Craig, director operations and engineering at Altaaqa Global Energy Services.

Image Credit: Altaaqa Global Energy Services

forward."

He continued, "We see a lot of hybridisation going on, specifically in mining and cement manufacturing, which is an area of activity for us and is happening on the ground now. In the future we are very focused at looking at low and non-carbon fuel options, be that hydrogen or ammonia, for use in generation technologies such as fuel cells. They are technologies that are taking up a lot of our attention at the moment."

"One aspect we still see a huge amount of potential in is natural

gas being used as a source of generation. Africa is still at the front end of the exploitation of natural gas for power generation and there is a lot to be done, especially over the next five years in terms of the evolution and use of LNG and compressed gas too. These give a lot of cost and also some environmental advantages over using more traditional liquid fuels. Many of the thermal projects that we operate are natural gas and we are also looking at the use of biogases and the entry of hydrogen reciprocating and gas turbines."

Zest Weg gives motor users another efficiency boost

In the face of rapidly rising electricity costs in Africa, South Africa-based Zest WEG started phasing in IE4 super premium efficiency motors in its WEG W22 range from April 2021, which will save on customers' bottom lines and help reduce the load on strained energy grids.

According to Fanie Steyn, electric motors manager at Zest WEG, 2021 will see energy prices rising above R1/kWh for the first time in South Africa, with anticipated increases elsewhere on the continent. This makes it the ideal time for the introduction of WEG IE4-rated motors, which will be available in the size range between 37kW and 375kW.

"Unlike many countries around the world, South Africa among other African countries has not regulated the use of energy efficient motors," said Steyn. "Nonetheless, we have taken the proactive step of making the IE4 level of efficiency available to customers at no premium on the IE3 units."

Some years ago, Zest WEG introduced its WEG IE3 motors to the continent at little or no additional cost relative to its IE2 motors, with the same goal in mind: making both customers and the continent more energy efficient.

Specified under the International Electrotechnical Commission (IEC) 60034-30-1:2014 standard, IE1 refers to standard efficiency and IE2 to high efficiency; the IE3 and IE4 ratings are for premium efficiency and super-premium efficiency motors, respectively.

"The efficiency of 96.3% on an IE4-rated 110kW motor, when compared to 94.1% on an IE1-rated motor, can save users hundreds of significant expenditure in energy costs over a ten year period," he said. "Not only will these IE4 motors be more cost effective to run, but they have been designed with a number of new features that bring

considerable benefits."

Steyn emphasises that WEG IE4 super-premium efficiency motors meet IEC efficiency levels when running on 50 to 100% of load; efficiency is kept constant, which saves energy and ensures minimal losses through various loading points. The innovative frame design also allows maximum heat dissipation.

"Motor frame design plays a crucial role in thermal performance, as it is responsible for the outward transfer of heat generated inside the motor," said Steyn. "Running cooler means that our motors have increased life spans, allowing Zest WEG to offer a five-year guarantee on our WEG W22 electric motor range."

The motors' increased mechanical rigidity – achieved by integrating the front and rear feet sides – affords easier installation, higher mechanical stiffness and improved distribution of the mechanical thrust imposed by the load.

"As a first of its kind, our flexible

terminal box mounting means reduced inventory and quicker modification," he said. "The terminal box can be rotated in 90° increments to facilitate supply cable connection orientated to the front, rear, top or either side of the motor."

In addition to the benefits brought by WEG super premium

WEG IE4-rated motors are available in the size range between 37kW and 375kW.



Image Credit: Zest WEG

“The efficiency of 96.3% on an IE4-rated 110kW motor, when compared to 94.1% on an IE1-rated motor, can save hundreds of significant expenditure in energy costs over a ten year period.”

FANIE STEYN, ELECTRIC MOTORS MANAGER AT ZEST WEG

efficiency motors, a substantial increase in energy savings can be reliably achieved using WEG Variable Speed Drives (VSDs), which comply with the European Extended Product standard EN50598. This ensures the system efficiency of the motor and VSD combination. As an additional feature, WEG VSDs have energy savings settings which can be user activated, achieving an automatic saving under any reduced load conditions.

"We are excited to build on the phenomenal reputation of the existing WEG W22 electric motor range by offering an even more efficient motor that is truly "next level" state of the art in electric motors, having the same rock solid quality and reliability," Steyn concluded. ■

HYBRID PORTABLE GENERATORS IDENTIFIED AS TREND ACROSS GEOGRAPHIES

As per a revised report published by an ESOMAR-certified market research and consulting firm, the global portable generators market was valued at US\$700mn in 2020, and is anticipated to expand at a CAGR of around 6.5% over the next ten years.

Diesel and gasoline portable generators are seen as major contributors to CO₂ emissions. Over the past half-decade, various measures have been taken by governments around the world to curb air pollution. For instance, diesel generators are banned across various cities of Europe, citing high levels of emissions.

In order to tackle the emission problem without compromising on electricity supply, market players have come up with hybrid generators that can significantly reduce emissions. Photovoltaic (PV) diesel hybrid generators have garnered increased attention of late. Moreover, high spending on R&D and innovation has paved the way for innovative hybrid generators, attributed to changing consumer preference along with stringent environmental policies laid down by government bodies.

Key takeaways from market study

- The global portable generators market is anticipated to add significant value by 2031.



Image Credit: Adobe Stock

PV diesel hybrid generators are on the rise.

- The residential and commercial segment is projected to capture a major chunk of the market share over the next ten years.
- On the basis of power output, portable generators with power output ranging from 1.0-3.0Kw hold a big part of the total revenue share of the market.
- Asia Pacific is set to dominate global market revenue in 2021 and beyond.
- The market in Africa is expected to rise at a high single-digit CAGR through 2031.
- After a decline due to Covid-19, portable generator demand is expected to bounce back in the short term.

VALUING LONG-STANDING INDUSTRIAL TRADITION

The Cantoni Group, located in the mining region of Poland, is a pioneer in the production of electric motors. Its products include induction motors recognised globally as safe, reliable and durable, operating in the harshest conditions.

The latest offering from Cantoni Motors is the new series of premium efficiency (IE3) flame proof three-phase squirrel cage motors, designed for the chemical industry.

Such motors are suitable for operation in spaces (zone 1 or 2) where explosive mixtures of combustible gases and steams of liquid with air reckoned group II can occur, classes of the temperature T1....T5.

These motors are certified for group IIC in a complete range (can be used also in case of group IIB and IIA applications). They guarantee high safety level (equipment category 2G) and comply with ATEX directive 2014/34/UE together with harmonised standards IEC 60034-1, IEC 60079-0, IEC 60079-1 and IEC 60079-7.

The company has a wide selection of other explosion proof motors including non-sparking IEC and Class I Div 2 NEMA motors, dust ignition proof IEC and Class II Div 2 NEMA motors, increased safety motors as well as those for the mining industries.

For further information, please visit www.cantonigroup.com



Cantoni flame proof motors for chemical industry.

Image Credit: Cantoni

Ghana's Pokuase Interchange opens

A giant road interchange financed by the African Development Bank Group has opened in the Ghanaian capital, Accra, amid hopes the new infrastructure will help reduce road fatalities, ease mobility and spur trade within Ghana as well as with its neighbours.

Ghana's President, Nana Akufo-Addo, opened the Pokuase Interchange on 9 July. The four-tier interchange – the first of its type in West Africa – and a 10km road network linking it to adjoining arterial roads, form part of the Accra Urban Transport Project. The bank provided US\$83.9mn for the project, and the Ghanaian government contributed US\$11mn.

The project, which was approved in September 2016, will improve mobility on the Accra-Nsawam section of the Accra-Kumasi Highway, which sees 50,000 vehicles per day in traffic. It will also reduce vehicle operating costs by 37%, cut travel time from two hours to 30 minutes and lower road accident rates by 40%.

Marie-Laure Akin-Olugbade, the bank's director general for the West Africa Regional Development and Business Delivery Office, said that bank support for the Ghanaian transport infrastructure sector symbolises its quest for Africans' economic and social advancement.

"This approach amplifies the benefits through the ancillary facilities and the road which contribute to the improvement of livelihoods," she said.

The project also provides protection for the nearby Gya Sacred Forest, contributes to lower carbon dioxide emissions, and provides fully equipped modern ICT laboratories for 14 basic schools to train over 10,000 primary school children. Additionally, the production facilities for two local women's groups have been upgraded and access to ICT has improved the business and income of more than 250 women by 10%.

Project beneficiaries include local agro-industries, transporters and travellers on the Accra-Kumasi corridor, which is the main transit route between the breadbasket Brong Ahafo region and Accra, and is also part of the Ghana-Burkina Faso road corridor.



Image Credit: ADB

It is hoped the new interchange will reduce fatalities, ease mobility and boost trade.

GENIE EXPANDS PRESENCE IN WEST AFRICA WITH NEW DISTRIBUTOR

Genie has strengthened its presence in West Africa by nominating International Company of Multiservices (ICOM), which specialises in the sale of lifting and aerial access equipment, as a new authorised distributor and service provider in seven countries.



Image Credit: Genie

The ICOM team. Front right to left: José Antonio Moreno Ortega, president; Mohamed Bilal, head of international sales. Back right to left: Sandra Cosano, accounting; Alonso Luque, logistics; Nadia Lahssen, general manager.

Genie has chosen ICOM to distribute and service its full range of Genie telescopic and articulating boom lifts, scissor lifts, telehandlers, vertical mast lifts and aerial work platforms in Senegal, Mauritania, Republic of Guinea, Ivory Coast, Benin, Togo and Equatorial Guinea. ICOM has been an authorised Genie distributor and service provider in these seven countries since 1 January, 2021.

ICOM brings a real plus in terms of technical services as it has a team of trained technicians who are very experienced in the Genie product range. This is a significant advantage for end-users of Genie equipment in this region, 80% of which are oil, mining and shipping terminal companies. The company also boasts tangible resources and skills in the areas of sales, languages and different African cultures.

FINANCING AGREED FOR GHANA RAILWAY LINE

Deutsche Bank and Investec, in partnership with Swedish Export Credit Agency (EKN), Swedish Export Credit Corporation (SEK) and Export Credit Insurance Corporation of South Africa (ECIC) have announced the signing of an agreement to finance the construction of a 100km stretch of Ghana's Western Railway Line, running from Takoradi Port to Huni Valley. The Euro 600mn (approx. US\$706mn) financing consists of two loans, for which Deutsche Bank acted as mandated lead arranger (MLA). Engineering, procurement and construction (EPC) will be carried out by Amandi Investment Ltd.

Hon. Ken Ofori-Atta, Minister of Finance for the Republic of Ghana, said, "This project is part of Ghana's railway infrastructure plan and has been earmarked for implementation by government. It will be the single biggest railway investment by the country, post-independence. The Western Railway line is key to the haulage of agricultural produce and minerals from the middle belt to Takoradi Port in the south of Ghana."

