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"There is an urgent need to expand in-country gas infrastructure and develop competitive gas markets on the African continent."

Kweku Frempong, area general manager for West and Central Africa at Aggreko



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Cover picture: The Praetorian heavy-duty off-road bus from Torsus, a brand of Czech-headquartered Pulsar Expo

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Cover Inset: Kweku Frempong, area general manager for West and Central Africa at Aggreko

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Editor's Note

Welcome to the March issue of African Review magazine, your trusted source of news, information and analysis on all things Africa, linking you directly with buyers and business opportunities.

For almost 60 years, we've been covering all of Africa's key sectors and industries, from transport and construction to energy and mining, showcasing new technologies, innovative companies, African business leaders and its rising entrepreneurial stars.

In this issue, we've got news and insight into key trends in Africa's power sector, including an opinion piece by Kweku Frempong, area general manager for West and Central Africa at Aggreko (page 29). As part of our energy coverage this month, we also look at how gensets are supporting electrical infrastructure works at remote mine sites (page 25).

There is also a look at trends in the used equipment market (page 38). The squeeze on finances in the wake of Covid-19, plus other issues, such as supply chain constraints and inflationary pressures, means more buyers are exploring used construction and mining machinery.

There is lots more inside too, from the rebound in air freight (page 21) and the beginnings of Africa's first smart cities (page 36) to the essential work of wheel loaders in Africa's mining industry (page 45). Africa means business – and we'll be with you every step of the way.

Martin Clark, Acting Editor

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Cyber security

Digital advances can bring big profits for companies operating in the modern world, but can also leave organisations open to cyber attacks. It is therefore vital that cyber security is prioritised to nullify this threat.

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Building out the electrical infrastructure for a large mining and industrial complex in a remote part of Africa is a test of character for any power company. Read how Zest WEG has delivered electrical solutions for an ambitious DRC mine project which could develop into the second biggest copper mining complex in the world.

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Construction

After the economic squeeze of the last two years the market for used equipment is on the rise as construction companies look to rein in spending and look for affordable alternatives to support their projects.

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Mining

A consistent flow of new innovations and releases ensures that wheel loaders remain an essential piece of machinery on most African mining sites.



H₂-Industries invests in Egyptian green hydrogen plant

German energy storage developer H₂-Industries has confirmed an investment in a green hydrogen plant in Port Said, Egypt, with media reports suggesting a region of US\$3bn has been allocated to the project.

Preliminary approval for the venture has been granted to H₂-Industries by the General Authority for the Suez Canal Economic Zone (SC Zone).

The 1GW LOHC Hydrogen Hub at East Port Said will be a first-of-its-kind project in the world. 4mn tons of organic waste and non-recyclable plastic will be processed annually at the Mediterranean entrance to the Suez Canal, from which the plant will produce 300,000 tons of green hydrogen.

Executive chairman of H₂-Industries, Michael Stusch, said, "This is an exciting opportunity and one that will take the tons of waste that collects in Egypt and turn it into green hydrogen.

"The waste-to-hydrogen plant is a breakthrough in making green hydrogen economically viable, helping to not only reduce global CO₂ emissions but also reducing the pollution and impairment of water resources in the country."

Green hydrogen will be sold and transported for international use in 20th century infrastructure. Common industrial applications for green hydrogen include diesel trucks carrying H₂-Industries' LOHC, or for use during the generation of low-cost synthetic diesel (eDiesel) or sustainable aviation fuel (SAF), whereby CO₂ is the only emission.

H₂-Industries is also commercialising a range of other green hydrogen products to meet end users' commercial needs, ranging from the adaptation of coal-fired power plants to hydrogen power plants and transforming steel, cement and glass production to a CO₂-free process using H₂-Industries' technology and green hydrogen.

The project aligns with the Egyptian Government's goal to source at least 20% of its total energy production from new and renewable sources in 2022, with targets in place to increase this to 42% by 2035.



The plant will produce 300,000 tons of green hydrogen per year.

INMARSAT AND RLTT TO DELIVER IOT TO OIL & GAS

Inmarsat, a leading global and mobile satellite communications provider, has announced a new distribution partnership with Libyan telecommunications operator Rawafed Libya for Telecommunications and Technology (RLTT).

The agreement will see RLTT's specialist 'Digital Oilfields' sector adopt Inmarsat's IsatDataPro and BGAN with the aim of providing secure, satellite-based data services to a number of oil and gas companies operating across Libya.

Digital Oilfields provides always-on remote telematic and CCTV monitoring services for vital infrastructure, specialising in oil and gas drilling sites and wellheads on production sites across Libya. The Digital Oilfields services are delivered through Inmarsat's ELERA L-band connectivity network and optimise 99.9% availability, security and small-form, robust terminals.

RLTT's chairman, Taha Ellafi, explained, "Inmarsat's experience in providing IoT-over-satellite connectivity for industry means that it understands the types of products and services we want to offer to the oil and gas sector in Libya.

"Inmarsat was the best possible satellite provider by far for us to work with. We easily and seamlessly integrated our customer activation and billing systems with Inmarsat's and we will be ready to offer new services to our customers soon."

The RLTT Digital Oilfields unit intends to expand its satellite-powered offerings to a number of Libyan oil and gas operators, adding pipeline monitoring, vehicle telemetry, tracking, and fleet management.

Mike Carter, president of Inmarsat Enterprise, added, "RLTT has been instrumental in digitalising the systems of oil and gas companies across the country, so I am pleased to welcome them as an Inmarsat distribution partner in North Africa."

BENSLIMANE'S VACCINE MANUFACTURING PLANT

His Majesty Mohammed VI, King of Morocco, chaired a ceremony confirming that Benslimane (in the Casablanca-Settat region) will welcome the construction of a manufacturing plant for Covid-19 and other vaccines. The new plant aligns with the Kingdom's vision to position itself as a key biotechnology hub in Africa and the world, capable of meeting the health needs of the continent in both the short and long term.

The plant will integrate the most cutting-edge pharmaceutical research, clinical development, manufacturing and marketing of the biopharmaceutical products, eventually mobilising an investment of approximately US\$450mn to US\$570mn. The projected investment for the project's completion sits at approximately US\$230mn.

Benslimane's new vaccine plant is the result of a public-private partnership and is supported by Swedish company Recipharm.

Image Credit: Adobe Stock



The project is Schindler's first in Egypt's public transport network.

Schindler wins Cairo monorail project

Schindler has won the delivery, installation and maintenance contract for 136 elevators and 272 escalators on the Cairo monorail project, connecting Egypt's New Administrative City with East Cairo.

Julio Arce, member of the Schindler Group Executive Committee, explained, "Cairo Monorail is Schindler's first public transport project in Egypt – safety and reliability are our prime commitments."

UD Trucks' MENA growth



UD Trucks experienced approximately 30% growth in 2021.

Japanese commercial vehicle manufacturer UD Trucks has announced sales growth across the Middle East, East Africa and North Africa. Throughout 2021, the company expanded sales by approximately 30%.

Key markets for the year's expansion included Saudi Arabia, the United Arab Emirates, Qatar, and a number of countries in East Africa. The introduction of the Euro 5 products and 'Better Life' strategy played a pivotal role in the growth.



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Acronis launches its first cloud data centre in South Africa

Acronis, a global provider in cyber protection, has announced the availability of a new Acronis Cyber Cloud Data Centre in Johannesburg, Gauteng Province, South Africa.

The new data centre, one of the 111 new data centres being deployed by the company, allows service provider partners access to a full range of cyber protection solutions upon which they can build new services while delivering faster access, constant data availability and data sovereignty to their clients.

Having these capabilities is key for South African service providers today, the company opines as cyber threats loom over the business landscape and data accessibility, privacy and compliance demands grow.

The opening of the South Africa data centre is part of the Acronis Global/Local Initiative, an effort that includes global management for all data centres, geographic redundancy and control for local partners, and a local disaster recovery site – all with competitive pricing.

According to the company, the goal of this initiative is that service providers will have no trouble meeting the ever-changing compliance, data sovereignty, and performance requirements they and their clients face.

“A local presence is a necessity for modern cloud businesses and we are proud to deliver the Acronis Cyber Cloud Data Centre in South Africa. Now they can safeguard client data locally and know that they are backed by a global partner who is on standby 24/7/365 to address any issues,” said Peter French, regional general manager, Middle East and Africa, Acronis.

The global network of Acronis Cyber Cloud Data Centres already includes more than 40 data centres. With the new data centre in South Africa, local service providers will have a location within the country where they can store business-critical data for their clients.

Managed service providers will also benefit from the full range of managed cloud solutions and cyber protection solutions available via the cloud platform.



Image Credit: Acronis

Acronis announced its first Data Centre in Africa at a recent event.

ORACLE OPENS ITS FIRST CLOUD REGION IN AFRICA

Oracle, a computer technology corporation and a cloud service provider has announced the availability of its first cloud region in Africa to meet the rapidly growing demand for enterprise cloud services on the continent. The Oracle Cloud Johannesburg Region will aim to boost cloud adoption across Africa while also helping businesses achieve better performance and drive continuous innovation.

The opening marks Oracle's 37th cloud region worldwide and the company said it plans to have at least 44 cloud regions by the end of 2022, continuing one of the fastest expansions of any major cloud provider.

The Johannesburg Region is built on Oracle Cloud Infrastructure (OCI), which enables customers to easily migrate IT workloads and data platforms to the cloud or build new cloud-native applications. In addition, Oracle offers a wide range of application modernisation and cloud strategies to help African organisations operate with global competitiveness.

“The fourth industrial revolution, which is powered by cloud-led technologies, has significantly accelerated in South Africa and the wider African continent. In recent months, cloud technologies have played a vital role in helping African public and private sector organisations ensure business continuity, deliver essential services, and meet evolving customer expectations,” said Richard Smith, executive vice president, EMEA, Oracle.

“The Oracle Johannesburg Region offers a next-generation cloud to run any application faster and more securely for less, helping businesses build resilience, agility and achieve improved ROI.”

African organisations are using Oracle to manage their mission-critical workloads and take advantage of cloud economics.

FASTER PAYMENTS ENABLED BY STANDARD BANK

Standard Bank has announced that it has enabled near real-time payments allowing South Africans to transfer funds to accounts in Lesotho and Eswatini in only two hours. In the past, payments would take a minimum of 24 hours and a maximum of 48 hours to clear.

The new capability, which is also enabled for Namibia, allows Standard Bank SA clients to make cross-border payments to Standard Bank accounts in Lesotho or Eswatini via ATM, branch, digital channels such as the mobile app, internet banking and cellphone/USSD banking. Standard Bank also said that the recipient in Lesotho, Eswatini or Namibia will not be charged additional fees when they receive funds into their account that were sent outside of the country.

Motlatsi Mkalala, head of main market, Standard Bank South Africa, said, “Many people from Lesotho and Swaziland come to South Africa in search of employment, leaving their loved ones back home. As such, they need to be able to send money to their families and in a fast, efficient manner.”

Marriott launches Homes & Villas in South Africa



Image Credit: Marriott International

One of the featured properties in the neighbourhood of Bishopscourt, Cape Town.

Homes & Villas, Marriott International's curated collection of premium and luxury whole-home rentals, has announced that almost 300 exclusive Cape Town, Johannesburg and Durban homes have been added to the platform, marking the collection's debut in South Africa.