BRIEFS

New textiles projects for Egypt

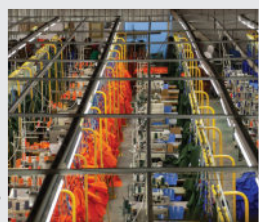


Image Credit: Adobe Stock

The new complexes could help to revive Egypt's textile industry.

Egypt's Orascom Construction PLC has signed a contract worth EGP2.6bn (US\$165mn) to build two textile manufacturing complexes in Damietta and El Mahalla. The complexes will be constructed in 16 months and will comprise seven facilities covering an area of 182,000 sq m once complete. The client is the Holding Company for Cotton, Spinning, Weaving & Garments. These projects will play a central role in the revival of the textile industry in Egypt, according to Orascom.

Kenya construction to grow by 3.9% in 2021



Image Credit: Adobe Stock

Projects include the affordable housing programme.

The Architectural Association of Kenya (AAK) forecasts that Kenya's construction industry will record growth of 3.9% this year following a depressed performance last year. Projects highlighted include the Nairobi Expressway, the LAPSET project and the affordable housing programme. "We project that growth will be propelled by huge infrastructural investments by the Government of Kenya," said Wilson Mugambi, AAK president.

Consortium of investors acquires majority stake in Eastcastle Infrastructure

African Infrastructure Investment Managers (AIIM), one of Africa's largest infrastructure-focused private equity fund managers; Adenia Partners (Adenia), a private equity firm investing in Africa; and IFC, a member of the World Bank Group, have partnered to invest a total of US\$130mn to support Eastcastle Infrastructure, a company specialising in Africa's telecoms tower sector.

The funding will support Eastcastle's build-to-suit strategy, to develop new telecom towers initially in the Democratic Republic of Congo, Nigeria and Ivory Coast. The number of towers across the region needs to increase significantly to accelerate the deployment of bandwidth intensive technologies such as 3G, 4G and 5G by Mobile Network Operators and to increase quality connectivity for individuals and businesses.

The deal comes as growth in data consumption across Africa is soaring, with data consumption per subscriber expected to increase fourfold by 2025, along with an expected 200 million new mobile internet users. Mobile operators that use bandwidth intensive technologies, such as 3G, 4G and 5G are expected to account for more than 85% of connections by 2025, compared to around 38% in 2017. The growth in smartphone adoption in Africa is another factor leading to increasing demand for data, with smartphone usage set to rise to 65% of connections in 2025, up from 44% today.

Ed Stumpf, investment director at AIIM, commented, "Investment in Africa's digital infrastructure is more important than ever to meet rising data demand and enable Africa's digital economy. The internet economy has the potential to contribute nearly US\$180bn to Africa's gross domestic product by 2025 and, as such, a core part of AIIM's strategy is to invest in businesses that address digital infrastructure bottlenecks and enable efficiency through infrastructure sharing.

"We look forward to working closely with the Eastcastle team, which brings vast experience in the sector and comprehensive capabilities in the development and operation of tower portfolios in multiple markets."



Image Credit: AIIM

The number of towers across the region needs to increase significantly to accelerate the deployment of bandwidth intensive technologies.

EASTERN CAPE ROAD STABILISED BY AFRISAM CEMENT

AfriSam's specialised Roadstab cement is helping pave the way for a safer R67/5 road between Queenstown and Whittlesea in the Eastern Cape.

The contractor – the Raubex Construction and Roadmac Surfacing Cape Joint Venture (RBX / RMSC JV) project – will consume around 180,000 bags of AfriSam's Roadstab cement for the stabilisation of the road's G4 sub-base layer. The contract covers 18km of roadway on the R67/5 route, from the Swart Kei River bridge in the south to Queenstown in the north. A complete rehabilitation is underway which will see the road upgraded and widened.



Image Credit: AfriSam

It is critical that the supply of road stabilising cement is available when required to support the scheduled roll-out of road construction activities.

AfriSam ensures that the supply of road stabilising cement is ready and available when required, to support the scheduled roll-out of road construction activities. The Roadstab cement is trucked to site from AfriSam's Queenstown depot, which is supplied by train line from the company's Ulco factory in the Northern Cape. The nationwide footprint of AfriSam also allows it to service the project from its Bloemfontein depot, when necessary.

The road project also includes the building of a new bridge over the Swart Kei River and the widening of the Klaas Smuts River Bridge. The project began in July last year, and completion is scheduled for April 2023.

BESIX CONSTRUCTING AFRICA'S TALLEST TOWER

PFO Africa has awarded BESIX the site management and civil engineering works of the F Tower in Abidjan, Ivory Coast, which will be Africa's tallest tower. The project is supported by the Ivorian Ministry of Construction, Housing and Urban Planning.

The F Tower is the second project carried out by PFO Africa and BESIX for the Ivorian government, the first being the La Mé drinking water plant, currently under construction, one of the largest installations of its kind in West Africa, which will produce 30% of Abidjan's drinking water needs.

Pierre Sironval, deputy CEO of BESIX Group, said, "This is our second contract in Ivory Coast, a country that offers a favourable business environment and is economically dynamic. In PFO Africa, we have found a high quality partner. We look forward to strengthening this alliance by participating in the construction of a building as iconic as the F Tower."

► BRIEFS

New Case IH dealer is Kanu Equipment Ghana

Kanu Equipment Ghana Limited has been appointed as the new Case IH dealer for Ghana, providing sales and service support for a wide range of Case IH equipment and machinery.



Image Credit: Case IH

Kanu Equipment has recruited experienced team members with a passion for customer satisfaction to support Case IH agricultural machinery sales and servicing.

Customers throughout Ghana will benefit from dealership facilities in both Accra, the country's business capital, and Takoradi, the business capital of western Ghana. The facilities include a parts counter, workshop and equipment warehouse.

Mota-Engil enters into joint venture with Shoreline Group



Image Credit: Adobe Stock

The deal could see Mota-Engil win construction work to the value of US\$1.8bn.

Portugal's Mota-Engil has entered into a joint venture with Nigerian energy company Shoreline Group, which could see it win US\$1.8bn of construction work.

The company currently has a backlog of work worth US\$3.5bn in Angola, which represents its largest market in Africa.

Mota-Engil has a long history of involvement in Africa, and is currently working in 14 African countries.

Mini-excavators on the market

The latest compact machinery available in Africa and the Middle East, offering increased efficiency and improved performance.

BOBCAT R2-SERIES 5-6 TONNE MINI-EXCAVATORS

Bobcat has launched the company's new R2-Series generation of 5-6 tonne mini-excavators – the new E50z and E55z models – offering many new state-of-the-art features and options.

Robert Husar, product line director for Bobcat mini-excavators in EMEA, said, “We are delighted to announce the new Bobcat R2-Series 5-6 tonne mini-excavators, the design of which has benefitted from the close involvement of our customers at every stage of the process. The truly striking styling of these new machines is indicative of their robust and dynamic design and excellent machine fit and finish. All these models offer a best-in-class mix of high performance, superb stability and smooth controllability of the working functions.”



CAT 2.7-3.5 TON MINI-EXCAVATORS

Boosting operating efficiency, servicing ease and operator comfort, the new Cat 302.7 CR, 303 CR and 303.5 CR hydraulic mini-excavators introduce industry-first features for the 2.7- to 3.5-ton class machines. Built on the Next

Generation platform that offers consistent

operator experience through the 1.5- to 10-ton range, each new model features exclusive stick steer, cruise control, operator adjustable settings, and tilt-up canopy or cab as standard equipment.

Expanded use of common parts throughout the line plus the sturdy exterior design help reduce parts inventory investment and lower repair costs. Daily maintenance checks are quickly made from ground level through side doors, while the tilt-up cab design offers access to components for servicing.



The Cat 302.7 CR excavator.

THE SEVEN-TON EC75D COMPACT EXCAVATOR FROM VOLVO CE

The seven-ton EC75D compact excavator from Volvo Construction Equipment (Volvo CE) offers class-leading digging capacity, stability, serviceability and operator comfort in African and Middle Eastern markets.

The undercarriage of the EC75D is wider and longer than those of its competitors, which ensures excellent stability and lifting capacity, high ground clearance and an extensive working range. Thanks to its larger size, the EC75D can be used with a bigger bucket than similar machines in the same class, helping to increase productivity. The boom and arm are made from high strength steel for maximum durability and uptime and are fixed to the superstructure at the side of the cab for improved stability.



JCB 1.5-TONNES TO 8.5-TONNES MINI-EXCAVATORS

JCB offers a full line of mini excavators, from 1.5-tonnes to 8.5-tonnes operating weight.

The line-up starts with the 1.5-tonne 16C-1 conventional tailswing model and the 18Z-1 zero tailswing machine. There are two models in the 2.5-tonne class, in the 8025ZTS and the 8026, while the company has just introduced two new mini excavators at 3.5-tonnes, the 35Z-1 and the 36C-1.

For those customers that require a midi machine, JCB offers the 48Z-1 and the 55Z-1, at 5.0-tonnes and 5.5-tonnes respectively, with the 65R-1 reduced swing machine at 6.5-tonnes operating weight. The line-up is completed by the 8.5-tonne class 85Z-2 and the 86C-2 models.



The 35Z mini-excavator from JCB.



A highway road in Cape Town.

Image Credit: Adobe Stock

New material specifications for road builders

Quarrymen and miners of materials used in the construction of roads have a new set of specifications to be followed, in order to supply national and provincial roads agencies as well as all metros and municipalities.

Surface mining industry association, ASPASA, has worked tirelessly with the Committee of Transport Officials (COTO) and role-players to hammer-out standards for different types of materials to be used on our roads. Crushed aggregates and sand are key components in the manufacture of this type of infrastructure and the new COTO specifications effectively replaces the previous, widely known COLTO specification.

Industry veteran and the motivating force behind ASPASA's submission to COTO, Barry Pearce, who heads up ASPASA's technical committee, says the new specifications have brought the industry together like never before and led to close cooperation between the roads agencies, engineers, materials suppliers and road contractors. Material suppliers will now have a two years trial period to implement, test, debate and refine the specifications before final acceptance.

Simple implementation

Now all that remains is for our ASPASA members to read the specification in its entirety, especially chapter four which deals

directly with the supply of materials. The move from the COLTO to COTO specifications also comes with a change in sieve sizes from imperial to metric ISO sizes. That means quarries will need to make minor changes or possibly set about changing worn grizzlies and screens to match the relevant COTO sizes so as to conform to the new specification.

"The specifications also pay closer attention to the testing and acceptance of materials where they are mined and upon delivery and usage. ASPASA has long been of the opinion that acceptance needs to be conducted at the source of the material and before any further processing, such as the addition of cement or binders take place.

"For now, this method of acceptance is required for materials sourced from approved borrow pits and requires engineers to test and accept crushed and stockpiled material at the borrow pit before delivery to site and further processing by the contractor. Our technical committee, however, suggests the same should apply to existing quarries with some minor adjustments where compliance with existing legislation is already in

place such as HSE requirements. If this approach of approval of material is adopted, I think the COTO specification will be as near to 'perfect' as we can get it right now," said Pearce.

Exclusion clauses

He adds that onsite acceptance testing at the quarries will leapfrog one of the biggest hurdles in the supply of materials, namely exclusion clauses. These are used by materials suppliers as a measure of protection to ensure slight variances in quality of materials as specified are accounted for and can be excluded from the overarching specification as well as protection from claims where the material has been further processed on site by the contractor. In other words, a more clear differentiation in where the material responsibility is passed to the contractor and the supplier is no longer responsible.

Nonetheless, despite not being a requirement of the new COTO specifications, these and other sticking points should be ironed-out by the supplier and the engineers, road builders and transport agencies before any project is started. ASPASA members are always encouraged to

ensure the contractual work of specifying, onsite and laboratory testing, processes of delivery and onsite acceptance methods are agreed upon upfront and are legally documented to prevent issues arising into the future.

ASPASA members already have all the legal and regulatory compliances in place, so it also makes sense for agencies and specifiers to make use of the association's members where appropriate. Provided they understand and implement the requirements of COTO then any ASPASA member should be able to supply any transport agency without problems.

Ongoing work

"ASPASA and our technical committees will continue to work with the agencies, Road Pavement Forum, South African Bitumen Association and other role players to ensure COTO specifications are upheld and that our members are well-versed in the supply of in-spec materials. We will also continue to highlight any issues that may arise in the two-year implementation period," concluded Pearce. ■

For more information visit www.aspasa.co.za

CONSTRUCTION & MINING Buyers' Guide

Section One: Listings by Category

Section Two: Suppliers

Section Three: Agents & Subsidiaries in Africa

Please mention African Review when contacting your supplier

Section One: Listings by Category

AIR COMPRESSORS

CANTONI MOTOR S.A.
Coelmo SpA
Doosan Portable Power

Diesel Driven

Brokk AB
Doosan Portable Power

Electric

Altaaq Global Energy Services
Brokk AB
CANTONI MOTOR S.A.
IREM S.p.A. a socio unico
Lovato Electric S.p.A.

BUILDINGS

Cavatorta France SAS
Mytilineos S.A.

COMPONENTS AND SPARE PARTS

Haladjian Mining
Rossi S.p.A.
Wirtgen Group Branch of John Deere GmbH & co. KG

CONCRETE EQUIPMENT

Bobcat
HMD Africa S.A.L (Offshore)
Pan Mixers SA (Pty) Ltd.
Parker Plant Ltd.
Trelawny SPT Ltd.

Batching Plant

HMD Africa S.A.L (Offshore)
Jessop & Associates (Pty) Ltd.
Lintec & Linnhoff Holdings Pte Ltd
Pan Mixers SA (Pty) Ltd.

Block/Tile- Making Equipment

Jessop & Associates (Pty) Ltd.
Pan Mixers SA (Pty) Ltd.

Breakers

Bobcat
HMD Africa S.A.L (Offshore)
Jubaili Bros
Lovato Electric S.p.A.
Powerscreen

Concrete Pumps

HMD Africa S.A.L (Offshore)
Pan Mixers SA (Pty) Ltd.

Mobile Mixing Plant

Bobcat
Lintec & Linnhoff Holdings Pte Ltd
Pan Mixers SA (Pty) Ltd.

Pipe Making Equipment

Pan Mixers SA (Pty) Ltd.

Recycling

HMD Africa S.A.L (Offshore)
Lintec & Linnhoff Holdings Pte Ltd

McCloskey International
Powerscreen

Concrete Equipment -Other

Brokk AB
Cavatorta France SAS
Doosan Portable Power
HMD Africa S.A.L (Offshore)
Jessop & Associates (Pty) Ltd.
Lintec & Linnhoff Holdings Pte Ltd
Pan Mixers SA (Pty) Ltd.

CONSTRUCTION VEHICLES

Bell Equipment Southern Africa
Caterpillar SARM
DEUTZ AG
HMD Africa S.A.L (Offshore)
Kanu Equipment Africa
Volvo Construction Equipment
Watermaster | Aquamec Ltd

Dump Trucks and Haulers

Caterpillar SARM
HMD Africa S.A.L (Offshore)
Panafrican Equipment Group
Volvo Construction Equipment AB

Engines, Components and Accessories

Baudouin
CANTONI MOTOR S.A.
Caterpillar SARM
Haladjian Mining
Jubaili Bros
Perkins Engines Company Limited
Rolls-Royce Solutions Africa (Pty) Ltd.
Volvo Penta

Site Dumpers

Caterpillar SARM
HMD Africa S.A.L (Offshore)

Tractors

Action Construction Equipment Ltd.
Caterpillar SARM

Trailers

BEDELCO SPRL
Faymonville Distribution
Goldhofer Aktiengesellschaft
Towerwrks Egypt

Truck Mounted Platforms

Towerwrks Egypt

Construction Vehicles - Other

Caterpillar SARM
HMD Africa S.A.L (Offshore)

CONSULTANCY SERVICES

Allott (Nigeria) Ltd.
Haladjian Mining

DEMOLITION EQUIPMENT

Bobcat
Brokk AB
Doosan Portable Power
McCloskey International
Powerscreen
Rockster Austria International GmbH
Terex Minerals Processing Systems (Terex MPS)
Volvo Construction Equipment

DRILLING

Brokk AB
Haladjian Mining

Drilling Machinery and Plant

CANTONI MOTOR S.A.
Doosan Portable Power

Piling

Watermaster | Aquamec Ltd

Trenching and Pipe Laying

Liugong Dressta Machinery sp. z o.o.

Drilling - Other

Doosan Portable Power

EARTHMOVING EQUIPMENT

Action Construction Equipment Ltd.
Bell Equipment Southern Africa
Bobcat
Caterpillar SARM
DEUTZ AG
HMD Africa S.A.L (Offshore)
J.A Delmas S.A.S
Kanu Equipment Africa
Liugong Dressta Machinery sp. z o.o.
MB S.p.A
Panafrican Equipment Group
Volvo Construction Equipment

Attachments and Accessories

Bobcat
Caterpillar SARM
Magni Telescopic Handlers

Backhoe Loaders

Action Construction Equipment Ltd.
Bobcat
Caterpillar SARM
HMD Africa S.A.L (Offshore)

Dozers

Caterpillar SARM
HMD Africa S.A.L (Offshore)
Liugong Dressta Machinery sp. z o.o.

Excavators

Caterpillar SARM
Volvo Construction Equipment AB
Watermaster | Aquamec Ltd

Loaders - Other

Bobcat
Caterpillar SARM
HMD Africa S.A.L (Offshore)
Volvo Construction Equipment AB

Mini-Excavators

Bobcat
Caterpillar SARM
HMD Africa S.A.L (Offshore)

Motor Graders

Caterpillar SARM
HMD Africa S.A.L (Offshore)

Scrapers

Caterpillar SARM
HMD Africa S.A.L (Offshore)
Trelawny SPT Ltd.

Skidsteer Loaders

Bobcat
Caterpillar SARM
HMD Africa S.A.L (Offshore)

Earthmoving Equipment - Other

BEDELCO SPRL
Caterpillar SARM
Liebherr- Export AG

Equipment

J.S. Corrugating Machinery Co. Ltd.

Materials

Interplast Limited

Services

J.A Delmas S.A.S

LIFTING EQUIPMENT

Action Construction Equipment Ltd.
Bell Equipment Southern Africa
CANTONI MOTOR S.A.
Condra Cranes and Hoists
HAULOTTE GROUP
HMD Africa S.A.L (Offshore)
Liebherr- Export AG
Magni Telescopic Handlers
Volvo Penta

Components and Accessories

Cat Lift Trucks
Rossi S.p.A.

Cranes

CANTONI MOTOR S.A.
Condra Cranes and Hoists
Liebherr- Export AG

Hoists

CANTONI MOTOR S.A.
Condra Cranes and Hoists

Lift Trucks

Cat Lift Trucks

Other Materials Handling

Cat Lift Trucks
Condra Cranes and Hoists

Pneumatic

BEDELCO SPRL

Telescopic Handlers

Bobcat
HMD Africa S.A.L (Offshore)
Magni Telescopic Handlers

MOBILE POWER SUPPLY UNITS

Altaaq Global Energy Services
Coelmo SpA
DEUTZ AG
Doosan Portable Power
Green Power Systems S.r.l.
JMG Ltd.
LINZ Electric SPA
Mytilineos S.A.

Generator Sets

Altaaq Global Energy Services
Clarke Energy
Coelmo SpA
Doosan Portable Power
Green Power Systems S.r.l.
JMG Ltd.
Jubaili Bros
LINZ Electric SPA
Lovato Electric S.p.A.
Mahindra Powerol, Mahindra & Mahindra
Mytilineos S.A.
Rolls-Royce Solutions Africa (Pty) Ltd.

PUMPING EQUIPMENT

HMD Africa S.A.L (Offshore)
Watermaster | Aquamec Ltd

Concrete

Bobcat
Pan Mixers SA (Pty) Ltd.

Truck Mounted

HMD Africa S.A.L (Offshore)

Pumping Equipment - Other

Baudouin
CANTONI MOTOR S.A.
HMD Africa S.A.L (Offshore)
Interplast Limited

Crushing, Screening and Washing

CANTONI MOTOR S.A.
HMD Africa S.A.L (Offshore)
McCloskey International
Parker Plant Ltd.
Powerscreen
Rockster Austria International GmbH

Terex Minerals Processing Systems (Terex MPS)
Volvo Penta
Wirtgen Group Branch of John Deere GmbH & co. KG

Grinding Equipment

CANTONI MOTOR S.A.
Pan Mixers SA (Pty) Ltd.
Trelawny SPT Ltd.

Mixing

CANTONI MOTOR S.A.
HMD Africa S.A.L (Offshore)
Pan Mixers SA (Pty) Ltd.

Quarrying

Doosan Portable Power
Liugong Dressta Machinery sp. z o.o.

Magni Telescopic Handlers
Powerscreen
Terex Minerals Processing Systems (Terex MPS)

ROAD BUILDING EQUIPMENT

Action Construction Equipment Ltd.
Caterpillar SARRL
Cavatorta France SAS
Ciber Equipamentos Rodoviarios Ltda.
Doosan Portable Power
HMD Africa S.A.L (Offshore)
Panafrican Equipment Group
Volvo Construction Equipment
Wirtgen Group Branch of John Deere GmbH & co. KG

Asphalt Plant

Ciber Equipamentos Rodoviarios Ltda.
Haladjian Mining
Lintec & Linnhoff Holdings Pte Ltd
Parker Plant Ltd.