Launched in May 2019, Homes & Villas by Marriott International boasts over 50,000 premium and luxury whole-home rentals located in 500+ destinations around the world.

Doosan's forklifts reduce Belgotex's carbon footprint



Image Credit: GLTC

Belgotex hopes to adopt a greener path by using electric forklifts in its operations.

In its quest to reduce its impact on people and the planet, one of Africa's leading carpet and artificial grass manufacturer, Belgotex, has replaced 50% of its existing LPG fleet with 15 new Doosan lithium-ion (Li-ion) electric forklifts from Goscor Lift Truck Company (GLTC).

The new electric forklifts, charged by solar power, will help enable Belgotex to reduce its CO₂ by 855.4 tonnes over 84 months, equivalent to planting a total of 14,148 trees.

Redstone CSP achieves first debt draw down

The South African Redstone concentrated solar power (CSP) project has achieved its first debt drawdown on the largest renewable energy investment in South Africa to date.

Redstone is led by ACWA Power, a leading Saudi developer, investor and operator of power generation, water desalination and hydrogen plants, which is also the lead shareholder in Redstone with co-shareholders including the Central Energy Fund, Pele Green Energy and the local community.

The project is located in the Northern Cape Province of South Africa and will be equipped with a 12-hour thermal storage system to delivery reliable electricity to nearly 200,000 households around the clock.

The African Development Bank (AfDB) acted as the mandated lead arranger (MLA) and coordinating bank for the ZAR11.6bn (approx. US\$767mn) total investment. The project has also secured financing from leading international and South African financial institutions including ABSA Bank, CDC Group, Development Bank of Southern Africa (DBSA), Deutsche Investitions- und Entwicklungsgesellschaft (DEG), Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden (FMO) Investec Bank, Nedbank Limited, Sanlam Limited, and the Industrial Development Corporation of South Africa.

The construction for the project is currently in its ninth month and engineering works is more than 58% completed, whereas procurement and construction works stand at over 45% and 6% respectively. A key construction milestone, tower foundation for the project, has been completed with the commencement of operations scheduled for Q4 2023.

AfDB director of energy financial solution and policy regulations, Wale Shonibare, commented, "This project marks a landmark project finance investment in South Africa and demonstrates the commercial viability of CSP technology in enhancing clean energy generation. Redstone's capability to convert solar power into baseload energy at scale, aligns with AfDB's Climate Change & Green Growth Policy and Strategy of investing for clean and inclusive growth."



The Redstone project will power 200,000 households upon completion.

SANDFIRE PROGRESSES MOTHEO DEVELOPMENT

Sandfire Resources Limited (Sandfire) has provided a development and construction update for its Motheo Copper Mine in Botswana, one of the few new copper mines under construction in the world.

Motheo is a substantial new long-life copper mine and is expected to become the cornerstone of a long-term copper mining hub for Sandfire in the Kalahari Copper Belt.

Development at Motheo is proceeding on schedule and on budget, with first production expected in the first half of the calendar year 2023. Some of the key recent developments at the Motheo Copper Mine include:

- A ramp-up in the on-site workforce to over 1,000 people
- Significant progress with the development of access roads to the Motheo site
- Pouring of the foundations for the crusher, reclaim tunnel and mill
- Construction of the 750-room mine village advancing well
- Mining contractor mobilised to site
- Mining pre-strip scheduled to commence early April 2022
- Foundations for the 132 kV power line commenced.

Sandfire managing director and CEO, Karl Simich, commented, "This is the first of what we intend to be a regular series of pictorial updates on our progress at Motheo over the coming year. It is very gratifying to see the enormous progress being made on the ground by our team in Botswana."

"Despite the challenges confronting new construction projects around the world, our team has been doing a wonderful job – keeping the project firmly on track, on time and on budget and, importantly, ensuring the health and safety of our employees and contractors at all times. We already have over 1,000 people on site, and we expect this to increase to 1,500 over the course of the year."

PARATUS READY FOR NEXT STEP IN EQUIANO CABLE DELIVERY

Last year, Paratus entered into an agreement with Google to be the landing partner for the Equiano cable in Namibia. The company has announced it is on track with the project having completed the landing station in June last year and completed the internal fit at the start of 2022.

The landing station is now ready to accommodate the cable, which is due to land in Q2 2022. The Equiano cable is expected to be ready in Q4 2022 and Paratus has been investing in building the infrastructure to provide better connectivity and deliver unlimited quality networks to the southern African region.

Paratus Namibia MD, Andrew Hall, said, "This cable provides a massive 20 times more network capacity than the previous cable. It also, importantly, provides an alternative service to Namibia and the rest of SADC, which in turn enhances redundancy to ensure network stability and vastly improved uptime. This is great news for both businesses and consumers across the region."

BRIEFS

Tlou set to connect Lesedi to the grid



Zismo Engineering has been contracted for the construction of the overhead lines and OptiPower for the construction of substations.

Tlou Energy has announced that work is set to commence on the transmission line and substations to connect the Lesedi power project to the electricity grid in Botswana. The Lesedi project is located approximately 100 km from the existing electricity grid. The development will include the erection of poles fitted with an overhead 66 kV transmission line and substations at Lesedi. Funding has already been secured for this venture.

Electric vehicles in focus

The AIDC Eastern Cape has signed an MoU with the South African Bureau of Standards to establish the Eastern Cape automotive manufacturing hub in order to



AIDCEC CEO Thabo Shenxane and Jodi Scholtz, lead administrator at SABS, at the signing of the MoU.

support the South African automotive masterplan pillar of regional integration. The MoU identifies several joint projects including a collaborative programme with other Eastern Cape-based institutions to implement projects within the EV value chain contributing to the transition of the automotive sector in South Africa.

GuarantCo supports Orabank Togo for telecommunications and road projects

GuarantCo, a part of the infrastructure project developer and investor Private Infrastructure Development Group (PIDG), has provided a portfolio guarantee of approximately US\$25mn to Orabank Togo. The guarantee supports projects including telecommunications and road projects in Togo, and allows Orabank to benefit from capital relief, enabling it to grow its infrastructure portfolio while remaining within single obligor limits.

It is anticipated that this transaction will result in the provision of improved infrastructure services to more than 500,000 people and support hundreds of jobs through Orabank's continued lending to infrastructure projects. In addition, GuarantCo will contribute to the development of financial services in Togo where the rate of banking system usage is low.

As Basel regulations continue to be rolled out across the African continent, GuarantCo expects this transaction to be replicated with other lenders to ensure that infrastructure project financing is not compromised while necessary prudential safeguards are implemented.

Layth Al-Falaki, CEO of GuarantCo, said, "This is the second GuarantCo transaction in Togo, after Kékéli Efficient Power in 2019, and it will bring significant benefits to the Togolese people. The increase in infrastructure project financing unlocked from our portfolio guarantee, combined with volumes from potential similar guarantees replicating this transaction in the region, will lead to a critical and much needed infrastructure improvement."

Guy Martial Awona, CEO of Orabank Togo, said, "Orabank Togo welcomes GuarantCo's support for the portfolio guarantee which strengthens its capacity to finance the development of companies in the telecommunications, energy and infrastructure sector. Once again, the bank is proud to contribute to the efforts of the Government in the implementation of the National Development Plan launched in 2018."

In 2019, GuarantCo provided US\$23.8mn Liquidity Extension Guarantee (LEG) to enable local commercial banks in Togo, including Orabank, to provide a 14-year tenor loan to Eranove.



The guarantee will support projects including telecommunications and road projects in Togo.

Image Credit: GuarantCo

SIKA EXPANDS IN AFRICA

Sika, a speciality chemicals company which develops systems and products for bonding, sealing, damping, reinforcing and protecting, has increased the size of its plant in Côte d'Ivoire with new warehousing capacities and offices, as well as laboratories and additional manufacturing facilities. It has also positioned itself for further dynamic growth in Tanzania.

The significant expansion of production and warehousing zones at the Dar es Salaam and Abidjan plants marks another important milestone in the implementation of Sika's growth strategy on the African continent. Demand for Sika solutions is rising sharply, driven by increasing industrialisation, rapid population growth, and a strong shift toward urbanisation accompanied by significant needs in terms of infrastructure.

The site extension in Côte d'Ivoire will allow the company to double production capacities in tile adhesives and repair mortars while simultaneously increasing warehousing capacities. Sika also intends to supply the neighbouring countries of Burkina Faso, Togo, Benin, Mali, and Sierra Leone from the site in Abidjan.

Ivo Schädler, regional manager, EMEA, said, "With Sika subsidiaries in 18 African countries and 22 plants on the continent, we are investing in the long term and sending a strong signal in terms of our commitment to sustainable business activities in the region. In our two expanded sites, we are producing high-value solutions used in major infrastructure projects.

"Examples of such projects are the Metro project and port expansion in the city of Abidjan as well as the Standard Gauge Railway and the Julius Nyerere hydropower station in Tanzania."

The construction industries in both Tanzania and Côte d'Ivoire are being boosted by public sector investment in major infrastructure projects.

MAINONE EXPANDS GLOBAL CLOUD CONNECT SERVICES IN WEST AFRICA

MainOne, a broadband infrastructure company in West Africa is empowering enterprises to adopt Cloud technology through its MainOne Cloud Connect service that ensures direct, secure, and reliable network connectivity between enterprise data centres or office locations and public cloud providers.

Cloud-hosted team collaboration applications with MainOne Cloud Connect provide the additional security and compliancy benefits for industries in the financial, oil and gas and manufacturing sectors.

Oluwasayo Oshadami, head, technical solutions and managed services, said, "Our Cloud Connect service enables businesses in Nigeria, Ghana, and Côte d'Ivoire adapt to the rapid growth of cloud solutions with always-on, secure access to their cloud enabled applications. Our investments in a world-class connectivity infrastructure coupled with technology from our global partners is strategically positioned to support the digital transformation efforts of our customers."

Afreximbank's FEDA invests in Ecow-Gas

Image Credit: Adobe Stock



Due to limited power supply from the grid, the industrial sector in Africa suffers severe energy shortages.

Fund for Export Development in Africa (FEDA), a subsidiary of African Export-Import Bank (Afreximbank), has invested in West African liquefied natural gas (LNG) distribution infrastructure platform Ecow-Gas B.V.

This will support the creation of infrastructure to provide access to cheaper and cleaner fuels for industrial customers across the region and promote efforts to minimise CO₂ emissions by replacing environment-polluting fuels.

Nigeria launches Integrated Energy Planning Tool

Image Credit: Adobe Stock



The geospatial platform provides low-cost, dynamic and data-driven intelligence for a range of stakeholders.

The Government of Nigeria has launched the Nigeria Integrated Energy Planning Tool in collaboration with Sustainable Energy for All, support from the Global Energy Alliance for People and Planet and funding from The Rockefeller Foundation. The geospatial platform provides low-cost, dynamic and data-driven intelligence for a range of stakeholders to identify the mix of technologies and spending required to achieve universal energy access.

Eutelsat and Intersat collaborate for internet connectivity

Eutelsat Communications and Intersat, one of Africa's leading providers of internet solutions, have signed a deal representing several hundred Mbps to address the connectivity needs of enterprises, institutions and individuals in Gambia, Guinea Bissau and Senegal.