Compaction Equipment

Caterpillar SARRL
Panafrican Equipment Group

Pavers

Caterpillar SARRL
Pan Mixers SA (Pty) Ltd.
Panafrican Equipment Group
Volvo Construction Equipment AB

Recycling

Bobcat
Lintec & Linnhoff Holdings Pte Ltd
Rockster Austria International GmbH
Terex Minerals Processing Systems (Terex MPS)

Rollers

Caterpillar SARRL
HMD Africa S.A.L (Offshore)

Road Building Equipment - Other

BEDELCO SPRL
Bobcat
Caterpillar SARRL
Cavatorta France SAS
Doosan Portable Power
HMD Africa S.A.L (Offshore)
Lintec & Linnhoff Holdings Pte Ltd

Liugong Dressta Machinery sp. z o.o.

STEEL

Towerwrks Egypt

Fabrication and Structures

Towerwrks Egypt

TOOLS

CANTONI MOTOR S.A.
Doosan Portable Power

Mechanical

Mytilineos S.A.

Pneumatic

BEDELCO SPRL
Doosan Portable Power
Trelawny SPT Ltd.

Tools - Other

Doosan Portable Power

UNDERGROUND & MINING MACHINERY

Bell Equipment Southern Africa
CANTONI MOTOR S.A.
J.A Delmas S.A.S
Kanu Equipment Africa
Liebherr- Export AG
Magni Telescopic Handlers
Normet Group Oy

OTHER SITE EQUIPMENT AND MATERIALS

Bobcat
Coelmo SpA

Doosan Portable Power

Fencing

Cavatorta France SAS
Interplast Limited

Lighting Masts/Towers

Doosan Portable Power
Green Power Systems S.r.l.
Jubaili Bros
LINZ Electric SPA
Towerwrks Egypt

Pipe and Cable Detecting Systems

Interplast Limited

Sand Blasting Equipment

Doosan Portable Power

Scaffolding

HMD Africa S.A.L (Offshore)
Wilhelm Layher GmbH & Co KG

Silos

Lintec & Linnhoff Holdings Pte Ltd
Pan Mixers SA (Pty) Ltd.

WELDING EQUIPMENT

Coelmo SpA
Green Power Systems S.r.l.
Interplast Limited
LINZ Electric SPA

USED EQUIPMENT

Bell Equipment Southern Africa
Caterpillar SARRL
J.A Delmas S.A.S
Kanu Equipment Africa

Rental Equipment

Altaaqa Global Energy Services
Caterpillar SARRL
J.A Delmas S.A.S

Complete Solutions for Electrical Needs

Altaaqa Global Energy Services
Jubaili Bros
Lovato Electric S.p.A.
Mytilineos S.A.

SAFETY EQUIPMENT

Sandvik Mobile Crushers and Screens

MOTORS/DRIVERS/CONTROLS

CANTONI MOTOR S.A.

CONVEYOR SYSTEMS

CANTONI MOTOR S.A.
McCloskey International
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Terex Minerals Processing Systems (Terex MPS)

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Section Two: Suppliers

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Agents:

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Kenya - Mantrac Kenya Ltd.
Libya - Free Libya Tractors
Nigeria - Mantrac Nigeria Ltd.

Sierra Leone - Mantrac Sierra Leone Ltd.
 South Sudan - Ezentus FZE Co. Ltd.
 Tanzania - Mantrac Tanzania Ltd.
 Tunisia - Parenin SA
 Uganda - Mantrac Uganda Ltd.
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Caterpillar SARL



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- Angola - Barloworld Equipamentos Angola Lda. (Caterpillar SRL)
- Botswana - Barloworld Equipment Botswana Pvt. Ltd. (Caterpillar SRL)
- Burkina Faso - Burkina Equipements (Caterpillar SARL)
- Cameroon - Tractrafric Equipement Cameroun
- Cameroon - Tractrafric Equipement Cameroun (Caterpillar SRL)
- Chad - Tractrafric Equipement (Chad)
- Congo Brazzaville - Tractrafric Equipement Congo
- Congo Brazzaville - Tractrafric Equipement Congo 1
- Congo DR - Tractrafric Equipement RDC
- Cote D'Ivoire - Manutention Africaine (Cote D'Ivoire) (CATERPILLAR 1)
- Cote D'Ivoire - Manutention Africaine Cote D'Ivoire(CATERPILLAR 2)
- Djibouti - Anciens Comptoirs Ries
- Egypt - Mantrac Egypt(Caterpillar SARL 1)
- Egypt - Mantrac Egypt(Caterpillar SARL 2)
- Egypt - Mantrac Egypt(Caterpillar SARL 3)
- Egypt - Mantrac Egypt(Caterpillar SARL 4)
- Eritrea - Eritrea Equipment PLC
- Ethiopia - Ries Engineering S. Co. (Ethiopia - Caterpillar SARL)
- Gabon - Tractrafric Equipement Gabon (Caterpillar SRL)
- Gambia - JA Delmas Export - Gambia (SARL)
- Ghana - Mantrac Ghana Ltd. (Caterpillar SARL 3)
- Ghana - Mantrac Ghana Ltd.(Caterpillar SARL 1)
- Ghana - Mantrac Ghana Ltd.(Caterpillar SARL 2)
- Guinea - Manutention Guineenne
- Guinea Bissau - Bissau Equipamentos
- Guinee Equatoriale - Tractrafric Equipement (Guinee equ)
- Kenya - Mantrac SAE
- Kenya - Mantrac SAE
- Kenya - Mantrac SAE (CAT SRL Kenya 1)
- Lesotho - Barloworld(LESOTHO)
- Liberia - Liberia Equipment Ltd. (Cat SRL)
- Madagascar - Henri Fraise Fils & Co.(CATERPILLAR 1)
- Malawi - Barloworld Equipment Malawi Ltd.(CATERPILLAR 2)
- Malawi - Barloworld(CATERPILLAR SRL 1 malawi)
- Mali - Manutention Africaine (Mali)
- Mauritania - Societe Mauritanienne Des Tracteurs SARL
- Mauritius - Ireland Blyth Ltd.
- Mauritius - Tractrafric Equipment International (mauritius)
- Morocco - Tractrafric Equipement Maroc
- Mozambique - Barloworld(CATERPILLAR SRL Mozambique)
- Namibia - Barloworld Namibia (Pty) Ltd. (cat SRL)
- Niger - Manutention Africaine (Niger)(CATERPILLAR)
- Nigeria - Mantrac Nigeria Ltd. (CATERPILLAR 1)
- Nigeria - Mantrac Nigeria Ltd. (CATERPILLAR 2)

- Nigeria - Mantrac Nigeria Ltd. (CATERPILLAR 3)
- Nigeria - Mantrac Nigeria Ltd.(CATERPILLAR 4)
- Reunion - Societe Commerciale Industrielle de Matieriels
- Rwanda - Tractrafric Equipment Rwanda
- Senegal - Societe Auxiliaire (Senegal) D Equipements (Saudequip)
- Sierra Leone - Mantrac Sierra Loene Ltd. (CATERPILLAR)
- South Africa - Barloworld Equipment (CATERPILLAR 1)
- South Africa - Barloworld Equipment (CATERPILLAR 2)
- Sudan - Sudanese Tractor Company Limited (SUTRAC)
- Swaziland - Barloworld Equipment Swaziland (Pty) Ltd.
- Tanzania - Mantrac SAE (CATERPILLAR 4)
- Tanzania - Mantrac SAE (CATERPILLAR 1)
- Tanzania - Mantrac SAE (CATERPILLAR 2 tan)
- Tanzania - Mantrac SAE (CATERPILLAR 3)
- Tanzania - Mantrac SAE (CATERPILLAR 5)
- Togo - Togo Equipment
- Tunisia - Parenin SA
- Uganda - Mantrac Uganda Ltd. (CATERPILLAR)
- Yemen - Tehama Trading
- Zambia - Barloworld Equipment Zambia Ltd. (CATERPILLAR)
- Zimbabwe - Barzem Enterprises Pvt. Ltd.

Cavatorta France SAS

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Agents:

- Algeria - TPS - Tractor Parts Services SARL
- Morocco - SMDM - Societe Marocaine de Distribution Materiel
- Nigeria - SCOA Trac
- Portugal - Moviter Equipamentos Lda
- South Africa - Wirtgen South Africa (Pty) Ltd.

Clarke Energy

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Coelmo SpA

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Agents:

Togo - ADTF SARL

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Agents:

- Botswana - Duneton (Pty) Ltd.
- Zambia - EC Mining Ltd.

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Goldhofer Aktiengesellschaft

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Green Power Systems S.r.l.

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Haladjian Mining

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HAULOTTE GROUP

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HMD Africa S.A.L (Offshore)

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Interplast Limited

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IREM S.p.a. a socio unico

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Agents:

Kenya - Specialised Power Systems Ltd.

J.A Delmas S.A.S



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Agents:

Egypt - FEDAWY BROS.CO

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Agents:

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Agents:

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Liebherr- Export AG

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Lebanon - Lintec & Linnhoff Maschinen Pte Ltd

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Liugong Dressta Machinery sp.

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Sudan - DAL ENGINEERING CO.LTD

MB S.p.A



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Agents:

South Africa - Kemach Equipment

Mytilineos S.A.



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Normet Group Oy



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Ghana - Panafrican Equipment (Ghana) Ltd.
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- Cameroon - SMT (CAMEROON)
- Congo Brazzaville - SMT (Congo)
- Congo DR - SMT (Congo DR)
- Cote D'Ivoire - SMT - Ivory Coast
- Egypt - Ghabbour Egypt
- Ethiopia - Equatorial Business Group Pvt. Ltd. Co.
- Gabon - SMT (GABON)
- Ghana - SMT (GHANA)
- Kenya - NECST Motors Kenya Ltd
- Liberia - SMT (LIBERIA)
- Madagascar - Leal Equipements Compagnie LTEE (MADAGASCAR)
- Mauritius - Leal Equipements Compagnie LTEE (MAURITIUS)
- Morocco - SMT Morocco
- Mozambique - Babcock International (Mozambique)
- Nigeria - SMT Nigeria 1
- Rwanda - SMT (RWANDA)
- Seychelles - Leal Equipements Compagnie LTEE (SEYCHELLES)
- Sierra Leone - A. Yazbeck & Sons Ltd.
- South Africa - Babcock International (South Africa)
- Sudan - Al Barajoub Engineering
- Tanzania - NECST Motors Tanzania Ltd
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- Tunisia - Nordic Machinery
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- Congo DR - SMT RD Congo 1
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- Cote D'Ivoire - SMT - Ivory Coast
- Egypt - Orasco Trading Co. SAE
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- Morocco - SMT Morocco
- Nigeria - SMT Nigeria 1
- Nigeria - SMT Nigeria 2
- Nigeria - SMT Nigeria 3
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Wilhelm Layher GmbH & Co KG, through its subsidiaries, manufactures and markets scaffolding systems. It offers modular scaffoldings, facade scaffoldings, event-systems for grandstands and stages, weather protection roofs, scaffolding claddings, rolling towers, and ladders. The company also provides scaffolding/protective systems, such as round scaffoldings, scaffolding decks, cassette roofs, lightweight cassette roofs, and scaffolding accessories. It offers its products through representatives worldwide. The company was founded in 1945 and is based in Güglingen, Germany. It has subsidiaries internationally.