Under the agreement, which represents the totality of the available capacity over these countries, Intersat will leverage the unparalleled coverage and reach of EUTELSAT KONNECT to provide a high quality internet service to customers located beyond the limits of terrestrial infrastructure.

EUTELSAT KONNECT is a new generation High Throughput Satellite offering unprecedented operational flexibility, delivering significant resources for broadband services across Africa. Since its full entry into service a year ago, the satellite has enjoyed significant commercial momentum with wholesale and distribution agreements in many of the continent's most populous countries.

Commenting on the agreement, Aminata Sanyang, managing director of Intersat said, "At Intersat we strive to stay at the cutting edge of technology by investing in state-of-the art services that make our customer offer better and faster. We are pleased to integrate Eutelsat's state of the art in-orbit assets into our suite of solutions to further roll-out our offer of robust, high quality, high speed Internet to an ever-growing number of Africans."

Nicolas Baravalle, Eutelsat's regional vice-president, sub-Saharan Africa added, "We are delighted to sign this agreement with Intersat to bring high quality, reliable connectivity to institutions, businesses and consumers currently in the digital divide. It reflects the significant demand on the African continent, and the unparalleled assets of the EUTELSAT KONNECT satellite in enabling it to be efficiently met. This contract also highlights the pertinence of Eutelsat's multi-channel distribution strategy."

Committed to promoting all facets of sustainable development across its business activities, Eutelsat leverages its in-orbit resources to help bridge the digital divide while maintaining a safe and uncluttered space environment.



Eutelsat has enjoyed significant commercial momentum with wholesale and distribution agreements.

OZÉ SUPPORTS DIGITAL RECORD KEEPING AND FINANCIAL SERVICES

OZÉ, a fintech startup providing digital record keeping tools with embedded finance products to MSMEs across West Africa, has raised US\$3mn via a pre-Series A round led by venture capital fund, Speedinvest.

Cathay AfricInvest Innovation Fund, Savannah Fund, and several Angels experienced in operating and investing in global fintech also participated in the oversubscribed round.

OZÉ will use the funds to expand the capabilities of its platform and increase access to affordable finance in Ghana and Nigeria through its partnerships with well-known commercial banks.

The team will continue to utilise deep on-the-ground networks to understand and build solutions for the micro and macro challenges faced by the 100 million-plus small businesses across West Africa. Traditionally these businesses have operated as brick-and-mortar enterprises running on pen-and-paper. Now, as they look to build online presence, demand for technology and financial products able to digitise businesses is increasing.

Co-founder and COO of OZÉ, Dave Emnett said, "The last decade has seen a huge transformation in the digitisation of business. Accelerated by the pandemic, we are now seeing an even greater demand for solutions to financial challenges like accepting payments, understanding cash positions, and securing loans to increase stock for busy periods."

The OZÉ platform provides tools for business owners to understand and improve their performance as well as access to capital to fuel growth. Business owners use the platform to record transactions, stay on top of receivables, get paid by their customers, access business coaching, and can apply for a loan right in the app.

IVECO BUS RENEWS PARTNERSHIP WITH SOTRA

Iveco Bus and Société des Transports Abidjanais (SOTRA), the public transit provider for Abidjan and its suburbs, have started production of a daily minibus assembly line at the SOTRA INDUSTRIE plant in Koumassi, near Abidjan. The project, which began in 2018, is the most recent outcome of a collaboration between Iveco Bus, a brand of buses and coaches manufacturer Iveco Group and SOTRA which started nearly 40 years ago.

The new plant, which has an annual production capacity of 1,000 units and employs 500 people, will manufacture the Daily Minibus, specially renamed 'Daily Ivoire', which can have from 16 to 26 seats. The first 60 Daily Ivoire minibuses have already rolled off the production line, powered by natural gas engines from FPT Industrial, another Iveco Group brand. The minibuses are for the Côte d'Ivoire market and for export to other African countries, starting with western and central Africa.

BRIEFS

UK signals West African expansion

Image Credit: Adobe Stock



UKEF has the capacity to provide further support for UK trade in West Africa.

At the Africa Investment Conference 2022, the UK Prime Minister, Boris Johnson, said the UK is already one of Africa's biggest commercial partners but is "determined to do much more - our shared task must be to ensure that Africa prospers from the green industrial revolution."

The UK Government is also mobilising support from its export credit agency, UKEF, to boost exports to Africa. Support so far has been deployed for infrastructure projects in West Africa.

TiKA supports wood craft production in Guinea



TiKA provided chisels, various tools, tree chainsaws and other equipment to enable the production of better quality crafts.

Turkish Cooperation and Coordination Agency (TiKA) has provided equipment to the association Allalake International (AIFAC), which operates in the field of wood craft production in Conakry.

Gokhan Keser, TiKA's coordinator in Conakry, stated that they decided to support this sector considering its promise - wood crafts are taken as souvenirs by foreigners who visit Guinea and used as decorations. He added that they aimed to provide employment to prospective members with this project.

Barrick's Tanzania mines advancing to Tier One status

North Mara and Bulyanhulu, which were moribund gold mines when Barrick took over their management two years ago, have delivered a combined production of more than 500,000 ounces in 2021, meeting a key criterion for membership of the company's elite Tier One portfolio.

The within-guidance performance was achieved with both mines retaining their ISO 45001 safety and ISO 14001 environmental accreditations, in common with Barrick's other operations.

North Mara is on track to become a fully integrated mine with the planned commissioning of the Nyabirama pit during the current quarter and the scheduled commencement of the Nyabigena pit in the third quarter of 2022. This is expected to add substantial resources and increased flexibility to its plan. Both mines are expected to report a significant growth of their mineral reserves, net of depletion, for 2021. Barrick has increased its footprint around Bulyanhulu through the acquisition of six highly prospective licences bordering the mine, and its exploration teams are also looking elsewhere in Tanzania for new opportunities.

Barrick president and chief executive Mark Bristow said the mines' performance had been supported by reinforced Covid-19 protocols and the roll-out of vaccines to its workforce, 26.45% of which have been partially vaccinated and 20.25% fully vaccinated. Barrick is working closely with the country's health authorities to supply four PCR machines to hospitals around the mines.

The mines also continued to recruit and upskill local people. Tanzanian nationals now account for 96% of their workforce, with 41% drawn from the surrounding villages. They are also strengthening their partnerships with local suppliers.

Referring to Barrick's recently published Human Rights Report, Bristow said the environmental and other issues it had inherited from the mines' previous operators had been or were being settled.

The company's significant progress on this front was exemplified by last month's landmark completion of the restoration of North Mara's tailings facility pond to within its permitted design capacity, Bristow said. The rehabilitated facility has been complemented by a new high recovery water treatment plant.



Image Credit: Barrick

EKORENT TO EXPAND SOLAR CHARGING ACCESS IN NAIROBI

EkoRent Africa (EkoRent), a business supported by PIDG company InfraCo Africa and EEP Africa, has signed a solar charging project collaboration agreement with Strathmore Energy Research Centre through Strathmore Research and Consultancy Centre, establishing a framework for setting up Kenya's first Nopea SolarHub Electric Vehicle Charging Station.

EkoRent operates NopeaRide, an all-electric taxi-hailing service in the city with 14 grid-tied charging points in six locations across Nairobi. The new solar hub will now enable its vehicles to also charge their batteries using solar energy.

Speaking at the signing event, Juha Suojanen, founder and CEO of EkoRent said, "The collaboration is an exciting next step for NopeaRide in Nairobi. We look forward to cooperating with Strathmore Energy Research Centre, through its dedicated Research and Consultancy Centre, in finding localised solutions to further promote clean mobility in Kenya and Africa."

"The Nopea SolarHub charging stations on the Strathmore University campus are the first of their kind in Africa and show how it is possible to efficiently combine clean energy and clean mobility solutions. Due to Kenya being located on the Equator and ideal for harvesting clean solar energy, it has great potential to lead efforts towards zero-emissions transport in Africa."

Under the terms of the Agreement, Strathmore University Energy Research Centre will provide space on its campus for NopeaRide to set up and install a Nopea SolarHub and Electric Vehicle Charging Stations for use by NopeaRide's 100% electric taxi fleet.

PIDG Technical Assistance is providing grant funding to support project management of the SolarHub development.

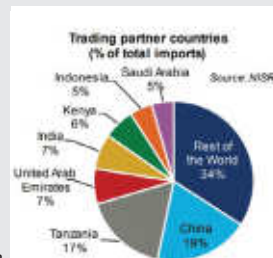
LAKE ALBERT RESOURCES DEVELOPMENT PROJECT LAUNCHED

The Lake Albert Development Project partners – the Uganda National Oil Company (UNOC) and the Tanzania Petroleum Development Corporation (TPDC) – have announced the final investment decision and the launch of the major project representing a total investment of approximately US\$10bn, during a ceremony held in Kampala. Yoweri Museveni, President of the Republic of Uganda; Philip Mpango, Vice-President of the United Republic of Tanzania; Patrick Pouyanné, chairman and CEO of TotalEnergies; and representatives of the China National Offshore Oil Corporation (CNOOC) were present at the ceremony.

The Tilenga project, operated by TotalEnergies, and the Kingfisher project, operated by CNOOC, are expected to start producing in 2025 and to reach a cumulative plateau production of 230,000 barrels per day. The upstream partners are TotalEnergies (56.67%), CNOOC (28.33%) and UNOC (15%).

► BRIEFS

Image Credit: Oxford Economics Africa



Export revenue increased by US\$43.2mn in December.

Rwanda's trade volume jumps despite Omicron shock

The latest data published by the National Institute of Rwanda shows that trade volumes for both imports and exports increased in December 2021. Imports rose by 15% m-o-m compared to November, while exports jumped by 33.1%. Overall, the trade deficit expanded by 3.8% m-o-m to US\$218.3mn in December as the increase in imports offset the rise in exports, according to Oxford Economics Africa.



The home systems are expected to serve 470,000 people.

Bboxx gets US\$15mn loan for affordable solar home systems

Bboxx, a next generation utility company, has secured a US\$15mn loan provided by SBM Bank Kenya, to provide off-grid solar home systems to nearly half a million people in Kenya. GuarantCo, a part of the Private Infrastructure Development Group, has provided a US\$11.25mn partial guarantee against the loan facility. The funds will be used to purchase new inventory over the next two years including 89,600 solar home systems.

Opibus introduces first-ever electric bus designed and developed in Africa

Opibus has introduced the first all-electric bus in Kenya as well as the first African-designed electric bus. This is the first major step in the company's vision to provide a locally designed and developed electric bus that can be mass-produced for the pan-African market, by the end of 2023.

The announcement is a step towards realising Opibus goal of electrifying Africa's public transport system, deploying products tailored for the local use case. The bus is designed and developed in-house with local engineering talent, while also utilising local manufacturing partners.

The key to the technology is the Opibus proprietary electric vehicle platform, which is modular and can be the foundation for several types of vehicles. This enables the creation of a bus that is suitable for the African use case in its reliability, durability and price point. This also means local and global contract manufactures can be used to create a globally competitive product, with a rapid scale-up.

This bus will be significantly lower cost than importing fully built electric buses. It also has superior performance compared to its diesel counterpart. With the installation of a powerful motor, the bus has maximum torque which improves performance while enabling the driver to accelerate more responsively. Additionally, since the electric bus does not have a combustion engine or manual gearboxes, there are no oil/filters/gaskets that need to be changed. This translates to an 80% reduction in maintenance expenses, compared to a diesel bus.

Considering the electricity charges which are also significantly lower than the ever-increasing diesel price, the total operating expenses are lowered by 50%.

The deployment of the buses will initially be in peri-urban areas around Nairobi Metropolitan, paired with a business model that enables operators to save from day one. Along with the bus deployment, several charging points will be installed from Opibus' already existing range of products. These chargers will be a mix of AC (slow) and DC (fast) chargers, using the fast charger, the electric bus will be fully charged within an hour enabling seamless operations.



Opibus' electric bus designed and developed in-house.

VODACOM GROUP PARTNERS WITH AMDocs

Amdocs, a leading provider of software and services to communications and media companies, has partnered with Vodacom Group, a leading African connectivity, digital and financial services company, to create an African Centre of Excellence (COE).

The COE will enable Vodacom to deliver next-generation experiences to its customers in Tanzania by introducing a standardised, flexible configuration, monitoring and monetisation of differentiated services while providing a unified IT architecture across the three countries. The COE will be launched as soon as all operational and commercial details have been finalised.

It will also enable Vodacom to achieve greater operational efficiencies by launching new products, services and tariffs more quickly, including bringing 5G services to its customers, by harnessing Amdocs' Openet charging solutions.

Dejan Kastelic, group chief technology officer at Vodacom, said, "Vodacom will continue to seek strategic partnerships as we evolve from a telco to a techco. This will allow us to realise our Tech 2025 strategy by investing in modern network technologies and digital IT systems to scale our products and services.

"Vodacom's partnership with Amdocs enables us to move to a cloud-native, standardised architecture and develop a single Centre of Excellence in Africa which will in turn allow us to deliver a consistent, next-generation customer experience across our operations."

Anthony Goonetilleke, group president of technology and head of strategy at Amdocs, remarked, "We're passionate about creating the best-connected experiences, and Vodacom's adoption of a unified, 5G-ready architecture means more rapidly bringing those experiences to life for customers in Tanzania."

EITL SIGNS NEW COAL MINING AGREEMENT

Edenville Energy (EDL) has announced its subsidiary Edenville International (Tanzania) Limited (EITL) has entered into a contract with Nextgen Coalmine Limited for the company's Rukwa Coal Project in Tanzania. This is for an initial period of one year from 1 February 2022 and supersedes the coal mining agreement with Infrastructure and Logistics Tanzania Limited (ILTL) and the sales and marketing agreement with MarTek Global FZ-LLC, announced by the company on 8 June 2020 and 26 August 2020 respectively, which have been terminated by Edenville.

The contractor will pay EITL a royalty of US\$10 per tonne of washed coal sold and a royalty of US\$5 per tonne of any coal fines sold and intends to utilise existing EITL employees and equipment where appropriate to increase production, sales and ultimately profitability. The contractor will be responsible for taking over operations with immediate effect to improve efficiency, however project ownership will remain with EITL.

BRIEFS

Rema launches R-COOL GO



The R-COOL GO launch event.

Rwanda's Ministry of Environment through the Rwanda Environment Management Authority (REMA) has launched the Rwanda Cooling Initiative's Green On-Wage (R-COOL GO) financing mechanism to make environmentally friendly refrigerators and air conditioners more accessible and affordable in Rwanda. R-COOL GO allows salaried employees to choose their desired refrigerator or air conditioner and request a loan from a participating bank.

Gold production startup with rural airstrip



The newly built airstrip.

A Super King Air 350 twin-turboprop aircraft landed at a new airstrip funded and built in Dima by Akobo Minerals. The 1100-metre-long airstrip lies a few kilometres from Akobo Minerals' mining operation and can accommodate aircraft carrying up to 40 passengers. It will allow the company to bring in goods and personnel more effectively, allow for any medical evacuation, and provide a secure transportation route of gold to Addis Ababa prior to onward distribution to international buyers.

Upcoming Events Calendar 2022

MARCH

7-9

MIDDLE EAST ENERGY

Dubai, UAE

www.middleeast-energy.com/en/home.html

11-13

ELECTREX AFRICA 2022

Nairobi, Kenya

www.mxmexhibitions.com/electrex_africa

16-18

POWERING AFRICA SUMMIT

Washington DC, USA

www.poweringafrica-summit.com

24-26

MINEXPO AFRICA

Dar-es-Salaam, Tanzania

www.expogr.com/minexpotanzania/

29-30

MMEC

Maputo, Mozambique

www.mozambiqueoilmining.com/

APRIL

11-12

FUTURE OF ENERGY

Amsterdam, The Netherlands

www.futureofenergy-event.com/#home

MAY

9-12

INVESTING IN AFRICAN MINING INDABA

Cape Town, South Africa

www.miningindaba.com/Page/save-the-date-may-2022

10-12

SECUREX WEST AFRICA

Lagos, Nigeria

www.securexwestafrica.com

17-19

SUSTAINABLE ENERGY FOR ALL

Kigali, Rwanda

www.seforall.org/forum

19-21

07TH SOLAR EXPO KENYA

Nairobi, Kenya

www.expogr.com/solarafrica/

30-3 June

IFAT

Munich, Germany

www.ifat.de/en/

JUNE

1-3

WAMPEX

Accra, Ghana

www.wampexwestafrica.com/

7-9

ENLIT AFRICA

Cape Town, South Africa

www.enlit-africa.com/

21-23

POWER & WATER NIGERIA

Lagos, Nigeria

www.pnwnigeria.com/

Security, fire and safety industry professionals to convene at Securexpo in Nairobi

The fifth edition of Securexpo East Africa will be held from 23-25 March 2022 in Nairobi, Kenya, assembling together security, fire and safety industry professionals.

Welcoming more than 3,000 visitors, 100 brands exhibiting and with industry-leading educational conferences to stimulate inspiration and knowledge-sharing, Securexpo East Africa is the largest dedicated industry exhibition and conference.

Forming part of the Securex Brand, Securexpo East Africa is one of four continental exhibitions that bring together security, fire and safety professionals across the security supply chain.

With sister expos residing in West Africa and South Africa, together Securex is the most recognised exhibition brand for the security, fire and safety industry on the continent.



The event will focus on Africa's safety, security and fire prevention markets.

Some of the 2022 exhibitors include Ajax Systems, AxonSoft, Booth, Centurion, DSPA, Kenya Fire Systems, Elsan Engineering Limited, Gadgetmend International Limited, Granular IT, IDS, Integrated Biometrics, Kanad

Systems, Montgomery Group, Nemtek, Optex (Europe) LTD, Paulson International, Security Systems International Ltd, Sumo Enterprise Solutions, Tanda UK LTD, Telaeris, Trackforce Valiant and many others.

Covid-19 measures

Although cases in Kenya are still small relative to other countries, recognising the ongoing situation of the Covid-19 pandemic, the organisers have come up with certain safety measures, together with the venue and in consultation with the Government.

The risk in Kenya remains low but it is important to ensure that the health and safety of all visitors is protected. The event will be laid out in accordance with the Government rules on social distancing and visitor numbers in relation to the space available.

Some of the measures that are being taken during the exhibition include fumigation of halls, hand sanitising units, mobile cleaning, a face mask requirement, temperature checks, wide aisles, spaced stands, and a dedicated medical centre.

Delivering sustainable packaging

As the packaging industry emerges from the pandemic, sustainability has become a key concern.

In 2019 Propak Africa opened in the Johannesburg Expo Centre, welcoming Africa's packaging, food processing, plastics, printing and labelling experts to network, learn and advance their business on the continent.

During the event's 2019 iteration, Sven Smit, event director for Propak Africa, commented "Effective, striking and sustainable packaging has never been more important," and the second day of the conference was dedicated to sustainability. At the time, Sven noted that visitors were invited to be part of promoting good environmental practice through packaging and exhibitors were encouraged to discuss their sustainability initiatives that were being pursued.

At the time, this was one of the hottest trends within the industry. With growing consumer awareness on the environmental plight, the packaging industry had to pursue eco-friendly solutions such as recyclable packaging in order to keep up with this changing demand.

Three years on from the conference, it is clear that global attitudes towards this cause have not been dampened, but instead encouraged, and the African packaging industry has followed in this regard.

Going green

Last year Averda noted that there was an appreciable increase in big manufacturing businesses attempting to improve their environmental footprint by reducing the amount of waste they send to landfill. In one cited example, the company assisted an unnamed large packaging company rethink their attitude towards waste and build an integrated waste cycle by reviewing and upgrading their waste management systems. The company has since

“It has been proven that establishing a circular economy provides economic benefits.”

JUSTICE TOOTLA, MD AT AVERDA



Solutions such as recyclable packaging are being demanded by consumers.

Image Credit: Adobe Stock

implemented a much more sustainable approach across its sites.

Justice Tootla, MD at Averda, commented, "Businesses should not shy away from this opportunity as it has been proven that establishing a circular economy provides economic benefits by not only reducing waste but simultaneously fostering business growth and job prospects. The goal of these changes is to sever the relationship between economic growth and the use of natural resource, so that our global economic prosperity is not linked to environmental degradation."

CCL Industries, a world leader in speciality label, security and packaging solutions, has signed onto the ten principles of the United Nations Global Compact which focus, among others, on encouraging companies to take on greater environmental responsibility and encourage the development and diffusion of environmentally friendly technologies.

One of the largest paper and plastics packaging manufacturers in southern Africa, Mpact has noted that sustainable development is ingrained in the company and a key tenet of its vision. As by demonstration, its new PET Ultrazorb meat tray, fully recyclable and able to be produced using food grade rPET, has claimed multiple industry awards and the 100% rHDPE cleaner bottles, produced by Mpact Plastics to support the

recycling of HDPE has received similar accreditation.

"As a group, we strive for innovation excellence and develop practical, economically viable and environmentally sustainable solutions that bring us closer to a true circular economy," said Penny Ntuli, Mpact Group communications manager, Mpact.

Mespack, an international manufacturer of flexible packaging, end-of-line, and water soluble pods equipment for consumer packaged goods companies, has demonstrated its commitment to the green effort by unveiling its new 'Doing Good' initiative. Among social programmes and commitments to its employees, the company has pledged to be more environmentally friendly through waste and pollution reduction processes. In a news release, Mespack noted it has performed various activities in order to contribute, make a difference, and have an affect on lasting change.

Propak Africa will return to the Johannesburg Expo Centre from 8-11 March 2022 providing the packaging industry an opportunity to reconnect after the Covid-19 pandemic. As attendees look ahead to exploring and sharing the latest innovations shaping the sector, with environmental concerns placed in such high priority by key industry players there is little doubt that this will be a key issue of the show. ■

“Intermediary cities are significant in structuring the urban network and connecting the local and regional to the continental and global level. This necessitates the urgent need for urban and sectorial policies to reference the growing importance of intermediary cities in programming and planning decisions towards achieving both economic and environmental balance.”



Image Credit: UN

OUMAR SYLLA

Director of the regional office for Africa at UN-Habitat

“Liberia will be better equipped to generate and disseminate accurate climate and weather information for climate change mitigation and early warning, food security, water security and environmental protection. These improvements will enable us to understand how disaster losses occur and how to avoid them in the future, saving

lives and preventing economic losses.”