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Agents:

- Algeria - T.P.S. SARL Tractor Parts Services
- Angola - Movicortees Angola - Equipamentos & Servicos, Lda
- Benin - DEM Bénin
- Botswana - WIRTGEN South Africa (Pty) Ltd. (Botswana)
- Burkina Faso - DEM Burkina Faso
- Cameroon - Kanu Equipment Cameroon Sarl
- Congo DR - DEM D.R. Congo
- Cote D'Ivoire - DEM Côte d'Ivoire
- Djibouti - Moenco
- Egypt - ACE Arabian Company for Engineering
- Ethiopia - Moenco (Ethiopia)
- Ghana - DEM Ghana
- Guinea - DEM Group SA
- Kenya - Panafrikan Equipment Ltd. (Kenya - Wirtgen)
- Lesotho - WIRTGEN South Africa (Pty) Ltd. (Lesotho)
- Liberia - Kanu Equipment Liberia Ltd
- Libya - WIRTGEN Libya J. C.
- Malawi - Machinery Spares and Trading Limited
- Mauritania - DEM Mauritania
- Mauritius - UMCL Ltd.
- Mauritius - UMCL Ltd. (Mauritius)
- Morocco - SMDM - Société Marocaine de

- Distribution de Matériel
- Mozambique - Movicortees Mosambique, Lda
- Nigeria - SCOA TRAC (Wirtgen)
- Portugal - Moviter Equipamentos Lda
- Senegal - DEM Senegal
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- Sierra Leone - Kanu Equipment Sierra Leone Ltd.
- South Africa - WIRTGEN South Africa (Pty) Ltd.
- South Sudan - Machine Afrik Co. Ltd.
- Spain - EMSA Maquinaria y Projectos S.L.
- Sudan - Machine Afrik Co. Ltd.
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- Togo - DEM Bénin (Togo)
- Tunisia - SOTRADIES
- Zimbabwe - Machinery Exchange (pvt) Ltd

Zest WEG



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Zest WEG, a subsidiary of leading Brazilian motor and controls manufacturer WEG, has a strong commitment to contributing to the development of the African region, and has been servicing the mining sector on the continent for more than 40 years. An in-depth understanding of the harsh conditions found within this sector and years of experience on the continent have ensured the Zest WEG service offering is fit-for-purpose. By leveraging best practice engineering and manufacturing capabilities, the group can offer a range of standard off-the-shelf products and end-to-end energy solutions. From single product installations to individually customised solutions, which are application specific, the latest technology is used to ensure optimum performance and reliability without compromising on energy efficiency. Zest WEG product line-up includes low- and high-voltage electric motors, vibrator motors, variable speeds drives, softstarters, power and distribution transformers, MCC's, containerised substations, mini-substations, diesel generator sets, switchgear and cogeneration and energy solutions, as well as electrical and instrumentation engineering and project management services.

Agents:

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Section Three: Agents & Subsidiaries in Africa

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TPS - Tractor Parts Services SARL

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Auto Sueco - Angola 1

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Barlworld Equipamentos Angola Lda. (Caterpillar SRL)

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Movicortes Angola – Equipamentos & Serviços, Lda

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DEM Bénin

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Burkina Faso

Burkina Equipements (Caterpillar SARL)

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Cameroon

Kanu Equipment

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Tractrafic Equipement Cameroun (Caterpillar SRL)

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Chad

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



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MANITOWOC RELEASES GROVE GHC110 TELESCOPING CRAWLER CRANE

Manitowoc has added the Grove GHC110 to its telescoping crawler crane range, designed for a range of tasks, such as alternative energy applications, road and bridge construction.

Its five-section main boom extends from 40.4ft to 153.4ft, producing an impressive maximum tip height of 162ft or 212ft when a standard 49.2ft bifold offsettable swingaway boom extension is added. The main boom sections are quickly and efficiently moved into the required positions using two horizontally mounted pins and a single telescopic cylinder.

JJ Grace, product manager for GHC cranes at Manitowoc, said, “It’s like a tough younger brother for the GHC140. It’s a perfect fit for contractors who need stout load charts and high manoeuvrability.”

The GHC110 offers 100% pick-and-carry



Image Credit: Manitowoc

The Grove GHC110 boasts an impressive 110 US tonne capacity.

capability across its standard 0.6°, 1.5° and 4° load charts and its new undercarriage offers several advantages in terms of reducing the need for site prep. The wide tracks create a large ground contact area which produces enhanced stability, with the hydraulically extendable and retractable cross members offering a choice of three potential track spans (gauges).

The engine’s noise emissions have been reduced through the addition of extra sound insulation to the engine bay. An in-cab camera enables operators to easily monitor movement of the main and auxiliary hoists.

Additional three exterior cameras provide increased visibility of areas where the operator’s view would otherwise be restricted. There is also up to 20° of cab tilt to improve operator comfort and vision for long boom and extension work.

MACHINE CONTROL SOLUTIONS FOR CASE D SERIES EXCAVATORS

CASE Construction Equipment has introduced OEM-Fit 2D and 3D machine control solutions, designed by Leica Geosystems, part of Hexago, now available for CASE D Series excavators from CASE SiteControl Certified dealers.

This ensures that the optimal combination of machine and solution is installed and tested by CASE certified precision field specialists. It also simplifies the acquisition process and allows for the technology to be grouped with the purchase of the machine.

Nathaniel Waldschmidt, product manager, CASE Construction Equipment, commented, “It takes the guesswork out of what solution works best with each machine and ensures that it is installed and tested by certified professionals before it’s delivered to the contractor. The excavator and the machine control system are optimally matched and calibrated – helping the owners and operators of each machine get up and running immediately upon delivery of the machine.”

“Machine control has the ability to transform the productivity, efficiency and long-term profitability of excavators,” said Waldschmidt. “We’re now making the addition of machine control with excavators completely turnkey, allowing contractors to experience those benefits in an extremely seamless experience with their CASE SiteControl Certified dealer.”

Leica Geosystems’ machine control solutions offer several features that increase the productivity, accuracy and safety of excavators while providing operators an easy-to-use hardware and software platform.

Julius Berger receives Liebherr wheeled excavators for projects in Nigeria

Julius Berger has ordered ten more Liebherr A 920 Litronic wheeled excavators to be used in the future for large-scale projects in Nigeria.

The machines have an operating weight of around 21,000 kg with an engine power of 129 kW/ 175hp in exhaust emissions category IIIA. High digging performances, high lift capacities and fast work cycles make them essential assistants in an everyday construction site operation. Thanks to their mobile undercarriage and the good driving characteristics, the machines can be moved quickly and easily on the construction site. The robust undercarriage concept with a stabiliser blade at the front, as well as support lugs at the rear, ensure secure positioning and high stability during applications even with full loads. The upper carriage concept with its optimal maintenance accessibility, the harmonised Liebherr hydraulic system and the powerful construction machine engine also impressed the customer.

Julius Berger International GmbH and Julius Berger Nigeria Plc form the core of the Julius Berger Group, whose core technologies are in the construction and repair of diverse and complex civil engineering works. Some of the large-scale projects in Nigeria are construction projects with international importance.

“In order to be able to successfully execute large-scale projects in Nigeria, we resorted to searching for reliable and powerful wheeled excavators,” said Peter Leuschner, senior mechanical engineer at Julius Berger International GmbH. Other criteria in the purchase decision were that the wheeled excavators can be used in diverse applications and at the same time are productive and efficient for daily construction site requirements.



Image Credit: Liebherr

The acceptance of the first five machines took place recently at Liebherr-Hydraulikbagger GmbH in Kirchdorf an der Iller.

TADANO LAUNCHES ALL TERRAIN CRANE WITH 70 TONNE LIFTING CAPACITY

With the release of the AC 4.070-1 and AC 4.070L-1, mobile crane manufacturer Tadano is introducing an upgraded four-axle all terrain crane with a lifting capacity of 70 tonnes and two boom lengths.

The six-section main boom has a length of 52.1m and, at its full boom length, the crane can lift 5.8 tonnes. A 44m main boom continues to be available as an option.

Customers who acquire the new AC 4.070(L)-1 also benefit from the latest carrier cab from Lauf and the identical superstructure controls using the AML-F crane control system.

With manual or stepless hydraulic adjustment capabilities, it can be used at 0° to 40° to overcome an extremely wide variety of obstacles. In addition, the larger total lifting capacity continuously changes in line with all radii.



Image Credit: Tadano

The new Tadano AC 4.070(L)-1 all terrain crane.

The intuitive and precise AML-F crane control system makes it possible to achieve short set-up times to get going quickly and ensures a high degree of flexibility when it comes to positioning the crane thanks to asymmetrical outrigger setting capabilities. The automatic lifting

capacity selection function makes things easier for crane operators and the Tadano Lift Adjuster provides greater convenience during lifting by reliably reducing load swinging.

Thanks to the ability to flexibly subdivide its counterweight, the AC 4.070(L)-1 can be configured very precisely for an extremely wide variety of axle load limits, all the way up to 16.5 tonnes. Without a main boom extension and with 4.4 tonnes of counterweight, the crane can comply with the ten-tonne axle load limit that is becoming increasingly more common. When staying under a 12-tonne axle load limit instead, the crane can even travel with up to 12.2 tonnes of counterweight.

The AC 4.070(L)-1 benefits from a reliable and cost-effective two-engine design featuring the latest exhaust emission control technology.

Linnhoff TSD 1500 MobileMix asphalt plants first choice in Ethiopia

In 2018, the Ethiopian Government announced a programme to double the length of their road network to 200,000 km. This kick-started a series of new projects and prompted many contractors to look for fast and efficient construction technology to support their activities which led to several Linnhoff TSD 1500 MobileMix asphalt mixing plants being commissioned in the country.

The asphalt plants have featured on a host of projects nationwide, providing hot mix asphalt for constructing new roads and upgrading older ones from gravel to asphalt paved roads to meet the road design demands of the Ethiopian Roads Authority (ERA).

The Linnhoff TSD 1500 MobileMix asphalt plants have featured in many projects in the county including: 59 km Ginchi-Shikute Road and the 60 km Shikute-Chulute Road in the Oromi region, valued at approximately US\$40mn; the 84 km Alem Ketema-Degolo Road Upgrade, valued at around US\$28.6mn; the Turmi Omo Road valued at around US\$18mn; and the 17 km Maicheew-Mehoni Road as well as the 20 km harar-Jijiga Road.

With a rated production capacity of 120 tonnes per hour (at 3% moisture content), the Linnhoff TSD 1500 MobileMix plants are ideal for short-term projects or work in remote locations due to the built-in chassis providing fast mobilisation and the range of customisable options available.