SAMUEL TWEAH, JR

Minister of Finance and Development Planning, Liberia, on AfDB's grant to enhance Liberia's early warning weather systems

“Now more than ever, we need to renew our commitment to support countries to achieve the 2030 agenda. This requires new ways of thinking, and new ways of working together as partners. I'm pleased to say that South-South and Triangular Cooperation is playing a greater role than ever before in the international development landscape and there is more that can be done.”

ABEBE HAILE-GABRIEL

FAO assistant director-general and regional representative for Africa

“Market growth for data centres has been exponential over the past five years and the trend towards a totally digitally connected world was accelerated by 18 months of online working and socialising. As the data centre market matures, the future for the industry in Africa and globally looks resoundingly positive.”

WENDY CERUTTI

Turner & Townsend's data centre lead for Africa

“We are proud that our efforts to provide tailored, flexible and innovative financial solutions to support our member states in achieving their ambitious development aspirations are once again proving effective. This landmark transaction is timely and

will have a significant impact on Uganda's development. By assisting the government to implement key trade-enabling infrastructure projects under its second national development plan, this facility will boost trade activities in the country and the flow of trade-related capital and services in the region.”



Image Credit: Afreximbank

BENEDICT ORAMAH

President and chairman of the board of directors of Afreximbank on the dual-tranche facility closed with the Government of Uganda

“This is an important milestone in the history of GCR. This transaction will enable us to build on our deep local market insights and a quarter-century of growth across the continent. It will also provide the opportunity to further develop solutions that meet a range of customer needs, including credit ratings, credit risk solutions, and ESG capabilities.”

MARC JOFFE

CEO of Global Credit Rating Company Limited (GCR) on Moody's Corporation's acquisition of the majority stake in GCR

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

COCA-COLA LAUNCHES AFRICAN SUSTAINABILITY PLATFORM



Image Credit: Adobe Stock

The new platform will build and expand on the past accomplishments in water stewardship, the economic empowerment of women and youth and waste management.

Coca-Cola Africa and its bottling partners have launched JAMII, the new Africa-focused sustainability platform which houses the company's existing and new sustainability initiatives.

Through this signature platform, Coca-Cola hopes to attract like-minded partners to help accelerate on-the-ground impact of its initiatives.

The new platform will build and expand on the past accomplishments in three areas; water stewardship, the economic empowerment of women and youth and waste management. This will be delivered together with bottling partners, system employees, and several NGO partners.

In the area of women and youth economic empowerment, JAMII will promote and stimulate entrepreneurship opportunities through the provision of improved access to skills training, networks, finance and markets.

In the area of water stewardship, JAMII will replenish 100% of the water used in production by managing water use efficiency in operations, supporting the conservation of natural water resources and improving community water access and climate change adaption.

For waste management, Coca-Cola Africa is committed to driving a world without waste. Nearly all of Coca-Cola's packaging is already recyclable with the goal of recycling the equivalent of 100% of its packaging waste by 2030.

AFDB CONTINUES TO SUPPORT SENEGALESE ECONOMY



Image Credit: Adobe Stock

AfDB has delivered 116 projects in Senegal since 1972.

Speaking at the State House in Dakar, where he received visiting AfDB head Akinwumi A. Adesina, President Macky Sall of Senegal commended the AfDB for the impact of its funded projects in his country, the most recent of these being the Regional Express Train launched last month.

The African Development Bank (AfDB) has delivered 116 projects in the country worth more than US\$3.47bn since the beginning operations at Senegal in 1972 with an aim to help and assist in building the country's economic growth.

Sall commented, "African Development Bank-funded projects are in line with our own development strategy. Your bank understands the needs of Senegal."

Adesina said AfDB was proud to contribute to Senegal's development. "I congratulate you, Mr. President, for the impressive achievements that Senegal has made under your leadership. You have delivered major projects in various sectors such as agriculture, social, energy and transport with flagship projects such as the modern Blaise Diagne International Airport, the Toll Road and now the Regional Express Train."

The Senegalese leader and Adesina agreed to hold a pan-African youth entrepreneurs' forum to address the financial needs of Africa's bulging youth population and rally support for the establishment of a youth investment bank.

MOOVE RECEIVES FUNDING BOOST FROM NBK CAPITAL PARTNERS



Image Credit: NBK Capital Partners

Moove provides vehicle financing for cars, bikes and lorries to mobility entrepreneurs.

NBK Capital Partners Mezzanine Fund II has closed a US\$10mn financing facility with mobility fintech Moove, Uber's exclusive vehicle supply partner in Africa.

The growth facility from the fund will support Moove's expansion in West Africa initially and is the first investment in Africa by NBK Capital Partners funds.

Moove provides vehicle financing for cars, bikes and lorries to mobility entrepreneurs across the continent through its alternative credit scoring technology and innovative revenue-based financing model. The company currently operates in six cities across Ghana, Nigeria, South Africa, and Kenya, with plans to expand further across the continent.

"We are very excited to partner with Moove on its journey to transform access to credit for millions of people across the African continent," said Yaser Moustafa, CEO of NBK Capital Partners. "The company is driven by strong founders who possess a unique, long-term vision for success, one built on the empowerment of individuals from every socioeconomic class across the region but also a genuine commitment to social and environmental sustainability."

Jide Odunsi, co-founder and CEO, Moove, said, "We're committed to ensuring that at least 50% of our customers are female, providing them with the tools, services, and flexibility they need to be productive and successful, when previously they have been excluded from more formal means of employment."

KONECRANES UNVEILS NEW CLIMATE TARGETS



Image Credit: Konecranes

Recently, Konecranes signed the Science Based Targets initiative commitment.

Konecranes has announced new climate targets that will target emissions in both its own operations and its value chain in order to further develop its low-carbon portfolio and mitigate climate risks

Recently, Konecranes signed the Science Based Targets initiative (SBTi) commitment which is in line with limiting global warming to 1.5°C.

The company has now committed to reducing its Scope 1 and 2 emissions by 50% by 2030 which is achievable by investing into renewable electricity and improving fleet fuel efficiency and the energy efficiency of production processes.

For Scope 3, Konecranes aims to reduce absolute carbon emissions by 50% by 2030, encompassing the use of sold products and steel-related purchases. The targets cover over 70% of Konecranes' value chain emissions and Konecranes will also fully offset flight emissions.

Teo Ottola, CFO and interim CEO at Konecranes, commented, "Konecranes is a sustainability pioneer in the industry. We are in a unique position to help our customers transition towards a low-carbon future by providing solutions that accelerate decarbonisation and advance electrification."

Anniina Virta-Toikka, head of sustainability at Konecranes, said, "Konecranes is fully committed to do its share and to be transparent about its actions and progress going forward."

Light at the end of a very long tunnel

A new facility opening in South Africa is set to bolster the regional response to Covid-19 and other diseases.



Once fully operational, the new facility could produce around one billion Covid-19 vaccines by 2025.

Image Credit: Adobe Stock

During the Covid-19 pandemic, developers of mRNA vaccines – Moderna, based in Cambridge, Massachusetts; Pfizer, in New York City; and BioNTech, in Mainz, Germany – have sent more than 70% of their doses to wealthy nations, according to vaccine-distribution analyses.

Meanwhile, millions of doses purchased by or promised to low- and middle-income countries have been delayed.

This has been especially serious for Africa, where only 10% of the population has been fully vaccinated. The pandemic has revealed the huge disparities that exist within and between countries in access to quality healthcare, medicines, diagnostics and vaccines.

But hope is on the horizon, even if an overnight solution for Africa is not a reality. That is thanks to developments in South Africa that began in June 2021 when the World Health Organization (WHO) launched its mRNA tech-transfer facility led by a local South African company, Afrigen.

Commenting at the time, South Africa's President Cyril Ramaphosa said, "It is within the walls of this Cape Town facility, through the

networks that are being built, through the advanced skills that are being developed, and through the other initiatives across our continent, that our vision for vaccine, diagnostics and drug manufacturing in Africa will steadily take form.

"Through the African Union and the Africa Centres for Disease Control and Prevention, in collaboration with numerous institutions across the continent,

and with the support of many international partners, we have mounted a formidable response to Covid-19 in Africa."

In early February, the Assembly of African Union Heads of State and Government called for continued African solidarity in addressing the impact of Covid-19 on the continent.

An uphill struggle

Africa has had to wage a concerted fight to secure vaccines for its people. The African Vaccine Acquisition Task Team has secured more than 500 million vaccine doses for the continent. But these doses represent only around half of what Africa needs to vaccinate 900 million people in order to achieve the 70% target set by the WHO.

“ We have mounted a formidable response to Covid-19 in Africa.”

CYRIL RAMAPHOSA, PRESIDENT OF SOUTH AFRICA

“Global health’s dysfunction derives from power imbalances,” says Olusoji Adeyi, president of the organisation Resilient Health Systems in Washington DC. “Addressing that will come from countries in the global south developing their own capabilities and taking responsibility for their own health.”

And that is exactly what is happening as South African-born US-based billionaire Patrick Soon-Shiong and South African President Cyril Ramaphosa cut the ribbon of the NantSA new vaccine manufacturing plant. It is planned that this facility will soon start making Africa’s first locally produced Covid-19 vaccines, as well as cancer vaccines and other pharmaceuticals.

Soon-Shiong, 69, has an interesting history. He left South Africa for the US after doing his internship to become a medical doctor. Today, he is number 89 on

the Forbes 400 list of wealthiest Americans with an estimated fortune of US\$7.5bn. He became known for inventing the cancer treatment drug Abraxane – from which he derived much of his wealth, subsequently invested in media interests.

He says the Covid-19 vaccine he has developed is second generation and will help to stop the transmission of the virus.

However, he emphasised the vaccines currently available are effective and necessary.

“It is so important for you to be vaccinated,” he says. “The vaccines that were there first played a very important role as they did absolutely reduce death and they continue to do so. So, I want to make sure that people understand that you need to be vaccinated.”

Supporting Africa’s response

This NantSA facility will make a vital contribution to protecting the

“This new vaccine manufacturing campus will be an important space contributing to the ecosystem for manufacturing capacity.”

MATSHIDISO MOETI, AFRICA REGIONAL DIRECTOR FOR THE WORLD HEALTH ORGANIZATION

African people, complementing the work already being done by companies such as Aspen, Biovac and Afrigen in South Africa as well as several other companies in other parts of Africa.

The Africa regional director for the World Health Organization, Matshidiso Moeti, congratulated Ramaphosa and Soon-Shiong on the launch, saying it was a proud day for the continent.

“This new vaccine manufacturing campus will be an important space

contributing to the ecosystem for manufacturing capacity. It will contribute positively to Africa’s response to Covid-19, as well as cancer, HIV, childhood preventable diseases, neglected tropical diseases and other diseases,” Moeti said.

Soon-Shiong says it will cost nearly US\$200mn dollars to complete the plant, but once it is fully operational, his company hopes to produce around one billion Covid-19 vaccine doses by 2025. ■

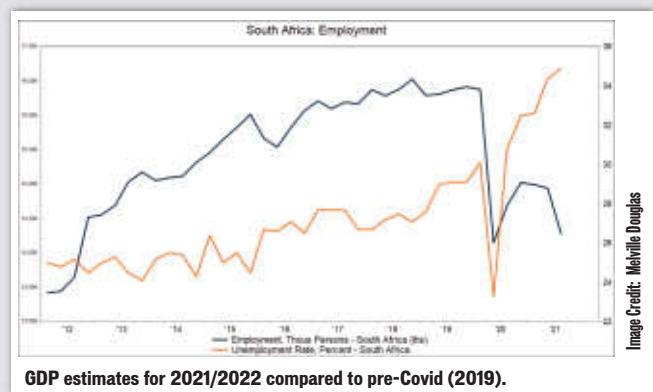
SOUTH AFRICA’S MODERATE RECOVERY

A higher vaccination rate in the South African population (bolstered by new facilities such as the NantSA vaccine manufacturing campus) is spurring hopes for a return to normality. However, while the country emerges from the pandemic, economic recovery is expected to be somewhat modest in the coming years.

According to the most recent ‘SA economic and investment market outlook for 2022’ composed by Bernard Drotschie, chief investment officer at Melville Douglas (a member of Standard Bank Group), after a sharp rebound in economic activity from very depressed levels, growth is expected to be moderate. The report indicates that a return to 2019 levels will be achieved by 2023/24, a slow recovery in comparison to what some other countries are expected to achieve. Drotschie suggests that the

relatively weak state of the economy going into the crisis, a lack of fiscal support, loadshedding, and a lack of large-scale reforms has held back growth in the past year which has, of course, not been helped by the impact Omicron has had on consumer confidence. Of particular concern is the dire state of the employment market, with unemployment reaching ‘unpalatable levels’.

However total household income (in nominal terms) presents a better picture as it has made a full recovery since the onset of the pandemic (although adjusting for inflation income levels are still slightly lagging). In addition, inflation in the country is still under control (and within the Reserve Bank’s target range) and the Government appears adamant to redirect its spending towards productive assets and



GDP estimates for 2021/2022 compared to pre-Covid (2019).

continue its journey of fiscal consolidation and greater collaboration with the private sector to help fund growth plans in the pipeline. The report noted that the importance of the Government’s following through on their reform plans and getting rid of corruption cannot be over-emphasised.

According to Drotschie, there is good news for investors as little of

the potential uplift in the country’s long-term growth trajectory has been discounted in asset valuations domestically, which is different to certain offshore markets such as the US. However attractive valuations on their own will not be enough to sustain the strong returns experienced recently and, in the end, profitable growth is what matters.

Legal reforms open Ethiopia to the world

Recent developments impacting legal practice in Ethiopia could help open the country further, according to Tameru Wondm Agegnehu and Weynaalem Weldesenbet.

As one of Africa's oldest nations, Ethiopia has a rich legal history. A legal edict dating back to the mid-17th century required the sovereign "to dispense justice among his people fairly and equitably". Justice was dispensed by local elders and appointed judges, based on custom as well as writs and religious rules.

Fast forward to modern times and, finally – and rightly – the Government felt the need to reform the resilient commercial code of 1960, which had defied repeated earlier reform attempts by previous administrations. After two years of diligent efforts, the revised commercial code was enacted in April 2021, with a section that includes LLPs for professional associations. The LLP is a limited liability partnership, with at least two professionals as partners and capital contributed either in cash or in kind, including intellectual property or professional services.

The law leaves both the capital and the number of partners up to the professionals. Equally relevant is a draft proclamation (called FASLAP) designed to regulate details of licensing and legal practice by foreign lawyers or law firms. The two laws lay out details about the formation of LLPs, the rights and liabilities of partners, the licensing process, and the criteria to be eligible to obtain a licence.

An LLP is defined as a limited liability partnership with distinct and separate legal personality from the partners, with at least two partners whose liability is limited to their contributions and organised to provide legal advice and related services. Admission as a partner to an LLP is open only to lawyers with a valid licence duly registered with the Office of the Attorney General.



Tameru Wondm Agegnehu, founding partner of Tameru Wondm Agegnehu Law Office in cooperation with BonelliErede, and Weynaalem Weldesenbet, local partner at Tameru Wondm Agegnehu Law Office in cooperation with BonelliErede.

Image Credit: Tameru Wondm Agegnehu Law Office

Foreign lawyers could also join the firm if they are of Ethiopian origin.

By the same token, a foreign law firm may establish a firm in partnership with domestic lawyers or buy shares from existing law firms if the foreign firm has a valid foreign licence and capital not exceeding a quarter of the Ethiopian law firm's capital. The law provides that LLP partners are not responsible or liable for other partners' misconduct or negligence unless they are personally implicated in the conduct that gives rise to the liability.

Law firms established as LLPs acquire independent legal personality to handle or bear duties

and responsibilities not attributable to individual partners along with the partner that gave rise to liability. As a result, the exposure of horizontal liability of fellow partners *inter se* is narrowed down to a situation where the partner in question is directly involved in one way or another.

This, in effect, absolves other partners from vicarious liability for the conduct of fellow partners. Generally, the pass-through taxation system applies to this relationship, to allocate tax liability between partners and the partnership.

The new law on LLPs and the draft proclamation for the licensing of practising lawyers introduce two major developments to legal practice

in Ethiopia. First, the adoption of the LLP model helps to transform legal practice from a sole practice to a corporate legal practice system which guarantees continuity of a law firm from generation to generation.

Second, the opening of legal practice to foreign lawyers will also make room not only for local lawyers to impart their knowledge to foreign lawyers, but also for foreign lawyers to learn more from local lawyers' rich and long-standing experience.

This development is most likely to break the isolation in which our system has remained for so long. The ensuing opening-up will widen our exposure to the rest of the world, with better opportunities for our lawyers to access international institutions and professional associations such as the IBA. ■

“ This development is most likely to break the isolation in which our system has remained for so long. The ensuing opening-up will widen our exposure to the rest of the world.”

Tameru Wondm Agegnehu, founding partner of Tameru Wondm Agegnehu Law Office in cooperation with BonelliErede, and Weynaalem Weldesenbet, local partner at Tameru Wondm Agegnehu Law Office in cooperation with BonelliErede.

The cyber security challenge

Emmanuel Yartey explores how companies operating in the modern world must protect against cyber attacks, or suffer the financial consequences.



Cyber security is essential for companies operating in the modern world.

Image Credit: Adobe Stock

Undoubtedly, in this current globalised world, the accelerated growth of manufacturing organisations that leads to increased profit margins is pivoted on technology. But it is the same technology that is used by malicious actors to influence the system for nefarious purposes.

However, Ghana's Tobinco Pharmaceuticals Limited is able to detect cyber security attacks early enough because of robust measures put in place by management.

Tobinco Pharmaceuticals is one of the leading pharmaceutical manufacturing, marketing and distribution companies in Ghana. The company focuses, in particular, on marketing, manufacturing and distribution of antimalarials and has increased its range to cover over-the-counter drugs and antibiotics

among others.

Over the years, Tobinco Pharmaceuticals has been able to make waves against the odds with regard to preventing cyber security attacks by making it their priority focus. Its endpoint protection, firewalls, and corporate security policy are all managed by experts who are on top of their responsibilities.

Cyber defence

Endpoint protection is the practice whereby a company secures

endpoints or entry points of end-user devices such as desktops, laptops, and mobile devices from being exploited by malicious actors. Currently, endpoint protection systems are designed to quickly detect, analyse, block, and contain attacks in progress.

For example, a firewall is a network security device that monitors incoming and outgoing network traffic and permits or blocks data packets based on a set of security rules. Its purpose is to establish a barrier between the

company's internal network and incoming traffic from external sources such as the internet in order to block malicious traffic such as viruses and hackers.

Corporate security policy is an information security policy statement designed to guide employees' behaviour regarding the security of the company's data, assets, and IT systems. What a security policy seeks to achieve is meaningful direction and value to the individuals within an organisation to establish a security mindset.

A spokesperson at Tobinco Pharmaceuticals told African Review, "Here at Tobinco, we are able to detect cyber attacks early because we consider security as fundamental, especially as manufacturers. We are digitally

“It is important that cyber security attacks can be reduced to the barest minimum.”

TOBINCO PHARMACEUTICALS LIMITED SPOKESPERSON

integrated and reliant on technology and this should enable operational excellence and not distract us from our core mission to design and produce products at Tobinco.

“It is important that cyber security attacks can be reduced to the barest minimum when there is constant detection, containment, and remediation. We at Tobinco have a well-laid response plan when threats are identified. We don’t lack visibility into our security infrastructure because our security operations are effective, enabling us to block unwanted network traffic.

“If I am not mistaken, around 70% of security operations in organisations are ineffective because of lack of visibility into network traffic.”

The spokesperson continued, “Indeed, around thirty years or more ago, heads of manufacturing companies played down matters of robust security hardware, policy, and industry compliance because the system wasn’t sophisticated and heads of organisations weren’t abreast of technology. Even if they

knew about it, such high technologies hadn’t been introduced in Ghana. In addition, the number of cyber security attacks was infinitesimal or non-existent. But in our times, it’s quite the opposite because of technological advancement and its accompanying negative effects.”

A necessary expenditure

“Security as a risk avoidance business is expensive. Daily implementation of the necessary solutions and staffing are costly endeavours which even the largest organisations struggle to keep operationalised,” remarked the spokesperson.

“But if these security solutions are implemented correctly, they will produce enough and encouraging amounts of data that will be consumed, analysed, and actioned. For most manufacturing organisations, this is a difficult task for already minor stretched IT organisations. And there is also the challenge to find talented security professionals necessary to staff their

security operations. Around 90% of manufacturing organisations in Ghana are confronted with moderate to extreme security risk due to security talent shortages.”

The spokesperson also commended the Government of Ghana for ensuring the enactment of the Cyber Security Act which the Parliament of Ghana passed to establish the Cyber Security Authority, which operates under the Ministry of Communications and Digitalisation. Its mandate is to regulate cyber security activities in the country; to promote the development of cyber security in Ghana and to provide for related matters.

Behind the screen

Why do cyber criminals engage in cyber attacks?

They attack organisations that are commercially oriented to benefit financially. They begin by stealing data that are sensitive such as workers’ credit card numbers or their critical personal information which they eventually use to access money or any assets of the victims.

There are also those who initiate attacks purposely to lock computers to stop owners using them and accessing the applications and data they need. This gives the cyber criminals the opportunity to blackmail the affected organisations to pay them huge sums of money before the computer systems are unlocked for use again.

These criminals have a multiplicity of reasons for attacking computer systems of government establishments, commercial and non-profit organisations.

According to the spokesperson at Tobinco Pharmaceuticals, the company commits a lot of financial resources into its security operations in order to keep alive their readiness to prevent cyber security attacks.

“The important thing is that we are on top of our game 24 hours a day to ensure that there is an absence of cyber security attacks at Tobinco. And this culture provides the much-needed fillip for Tobinco’s growth as a company with automatic success in our financial standing.” ■

CYBER PERILS OF PARAMOUNT CONCERN

According to the Allianz Risk Barometer 2022, published by Allianz Global Corporate & Specialty (AGCS), cyber threats are the biggest concern for companies for the year ahead.

The report analyses the most important business risks for the forthcoming 12 months and beyond, based on the insight of 2,650 respondents from 89 countries and territories.