All units come equipped with a hydraulic power pack self-jacking system and Lintec & Linnhoff's unique screen drum technology eliminates the need for a hot elevator and vibrating screens.



Linnhoff TSD 1500 MobileMix asphalt plants boast a rated production capacity of 120 tonnes per hour (at 3% moisture content).

Image Credit: Lintec & Linnhoff

BAUER AIDS EGYPTIAN PORT EXPANSION

Last year, through its local subsidiary Bauer Egypt SAE, Bauer Spezialtiefbau GmbH was commissioned to help develop four of the six main port expansions planned by the Egyptian Government and, so far, it has been making steady progress in this endeavour.

Due to its geographical location between three continents, Egypt has a long history of trade and has begun work to expand six main ports to meet the growing demand of maritime trade.

One of the main ports that Bauer has been supporting, is the expansion of the Port of Alexandria in order to allow it to handle more cargo. The new 'Multi-Purpose Terminal 55/62' covers an area of approximately 56ha, which is to be extracted first and then made usable. Bauer Egypt began work here in September 2020.

Bauer Egypt SAE was commissioned by main clients EDECS and GIECO, with the foundation work for the semi-rectangular, 225,897 cu/m quay wall, consisting of a front diaphragm wall, two rows of central piles and a rear row of barrettes. The front diaphragm wall will be 1.2m thick, over a length of 1,500m and a thickness of 1.025m over a length of 1,100m. The 1,326 middle piles and 660 rear barrettes will be 39m deep, like the front diaphragm wall.

To complete this work two Bauer BG 28 rotary drilling rigs are being used alongside four trench wall cutters. The vertical elements are to be produced in parallel with the help of two huge mixing systems, which are initially located on the north and south sides of the wall and each cover a radius of 200m. As the work continues to make progress, the mixing plants will be moved along the quay wall.

Linatex rubber lining reduces downtime and cuts costs at Sentinel Mine in Zambia

After the Weir Minerals Africa team was asked to provide a lining solution that would last longer than the incumbent product for Kalumbila Minerals Limited's Sentinel Mine in Zambia, they offered the Linatex Premium Rubber and Linard 60 which have achieved six times the life of the product previously installed.

The competitor rubber lining was failing after two months, resulting in downtime and added costs for equipment hire and specialised personnel. The remote location of the site also made obtaining materials for repairs a challenge.

The Weir Minerals Africa team specified a double-layered rubber lining solution. A bottom layer of 30mm Linatex Premium Rubber was selected to improve impact absorption, due to its resilient properties. Linard 60 with a thickness of 25mm was selected for the top layer, due to its cutting and tearing resistance to the product reporting to the discharge chute.

The combination of 30mm Linatex Premium Rubber and Linard 60 has lasted for one year with little to no signs of wear. This is a 250% wear life improvement when compared to the competitor product. As a result, Sentinel Mine has experienced reduced downtime and benefitted from the associated cost savings, and with the increased plant availability maintenance personnel have been freed up to focus on other problematic areas in the plant.

Linatex Premium Rubber is a proprietary vulcanised natural gum rubber, produced through a unique liquid-phase compounding process using high quality natural latex. It exhibits outstanding strength, resilience and resistance to cutting and tearing, giving superior performance in wet abrasion conditions.

Sentinel Mine has a longstanding relationship with Weir Minerals, with a range of Weir Minerals products installed and serviced over many years. With this in mind, the mine was confident that the team would provide an effective solution. The order was delivered to the customer site timeously. Together with a team from the Weir Minerals Zambia branch, the lining of the parts took place during a scheduled plant shutdown.



Image Credit: Weir Minerals Africa
Linatex premium rubber and Linard 60 rubber combination installed on a typical chute.

METSO OUTOTEC MAINTAINS CLIMATE FOCUS ON ONE YEAR ANNIVERSARY

One year ago, Metso and Outotec merged and created a new leader in the mining, aggregates and metals refining industries. Boasting a presence in more than 50 countries, it is now one of the largest in its field.

In that time Metso Outotec has focused its strategy on sustainability and has launched 24 products or services to address its customers environmental challenges. These include energy- and water-efficient mining and industrial filtration solutions, circularity solutions to treat electronic scrap, a furnace camera for safer smelting operations and three shutdown services programmes for improved performance. Additionally, more than 100 products have been given the Planet Positive label as a tangible sign of the company's commitment to more environmentally friendly advanced processing of minerals and metals.

LUCARA FINANCES UNDERGROUND EXPANSION AND ONGOING OPERATIONS OF KAROWE MINE

Lucara Diamond Corporation has announced that it has signed loan documentation in relation to its senior secured project financing debt package of US\$220mn to fund the development of the underground project expansion and support the ongoing operations at Karowe Mine, Botswana.

The funding was partially facilitated by five mandated lead arrangers (MLAs); African Export-Import Bank (Afreximbank), Africa Finance Corp., ING, Natixis, and Societe Generale, London Branch.

Eira Thomas, president and CEO of Lucara, commented, "Lucara is excited to be moving forward with a fully financed underground expansion project, extending Karowe's mine life to at least 2040 and projected to deliver at least US\$4bn in additional revenues using conservative diamond price assumptions. Securing credit commitments for the arrangement of US\$220mn senior debt facilities from five leading international financial institutions, with significant mining and metals track records and experience in Africa, is an important achievement for Lucara and reflects confidence in the large-stone resource at Karowe and the considerable efforts undertaken over the last five years to scope and define this attractive, highly economic growth opportunity."

"We believe this expansion project comes at the right time in the market cycle, with improving supply and demand fundamentals helping to stabilise and support stronger diamond prices in the short and longer term. The Karowe mine remains one of the highest margin diamond mines in the world, having yielded five of the ten largest diamonds in recorded history and is the only mine to have recovered three diamonds greater than 1,000 carats," Thomas continued.

► BRIEFS

Mining licence for Sandfire Resources in Botswana



Image Credit: Adolphe Stock
The contract is expected to be finalised in the near term.

Perenti Global Limited has announced that Sandfire Resources has successfully satisfied one of the two primary conditions required for the finalisation of the Motheo Project contract, after receiving a mining licence.

The contract will have an estimated value of US\$496mn over an initial term of seven years and three months with a provision for a one-year extension. Sandfire and Perenti are continuing work towards the finalisation of the contract.

GoldStone on track for gold production target



Image Credit: Adolphe Stock
First gold pour is expected to occur in Q3 2021.

GoldStone Resources has received approval to start irrigation and leaching of ore placed on the heap leach pad at the Homase Mine in Ghana. The company remains on track to achieve the target production of 25,000oz of gold for the first eight months of production.

Asia Investments Management Services Limited has agreed a further extension to the timing of payment of interest on the US\$3mn secured gold loan, announced on 22 June 2021.

Tongon gold mine receives life extension in Côte d'Ivoire

Exploration success is set to extend Côte d'Ivoire's Tongon gold mine's life, according to Barrick president and chief executive Mark Bristow.

Speaking at a local media briefing, Bristow said that Tongon could be given a new lease of life thanks to promising results from near-mine exploration campaigns designed to replace the mine's depleted reserves. In addition to work on the promising Seydou North and Tongon West targets, Tongon has filed the documentation for the extension of its Nielle mining licence by a further 10 years.

"The successful commissioning of Tongon in the midst of a civil war was a landmark achievement in the development of a gold mining industry in the highly prospective but underexplored Côte d'Ivoire. Since then, the mine has been consistently profitable – it has just declared a US\$150mn dividend for the second quarter of this year – and boasts one of the best safety records in the Barrick group. Over time it has invested US\$1.77bn in the Ivorian economy in the form of taxes, salaries, payments to local suppliers and infrastructure developments," Bristow added.

In Barrick's spirit of partnership with its host communities, Tongon has provided the local villages with access to electricity and new markets through a network of power lines, roads and bridges, built new primary schools and clinics, boosted the development of a regional economy by employing local contractors and suppliers, and prefinanced a number of income-generating projects. Most recently, it has provided a surgical unit for the Mbengue clinic.



Image Credit: Alshin Stock

Barrick, through its predecessor Randgold Resources, has been investing in and partnering with Côte d'Ivoire through the country's many challenges and development stages.

SHANTA GOLD INCREASES GOLD RESOURCES AT NEW LUIKA GOLD MINE

Drilling at Bauhinia Creek East Area 1 target at New Luika Gold Mine (NLGM) in south western Tanzania, has generated 39,786oz of indicated resources of gold grading 4.74 g/t at a cut-off grade of 1.0 g/t Au, according to Shanta Gold's exploration update relating to drilling conducted in Q2 2021.

The East Africa-focused gold producer, developer and explorer further stated that, in aggregate with the additional ounces announced on 19 April 2021, 116,247oz have been added to Indicated Resources at NLGM in H1 2021 grading 6.47 g/t, at a cut-off grade of 1.0 g/t Au (before H1 2021 depletion).

Eric Zurrin, CEO at Shanta Gold, commented, "These drilling results at the Bauhinia Creek East Area 1 further underline the resource potential at New Luika, with an additional 116,247oz of gold being added to NLGM's Indicated Resources in the first half of this year."




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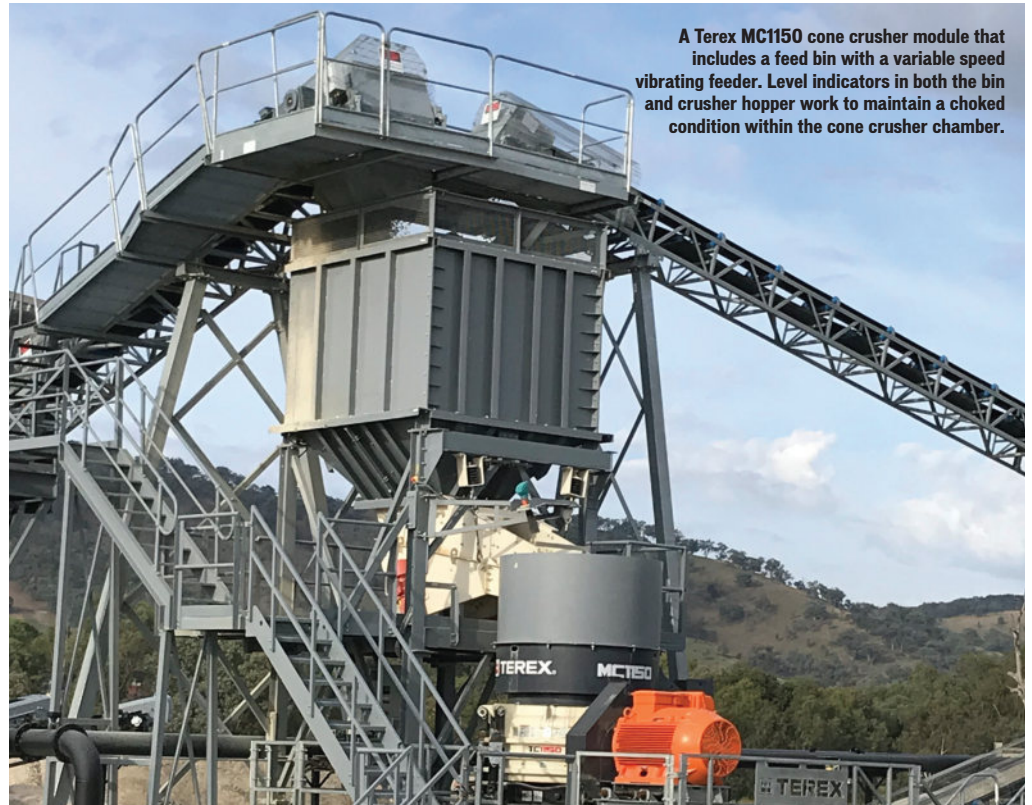
Crushers leading to quality aggregate

Paul Lilley, sales director for Terex MPS in Europe, Russia and Africa, explains that quarries have numerous factors to consider when selecting cone crushers to create quality aggregate products.

A successful application of a cone crusher within a crushing circuit is measured by the amount of material passing through the cone, the power draw of the machine, the size distribution of the products coming out of the circuit and the shape of the product, explains Paul Lilley from Terex MPS. The goal is to efficiently and economically produce the target products, conforming with the required specifications.

Cone crusher type

Cone crushers can be categorised into three main design types. With floating bowl and screw bowl cone crushers the upper frame raises to open CSS or relieve crushing pressure. The third type – the spider-bearing cone crushers – incorporate a shaft supported by a hydraulic piston which controls CSS and crushing pressure. Each machine type has its own features and advantages, and each is best



A Terex MC150 cone crusher module that includes a feed bin with a variable speed vibrating feeder. Level indicators in both the bin and crusher hopper work to maintain a choked condition within the cone crusher chamber.

Image Credit: Terex MPS

“The goal is to efficiently and economically produce the target products.”

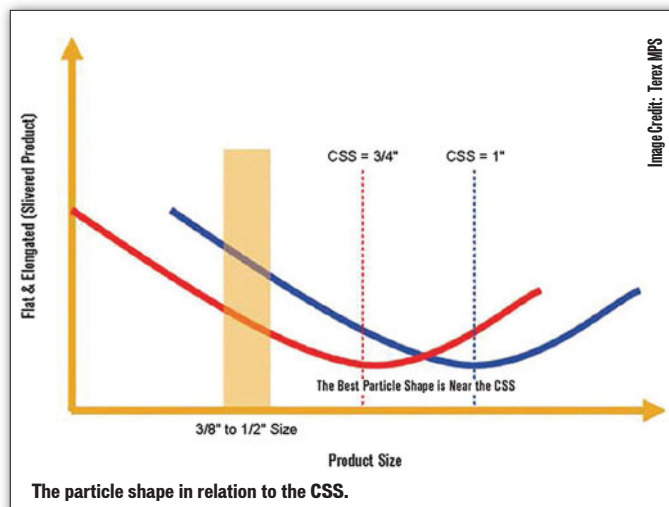


Image Credit: Terex MPS

sued to certain applications. Terex offers each of these cone crusher types within its equipment range to ensure it can provide the best option across all crushing applications.

Crushing factors

Each cone crusher has distinctive mechanical factors that affect the production rate and quality of the material processed by a cone crusher including:

- Cone head diameter
- Crushing chamber slope (angle)
- Cone head stroke
- Gyrating speed
- Manganese liner profile
- Closed side setting (CSS)
- Crushing force, monitored as operating pressure
- Applied power
- Feed control.

In any crushing operation, physical

characteristics of the material being processed affect the output product. The material characteristics that affect the crushing process include:

- Abrasiveness
- Compressive strength
- Bulk density
- Friability
- Plasticity
- Feed gradation
- Moisture content
- Reduction Ratio.

Producing quality product

Most aggregates specifications require a cubical product. The cubicity of the cone crusher product can be improved with the correct circuit design, promotion of recirculation, screen selection and crusher operating parameters. Generally the cubicity is best in sizes close to the crusher CSS. ■

Pilot Crushtec renews partnership with Metso Outotec

After five successful years representing global leader Metso Outotec in southern Africa, Jet Park-based Pilot Crushtec has renewed its distributorship for another five.

Despite periods of challenging economic conditions in recent years, Pilot Crushtec has earned global accolades within the Metso Outotec distributor network. According to Francois Marais, director sales and marketing at Pilot Crushtec, the company has already won annual awards for Best Aftersales Distributor and for Best Sales Growth.

“We value this partnership with one of the world’s leading brands, and have demonstrated through our solid performance the positive synergies that we leverage,” says Marais. “The years from 2017 through to 2019 in particular saw exceptional growth year-on-year for



Metso mobile jaw crusher and scalping screen working on-site.

both our Metso Outotec offering and our business as a whole.”

He highlights that the two companies’ offerings in the crushing and screening market complement each other very well, and they share a commitment to high quality

products, services and support.

“For customers, the renewal of our distributorship confirms their faith in our products and strengthens their security of investment going forward,” he says. “It assures the market once again that their capital

investments are being well supported through our extensive parts holdings and service excellence.”

The new agreement covers additional products and territories within the region, facilitating a wider offering in terms of new equipment and aftermarket aspects. According to Adam Benn, director capital sales North EMEA, Russia and CIS and Southern Africa at Metso Outotec, there was no hesitation in signing a renewal of the distribution agreement with Pilot Crushtec.

“Having just celebrated its 30th anniversary in business, Pilot Crushtec has built a strong reputation,” says Benn. “This applies not only to their supply of equipment and associated services, but their experienced team’s hands-on knowledge and can-do attitude to opportunities and challenges.”

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Process mining takes transparency to the next level

Caspar Jans, senior director business transformation at Software AG, shares his thoughts on what is process mining and how to embed it into wider process management practices.



Process mining technology has been embedded in a larger BPM platform.

Image Credit: Adobe Stock

If there has been one technological development that has really taken flight lately it is process mining.

Where the more traditional field of business intelligence (BI) has been active for over a decade in finding and creating transparency in the enormous amounts of business data, process mining has unlocked the capabilities to take this level of transparency to the next level by adding the business process context.

No more point analyses, but rather end-to-end process analyses that include the ability to drill down and find cross-functional root causes.

To begin with, process mining is a set of capabilities that allows and enables organisations to create transparency into the way business processes have been executed. It provides insights into who (can be anonymised) has done what, when they did it and where (application). Process mining on its own can already deliver some interesting results, but the power of process

mining is unlocked at the moment that it is combined with the wider process management practice.

Why should companies engage in process mining?

Operational excellence has been an important topic for most of the 21st century and the field of process mining is facilitating this in a couple of ways, and these are referred to as the major or main use cases of process mining: Process discovery, process, performance, process conformance, ad-hoc analysis

The first one is the most known use case of process mining with the spaghetti-like diagrams that are the result of analysing the executional trails of a business process. The conformance use case is interesting if you want to eradicate deviations from a standard process. Ad-hoc analysis is often applied when supporting a lean six sigma or other continuous improvement project.

Process mining considerations

Ever since the field of process mining has become commercially interesting, the number of process mining solutions has steadily increased. Most of them we call pure-play process mining tools, in other words they do one thing (which is process mining) and typically they do it well.

On the other side of the spectrum are a couple of solutions in which the process mining technology has been embedded in a larger BPM platform and just to be clear, some of these process mining tools are also really good and can often also be used in a standalone format. The big advantage this latter category has over the former is the integration with the process management side. Quickly documenting discovered processes pressing a button, or transferring the baseline model to the process mining engine for conformance checking are two examples of this.

Embedding process mining into BPM

As mentioned in the previous paragraph, embedding process mining into wider process management practice is not just a wise thing to do, it also unlocks a number of advantages that companies will not achieve in a standalone scenario:

- Companies can show the results of process mining right next to the document process they have mined, to prevent unnecessary switching between windows.
- Automatic creation of discovered processes that are worthwhile documenting, avoiding a lot of manual export/import activities.
- Reduce complexity for an IT organisation if they can run BPM and process mining from the same platform.
- The simplicity for the end users of a company's BPM platform having everything in one place. ■

Sustainability a key focus for mining companies

Schneider Electric and AVEVA have announced a combined technology offering to support mining companies achieve sustainable practices.

AVEVA, a global leader in industrial software, driving digital transformation and sustainability, and Schneider electric, a leader in the digital transformation of energy management and automation, have announced that their combined technology offerings are supporting the sustainability initiatives of mining companies in energy efficiency, yield improvement, low greenhouse emission technology adaptation, and new green processes.

Transitioning to sustainable practices

According to an IDC Technology Spotlight, sponsored by AVEVA and Schneider Electric, titled *Transitioning to Sustainable Mining, Minerals and Metals Practices*, the top three market pressures driving the sustainability agendas of mining and metals organisations are:

- Need to improve brand equity
- Reduce the risk of an adverse event
- Ensure compliance with current and future regulations.

Speaking at the virtual event, Ben Kirkwood, senior research manager, IDC Energy Insights - WW Mining, said, “Technology has a critical role to play in supporting mining companies. Efforts to hit sustainability targets and gain greater visibility and control over operations will enable corporate insight and action relating to energy, water usage, and management of the operational environment. IDC’s global analysis of the revenue growth and profitability of industrial companies shows that those with a committed and ongoing sustainability-based strategy combined with a long-term, funded, digital transformation agenda considerably outperform their competitors.”



Global decarbonisation is heavily reliant on the sustainable production of minerals and commodities.

The IDC Technology Spotlight also reinforced the fact that as the industry continues to experience backlash from its perceived stagnant position on sustainability, platforms with added analytics are enabling improved operational efficiencies while enhancing the visibility of the changes being made.

“Although the benefits of digital transformation are crystal clear, the mining industry has thus far been limited by legacy infrastructure, data inadequacies, and piecemeal optimisation programmes,” said Martin Provencher, industry principal, Mining, Metals and Materials, AVEVA. “Increasingly virulent cyberattacks and a growing mandate for decarbonised minerals have further

emphasised the importance of having high data availability and embracing a secure, cloud-first approach to visualise and contextualise enterprise-wide processes across global operations.

“The combination of Schneider Electric’s energy management solutions, automation systems and services, and AVEVA’s Digital Mining Transformation solutions enable our customers to transform conventional mining operations into intelligent, resilient and sustainable undertakings.”

Other key points to emerge from the IDC Technology Spotlight included:

- 71% of mining organisations support sustainability goals with

established formal programmes endorsed by executive sponsorship

- 87% have business processes that are standardised and transparent across all functional groups
- Despite 56.5% of organisations having implemented operational metrics linked to sustainability goals, only 37.1% utilise sustainability scorecards, impacting the ability to create value and success from those initiatives
- Yet, 27.4% of mining and metals organisations see improving brand equity as a top driver for sustainability, compared with the overall industry average of 18%
- Mining, minerals, and metals companies are on the road to delivering impactful outcomes outside traditional power purchase agreements (PPAs) – but have a long way to go
- Digital integrated operations can address key areas of the industry-wide sustainability agenda by combining power and process intelligence and controls. ■

“Technology has a critical role to play in supporting mining companies.”