Despite business interruption and supply chain disruptions in the lingering shadow of Covid-19, cyber risk has returned to the top of the global rankings as the biggest threat to companies operating in the forthcoming year (it last held the top spot in 2020). The threat of ransomware attacks, data breaches and major IT outages also left natural catastrophes, climate change and pandemic outbreak in its wake.

Thusang Mahlangu, AGCS Africa CEO, said, “There is a need for business continuity plans to address political disturbances and other types of business disruption such as cyber. Having defined, and preferably tested, procedures in place is crucial – these should include staff, client and general communication and social media plans. It is imperative for companies to think deeply about how they can best protect their assets and people.”

In the report, cyber incidents ranked as a top three peril in most countries and regions surveyed including in Africa and the Middle East. It was the top concern in South Africa and Nigeria; ranked second in Ghana; claimed fourth in Morocco and Namibia and was fifth in Kenya. The main driver of these concerns was the recent surge in ransomware attacks which



was confirmed as the top cyber threat for the year ahead (according to 57% of correspondents).

“Ransomware has become a big business for cyber criminals, who are refining their tactics, lowering the barriers to entry for as little as a US\$40 subscription and little technological knowledge. The commercialisation of cyber crime makes it easier to exploit vulnerabilities on a massive scale. We will see more attacks against technology supply chains and critical infrastructure,” explained Scott Sayce, global head of cyber at AGCS.

Soaring air cargo

Global freight market data released by the International Air Transport Association (IATA) has indicated that full-year demand for air cargo increased by 6.9% in 2021 compared to 2019 and 18.7% compared to 2020.

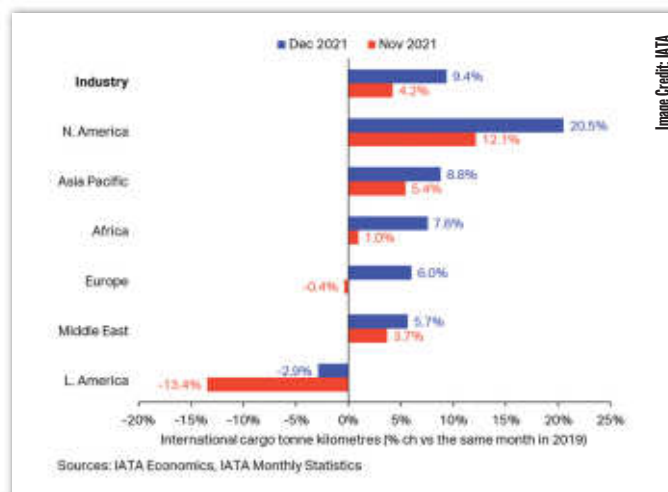
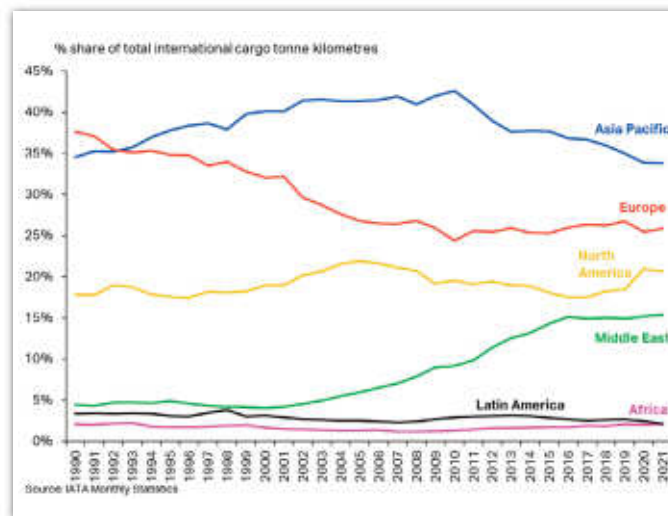
The substantial year-on-year increase in demand, measured in cargo tonne-kilometres (CTKs), was the second biggest improvement since IATA started to monitor cargo performance in 1990 (behind 2010's 20.6% gain). It comes after a strong performance in December which saw global demand climb 8.9% above the same month in 2019 – the best performance since April 2021 (which saw a growth of 11.4%).

The exceptional performance is aided by favourable conditions such as a rise in global goods trade (7.7% in November compared to pre-crisis levels) and global industrial production increasing by 4.0% over the same period.

In addition, the inventory-to-sales ratio remains low, cost-competitiveness of air cargo is favourable relative to sea-container shipping and the recent surge in Covid-19 cases has meant many advanced economies are creating a strong demand for PPE shipments which are often carried by air.

Growth was, however, restricted by labour shortages and supply bottlenecks. Furthermore, while air cargo demand has risen in 2021, capacity, measured in available cargo tonne-kilometres (ACTKs) remained stunted across the year – 10.9% below 2019. This was largely due to bottlenecks at key hubs.

Willie Walsh, IATA's director



remain, governments must keep a sharp focus on supply chain constraints to protect the economic recovery."

Regional variation

Strong variations were evident in the regional performance of air cargo in 2021 compared to 2019.

North American airlines emerged as the strongest performers, reporting an international CTK growth of 20.5% in December compared to the same month in 2019 which contributed to an annual increase of 20.2%. The regional airlines benefitted from strong demand for goods, and from more capacity available (international ACTKs were 0.2% above 2019 levels in 2021). Despite this, their international share of the region slipped to 20.7% after the strong gains of 2020.

At the other end of the scale, Latin American airlines were alone in recording a contraction in international demand, with their international CTKs falling by 15.2% in 2021 compared to 2019. Their market share also eroded to 2.1% of the international total, however the end of restructuring processes meant that December was the best month of 2021 with a 2.9% decline compared to December 2019.

African airlines saw international CTKs increase 11.3% in 2021 compared to 2019. Growth in the region has been dynamic for most of the year, driven by the strength of the Africa-Asia route. In December specifically, international CTKs grew by 7.6% against the same month in 2019, although international capacity fell by 14.6% last year.

Africa's market share caught up with Latin America in 2021 for the first time in the annual series (2.2% of all international CTKs). ■

“For many airlines, air cargo provided a vital source of revenue as passenger demand remained in the doldrums.”

WILLIE WALSH, IATA'S DIRECTOR GENERAL

general, commented, “Air cargo had a stellar year in 2021. For many airlines, it provided a vital source of

revenue as passenger demand remained in the doldrums due to Covid-19 travel restrictions. Growth opportunities however were lost due to the pressures of labour shortages and constraints across the logistics system. Economic conditions do point towards a strong 2022.

“December cargo performance was assisted by additional belly-hold capacity as airlines accommodated an expected year-end boost to travel. As shortages of labour and storage capacity

Zipline to deliver medical supplies in Bayelsa State

Zipline, a global leader in instant logistics, has partnered with the Government of Bayelsa State, Nigeria, to deliver essential medicines, blood and other medical commodities to health facilities via its drone technology.

Zipline will establish a distribution hub in Bayelsa State for the introduction, operation, and maintenance of instant logistics solutions. When completed, the service will operate 24 hours a day, seven days a week, from the distribution centre which will be equipped with Zipline's proprietary fleet of drones.

"Zipline is pleased to partner with the people and Government of Bayelsa to advance instant, autonomous healthcare delivery across the state," said Zipline CEO, Keller Rinaudo. "This partnership is an important milestone for Zipline as we scale smart, safe and just-in-time delivery technology and transform how goods move around the globe."

The Senior vice president of Zipline Africa, Daniel Marfo, assured that Zipline will begin the construction process immediately. "Our system is well tested across Africa and the United States, and there is no doubt that it is a giant step in expanding universal healthcare access in Nigeria."

The agreement is another step in Zipline's expansion journey and marks another foothold in West Africa. At the end of 2021 the company formed a similar partnership in the Ivory Coast to deliver thousands of vaccines, medications and blood products to facilities across the country.

At the time, Israel Bimpe, director, Africa go-to-market for Zipline, commented, "Our revolutionary instant logistics technology, which is being deployed around the world, will largely improve access and even distribution of medical commodities to remote and hard-to-reach areas."

"It is for this reason that we are excited with this partnership which, overall, will improve the lives of our own people, leaving no one behind in terms of access to medical commodities."



Zipline's autonomous electric aircraft are the backbone of its instant logistics system.

AMITRUCK ACCELERATES GROWTH

Amitruck, a Kenya-based digital trucking logistics startup, has secured US\$4mn in seed funding which will be used to expand across Africa and enhance its technical, operations, and sales units.

The fundraising was led by Better Tomorrow Ventures (BTM) which was joined by Dynamo Ventures, Rackhouse Ventures, Flexport Inc., Knuru Capital, Launch Africa Ventures, the Uncovered Fund, and more.

Founded in 2019, Amitruck aims to streamline the trucking business in Africa where the cost of transportation remains five times higher than in developed countries and the cost of goods can be up to 60% more. Amitruck enables clients to connect directly with transporters to eliminate the cost-prohibitive middlemen. Goods are insured against loss or damage and drivers on the platform are vetted for reliability.

Mark Mwangi, CEO and founder of Amitruck said, "Transport touches almost every sector of the African economy and is crucial to its development; we are excited to be part of that journey. Thanks to the support from our investors, we look forward to expanding our footprint across Africa and bringing more carriers and shippers to our marketplace."

Jake Gibson, general partner at BTM remarked, "While the trucking and logistic business in Africa has grown tremendously over the years, the pace of innovation particularly in its administration has been slow. Amitruck's solution is ideal for bringing the industry into the 21st century."

The startup's database has grown to more than 8,000 vehicles, which have completed almost 100,000 deliveries for more than 300 corporate clients. Consequently, its revenue grew by around 1,000% in 2021.

Amitruck is now eyeing market dominance in the African trucking and logistics market (which accounts for almost 80% of transported goods).

DNATA TARGETS TANZANIA EXPANSION

dnata, a leading global air travel services provider, has achieved a milestone in Erbil, Iraq, where its OneCargo system digitalised processes and maximised efficiencies across its cargo operations.

OneCargo automates key business and operational functions, including safety and quality monitoring, reporting and ULD management, with an integrated, cloud-based platform. AI-driven tools and analytics provide enhanced visibility on sales and business performance, allowing customers to match real-time demand with available capacity for maximum profitability. In addition, OneCargo eliminates all redundancies and manual check sheets, substantially improving operational efficiency.

After the success in Erbil, dnata plans to gradually implement OneCargo at additional global stations including the airport in Zanzibar, Tanzania. By 2023, OneCargo will have a user base of more than 2,000 staff members across six countries, interfacing seamlessly with a host of other system applications.

► BRIEFS

Maersk vessels to live feed weather data

Image Credit: Maersk



The data provided is shared with all members of the World Meteorological Organization.

Maersk has installed automated weather stations (AWS) on 50 of its vessels to transmit live data helping forecast weather and climate. All collected data is transmitted live to the National Meteorological Service of Germany, DWD, supporting their weather forecasts and climate science. AWS on ships provides a constant feed of high-quality data at sea and serves as the backbone for all numerical weather models.

Copia ramps up expansion

Image Credit: Copia Global



To date, the company has fulfilled more than 10mn orders.

Copia Global has raised US\$50mn in an equity round led by Goodwell Investments. Copia is the first and only B2C e-commerce platform with a distribution solution to serve the 750 million middle and low-income African consumer market. Copia brings quality products at the lowest market prices delivered at no cost to thousands of customers every day. It will use the capital to grow its model across East Africa and expand into other African countries.