BEN KIRKWOOD, SENIOR RESEARCH MANAGER, IDC ENERGY INSIGHTS - WW MINING

BOOYCO ELECTRONICS LOOKS BEYOND SOUTH AFRICA

South African proximity detection system (PDS) specialist Booyco Electronics has taken steps to enhance its global reach by extending its solutions to a surface gold mine in Chile.

More than 50 of Booyco CXS systems have been installed on vehicles and other machinery on the mine, following a demanding testing phase. Booyco Electronics' distributor in the region, Insucam, helped carry out the project.

Booyco Electronics CXS uses direct GPS signals from three constellations of satellites to determine spatial positions, so it is not reliant on the GPRS coverage used by mobile phones. This is an important advantage for mines located in remote areas without reliable GPRS signal.

The technology advances made by Booyco Electronics' CXS solution elevates it from being a



Image Credit: Booyco Electronics

The primary application of the Rhino 100 is for drilling of production slots, but it also makes a valuable contribution in a range of other applications.

warning system only to being a fully-fledged collision avoidance system – avoiding collisions between vehicles or between pedestrians and vehicles. It therefore provides a comprehensive and integrated response to Level 7, Level 8 and

Level 9 safety levels – as defined by the Earth Moving Equipment Safety Round Table (EMESRT).

This latest generation offering is built on Booyco Electronics' role in developing PDS solutions for more than 15 years. Ongoing product improvement has continuously enhanced its features and functionality.

Carlos Pinto Reyes, business development and new technologies manager at Insucam, said, "After the installation of the Booyco Electronics CXS systems, every operator on the mine is aware of the exact location of machines and their distance away. They are quickly alerted to any possibility of collision, as the system tracks the trajectory, speed and position of each machine. Operators also appreciate how intuitive the system is, while not overwhelming them with persistent sounds."

TAKRAF APRON FEEDERS INSTALLED AT DRC PROJECT

TAKRAF Group has supplied two machines for a leading copper/cobalt producer in the Democratic Republic of Congo (DRC). The order was carried out during challenging Covid-19 pandemic conditions, with installation and commissioning assistance provided remotely due to travel restrictions.

The TAKRAF apron feeders, which are being installed in two new crushing stations at the mine, are 1,830 mm wide by 11.2 m long (18° incline) and feed copper/cobalt ore at 1,200 t/h from a truck tipping point to grizzly feeders, which in turn feed jaw crushers. They are designed to handle up to 950 mm-diameter lumps.

TAKRAF apron feeders are increasing in demand from projects across sub-Saharan Africa, particularly for challenging and abrasive material handling work, where they are preferable to belt feeders, which tend to tear in such applications. TAKRAF South Africa has supplied three apron feeders to a gold project in the Republic of Guinea, and five apron feeders to an iron ore project on the West Coast of South Africa. At 2,184 mm long and 1,830 mm wide, the apron feeders for the iron ore project were designed as extractable feeders to facilitate maintenance, as they can be individually removed and taken to surface while the others continue operating.

TAKRAF apron feeders combine robust, heavy-duty frames with standard chains and rugged pans to provide extremely long service life. TAKRAF South Africa has also received orders for a further apron feeder for a major copper mine in South Africa, which already has two installed underground.

Epiroc machines for South African mine

Ivanplats, a subsidiary of Canadian mining company Ivanhoe Mines, has ordered several Boomer M2 Battery face drill rigs and Scooptram ST14 Battery loaders from Epiroc for its new Platreef underground mine, located in South Africa.

The Platreef underground mine, which will trial the emissions-free machines during its initial development phase, will produce palladium, rhodium, platinum, nickel, copper and gold.

Ivanplats has the ambition to use all battery-electric vehicles in their mining fleet at Platreef in order to create the most sustainable and productive project possible.

Helena Hedblom, president and CEO of Epiroc, commented, "It is encouraging that Ivanplats is considering going all battery-electric at Platreef, and we are proud to support them on this journey. Battery-electric equipment is increasingly embraced by mining companies as it provides a healthier work environment, lower total operating costs, and higher productivity. The technology is now well established, and Epiroc is driving this change toward emissions-free mining."

Marna Cloete, Ivanhoe Mines' president and CFO, added, "We want to be at the forefront of utilising battery electric, zero-emission equipment at all of our mining operations. This partnership with Epiroc for emissions-free mining equipment at the Platreef Mine is an important first step towards achieving our net-zero carbon emissions goals while mining metals required for a cleaner environment."

Boomer M2 Battery face drill rigs and Scooptram ST14 Battery loaders are built in Sweden, and are automation ready and equipped with Epiroc's telematics solution Certiq. The equipment will be delivered early in 2022. Epiroc will also provide on-site operator and maintenance training to Ivanplats.



The Epiroc Scooptram ST14 BATTERY Loader is part of the Ivanplats order in South Africa.

Image Credit: Epiroc

SANDVIK'S RHINO 100 SET FOR OPERATIONS IN SOUTHERN AFRICA

The primary application of the Rhino 100 is for drilling of production slots, but it also makes a valuable contribution in a range of other applications.



Image Credit: Sandvik Mining & Rock Solutions

Having been introduced to the southern African market a year ago, there are already two Rhino 100 ‘plug-and-drill’ raiseborers from Sandvik Mining & Rock Solutions commissioned for local mining sites

According to Saltiel Pule, Sandvik Mining & Rock Solutions’ business line manager for underground drilling in southern Africa, one unit will soon be at work in Botswana, while the second will be delivered to a large South African mine.

Pule said, “This machine has raised considerable interest in our market, and we fully expect to see five units at work in our region by the end of 2022. The primary application of the Rhino 100 is for drilling of production slots, but it also makes a valuable contribution in a range of other applications – from ventilation raises and escape routes to ore passes and connections between tunnels.

“Using conventional drill and blast methods, these vertical or inclined holes can take mines three to six months to complete. With the Rhino

100, we are talking about durations of less than a week,” Pule added.

Drilled as relief holes in sub-level open stoping, slot raises provide the necessary void space for blasting, allowing the expansion of blasted rock into the void to improve fragmentation. Dean Zharare, sales engineer for underground drilling at Sandvik Mining & Rock Solutions, highlighted that the conventional blasting of slot raises often creates a bottleneck for mines.

“We have encountered situations where mine personnel have to return two or three times to a slot raise before it is ready, due to misfires, for instance,” said Zharare. “This creates a bottleneck in the mining process, reducing the monthly metres achieved.”

The mobility and drilling speed of the Rhino 100 can transform this scenario, he added, with an expectation that monthly metres drilled could be improved by 65%. There is even the possibility that one of the units in South Africa will be

operated remotely with the operator based on surface while it drills underground stopes.

Underpinning the machine’s mobility is its ability to carry its own components, including rods, cables, hydraulics and the raiseboring head. It is pulled by a specially adapted double-axle John Deere tractor. To optimise the set-up time – which can take as little as 10 minutes – it has outriggers for stability rather than needing a concrete pad to be poured. No roof bolting is required either, as an inclinometer gives the operator the necessary coordinates for a surveyor to confirm before drilling operations begin.

Since the Rhino 100 was launched 2017, it has achieved a strong global footprint, with over 20 units operating worldwide. Australia has seen particularly strong take-up, with one contractor already ordering four machines. Underground expansions at almost a dozen operations around southern Africa present exciting opportunities for the future of the Rhino 100 in this region, Zharare concluded.

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West Africa to spearhead a more sustainable textile industry?

According to a report by the Oxford Business Group (OBG), an increasing number of stakeholders in the textile industry are exploring ways to make the sector more environmentally friendly.

The textile and fashion industry is a key contributor to climate change, accounting for around 10% of global carbon emissions. With pre-pandemic annual emissions of 1.2bn tonnes, the industry is the second-largest industrial polluter behind the oil and gas industry, surpassing emissions from all international flights and maritime shipping put together, as reported by the OBG.

There are many factors behind the industry's large carbon footprint, such as the water needed for cotton production – it can take an estimated 20,000 litres of water to produce 1kg of cotton, or one t-shirt and a pair of jeans. Additionally, with up to 8,000 chemicals used to turn raw materials into clothes, the World Bank estimates that 20% of global industrial water pollution comes from dyeing and finishing fabrics.

Another major factor is the sheer mass of clothes produced to meet the needs of modern 'fast fashion', with an estimated US\$500bn in value lost every year from clothes that are worn for short periods of time and not recycled.

Driving sustainability

To combat the environmental impact of the textiles and fashion industry, a number of industry players are turning towards more sustainable means of operation. For example, Jendaya, a UK-based, Africa-focused online fashion retailer avoids plastic and ships goods in recyclable cardboard packaging. This company is one of a growing number supporting cotton designers who produce clothes in



Image Credit: Adobe Stock

Around three-quarters of the continent's cotton is produced in West Africa but most of this is shipped to Asia for processing.

smaller capacities on a made-to-order basis, reducing waste and the amount of clothing that is consigned to landfill. Other examples of African companies promoting local production using natural materials under made-to-order models include Nehanda & Co in Zimbabwe, Naked Ape in South Africa, Nkwo in Nigeria and Awa Meité in Mali.

There are also efforts to support this approach on an institutional level. Fashionomics Africa, an initiative developed by the African Development Bank, aims to develop a sustainable textile value chain and help create business models that will keep garments in use, make use of renewable materials and recycle old clothes into new products.

Another company driving sustainable solutions across the entire value chain in West Africa's

textiles industry is Arise. Its existing sites in Gabon, Mauritania and Côte d'Ivoire which source raw materials, gin cotton and process and manufacture final products, will emphasise environmental, social and governance (ESG) factors across all aspects of operations.

"The private sector needs to implement socially conscientious governance models across the textile value chain, enfranchising local communities through fair and equitable labour practices while also managing ecological resources sustainably," said Bhavin Vyas, chief ESG officer at Arise.

Additional benefits

The benefits of such an approach are not just environmental. Increasing textile production on the continent will also provide an economic boon to the region as

countries continue their recoveries from the Covid-19 pandemic.

Around three-quarters of the continent's cotton is produced in West Africa but most of this is shipped to Asia for processing, meaning that African countries miss out on much of the value-added economic benefits traditionally associated with the textile industry. Every year leading West African cotton-producing nations Benin, Burkina-Faso and Mali export 1.8mn tonnes of unprocessed cotton worth US\$922mn, but then import US\$2.4bn in finished cotton textiles and apparels.

Processing closer to home will reduce the CO₂ caused by transportation and mean value is captured and jobs are created by producing and exporting finished products. ■



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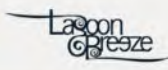
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