Conquering the toughest terrains

Commercial vehicles delivered by Torsus, a brand of Pulsar Expo, are designed with durability in mind to meet the unique demands of the African continent.

There are several challenges which must be considered when selling commercial vehicles into Africa, notes Dmytro Kalashnyk Sales Manager of Torsus, in an exclusive interview with *African Review*.

“In terms of logistics, there are limited options for roll-on-roll-off ports – since our vehicles are quite big, they have special requirements to be able to drive off safely and securely. Recently, we delivered vehicles to Port-Gentil in Gabon, but had to deliver into another city nearby as the facilities were not available,” Kalashnyk says.

“There is a similar challenge with inland transportation, as there are few companies which can provide sufficient transportation for big vehicles, such as ours.”

But Kalashnyk points out that within these tribulations is also opportunity. “Underdeveloped infrastructure in some African regions is the reason why we are so popular. Our vehicles are designed to go off-road and can function effectively on poor roads.

“Another challenge is the low quality of fuel which is not suitable for modern vehicles with modern engines. We have addressed this and have specifically prepared our engines for this kind of fuel – thereby solving the problem for the client. These challenges, therefore, are more like opportunities for us and, in addition, they result in smaller competition in the commercial space as many suppliers cannot meet these needs,” Kalashnyk adds.



Torsus' Terrastorm has been prepared to operator on the quality of fuel found on the continent.

Image Credit: Torsus

An earmarked market

While the company delivers its vehicles worldwide, its main focus is currently on the European, Asian and African markets.

Kalashnyk notes, “We have successfully supplied to countries across Africa such as Gabon, Ghana, Egypt and Senegal. We don't have a particular distributor for the African region so we serve the countries from our headquarters. We are, however, searching for an African distributor with which to build a strong partnership.”

Within Africa, Torsus' top seller is the Praetorian, which is the company's biggest model. The 4x4 off-road bus is designed for passenger service and is favoured in the region because it is

based on MAN TGM trucks which are very popular on the continent.

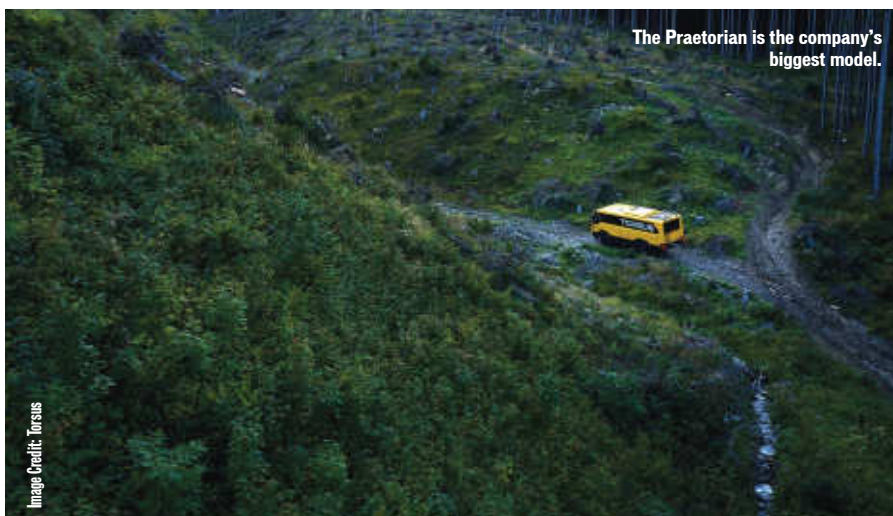
The company is also working to promote its smaller model, the Terrastorm (based on the VW Crafter and MAN TGE), which has been specifically prepared to operate on the quality of fuel found on the continent. Kalashnyk believes the vehicle will have a big future on the continent especially because there are not many competitors of a similar size in the market and fewer that can match its robustness.

“Our vehicles are extremely durable because we have chosen great partners in MAN and VW. Their vehicles have a long history on the continent and are incredibly robust, which now feeds into our buses. MAN has a presence in most African countries and the end-user can easily approach them for quick access to spare parts which will be usable on our buses.”

Kalashnyk surmises, “We also have a great engineering team who are constantly working on developing our vehicles and they incorporate feedback from clients who operate the trucks in the harshest conditions. The result is some of the world's toughest, safest and most efficient buses with impressive off-road capabilities.”

Looking to the future, Kalashnyk concludes, “So far on the continent, most of our clients come from the commercial sector and established industries such as mining or law enforcement.

“Africa is a very important market for us and we believe it has great potential. We hope to develop this market and are looking to open representation there soon.” ■



The Praetorian is the company's biggest model.

Image Credit: Torsus

The project entails the construction of high voltage transmission lines and associated substations.

Enhancing power

There is great impetus on the continent to provide interconnected power and facilitate the creation of a reliable, effective and efficient African power market, with a number of initiatives on the cards. Nawa Mutumweno reports.

Image Credit: Adobe Stock

A series of interconnected power projects are set to transform the African power market, with the Zambia-Tanzania-Kenya (ZTK) Power Interconnector Project leading the way. Its primary objective is to facilitate electricity trading in the region and promote power system stability.

The project will effectively connect the Southern African Power Pool (SAPP) with the East African Power Pool (EAPP), creating the largest power pool on the continent and an essential component of the North-South Cape to Cairo power transmission corridor.

Supporting electrification

Putting the objectives of the project in context, NEPAD outlines them as “to enhance electricity trade and improve security of supply; foster socio-economic development and promote regional integration; create an information and communications technology connection by including fibre optic ground wire on the transmission line; create a transmission backbone to support rural electrification; and stimulate investment in generation in the two sub-regions arising from the larger market of the interconnected systems.”

The scope of the project entails improving quality of power to northern Zambia (via Kasama) and western Tanzania (Sumbawanga); reinforcing the national grid in

Tanzania (and making the country an operating/trading member of the Southern Africa Power Pool); and assisting Kenya in diversifying its fuel sources for generation.

“An accessible and reliable interconnected transmission system is fundamental to the development, expansion and operation of a smoothly functioning regional electricity market. It facilitates and enables the construction of new generation capacity and increases access level across a region,” stated Deloitte Consulting LLP in a transmission report conducted with USAID and Power Africa.

In 2014, energy ministers from the three countries signed a Tripartite Inter-Governmental Memorandum of Understanding to build the Zambia-Tanzania-Kenya Interconnector which requires each country to build the necessary transmission infrastructure within their boundaries.

The implementing partners of the project are Kenya Electric Transmission Company (KETRACO), Tanzania Electric Supply Company (TANESCO), and Zambia Electricity Supply Corporation (ZESCO), which all play an integral role.

The project entails the construction of high voltage transmission lines and associated substations from Kabwe in Zambia through Tanzania and terminating at Isinya, Kenya, over 2,300 km at an estimated cost of US\$1.2bn. It will transmit an estimated 400MW

from Zambia to Tanzania and 300MW from the Tanzanian national grid to Kenya. The power project is unique as it spans three regional economic communities: COMESA, SADC and EAC.

On the Zambian side, the line passes through Kabwe, Mpika, Kasama to Nakonde Border (Tunduma) for 1,000 km. In Tanzania the line passes through Mbeya, Iringa, Dodoma, Singida, Shinyanga, Arusha and terminates at Namanga on the border with Kenya. Kenya is the shortest stretch, 98 km, running from Namanga to Isinya.

In 2011, a grant amounting to EU€4.4mn (approx. US\$5mn) was secured from the European Development Fund (EDF) through COMESA to kick-start the project. In June 2018, the World Bank approved US\$450mn funding for the Tanzanian section of the project. The Kenyan scope is fully financed and construction was scheduled for completion by the end of 2021. The Zambian Government is mobilising funding for the remaining sections of the interconnector.

Recent developments

On December 15, 2020, the country director (Tanzania) of the French Development Agency (AFD), Stephanie Mouen, signed a grant agreement of EU€26mn (approx. US\$29.5mn) with the Ministry of Finance and Planning of the United Republic of Tanzania. The grant has been provided by the European

Union (EU) and will be implemented by AFD to finance the cross-border link of the Tanzania-Zambia Energy Interconnection Project. In addition to the EU grant, it is financed through concessional loans from AFD and the World Bank.

An additional EU grant of EU€3.5mn (approx. US\$4mn) will be allocated to ensure capacity building of TANESCO's staff, integration of renewable energy, smart grid technologies and maintenance of the line and sub-stations, ensuring project sustainability.

“The grant from the EU is critical for the development of the whole project as it reduces risks in implementation and facilitates negotiations between Tanzania and Zambia on shared costs for the substation connecting the transmission line between the two countries,” said EU chargé d'affaires Emilio Rossetti.

The three countries still have a significant energy infrastructure gap but the interconnector is a critical milestone in their industrialisation programmes. The abundant renewable energy sources in eastern and southern Africa underpin the significant potential benefits from regional energy sector integration.

The completion of this regional power corridor is paramount for power trade between the Southern Africa Power Pool (SAPP) and East African Power Pool (EAPP), thus contributing to sustainable power system integration that will deliver

Powering the Kamoa Kakula copper project

Zest WEG delivers electrical solutions for an ambitious DRC mine project that will be among the world's lowest greenhouse gas emitters per unit of copper produced.

Building out the electrical infrastructure for a large mining and industrial complex in a remote part of Africa is a test of character for any power company.

Zest WEG opened up recently on its role at the Kamoa-Kakula copper project, near Kolwezi, in the southern Democratic Republic of Congo (DRC), one of Africa's most ambitious mine projects underway right now.

Eventually, it could develop into the second biggest copper mining complex in the world, after Chile's mighty Escondida development.

As well as its size, Kamoa-Kakula is set to be one of the cleanest and greenest mines on the continent –

its primary energy source comes from hydro-generated electricity from the Inga River.

The mine operator, Ivanhoe Mines, has pledged to achieve net-zero operational greenhouse gas emissions at the site.

“Underpinning the performance of our equipment at the mine will be high levels of service and support from Panaco.”

JOE MARTINS, MINING SECTOR SPECIALIST AT ZEST WEG



As an interim fix, the temporary construction power supply for the Kakula mine includes a bank of 12 small 2MW generators to provide back-up, on top of the installation of an 18MW 120kV mobile substation to increase the capacity of grid

power available at the mine.

A second set of six 2MW generators arrived from China a year ago, shipped via the port of Durban, to be added to the original gensets.

Supporting the expansion

Zest WEG is currently supplying an extensive range of motors and variable speed drives (VSDs) for the second phase of the project, which is located on the Central African Copperbelt in the DRC. Its solutions will help to reduce greenhouse gas emissions at the site.

Phase 1 produced its first copper concentrate in May 2021, while Phase 2, now in the advanced stages of construction, will result in a doubling of production.

Future phased expansions could eventually see the mine process 19 million tonnes per annum.

For the first phase of the project, Zest WEG was the key supplier of electrical equipment to drive the mine's primary and secondary mills in the concentrator plant.

Additionally, it is supplying Kamoa-Kakula with a new 20MVA, 33kV/11kV mobile substation, which is currently being manufactured in South Africa. This will provide stepped down power, and can be moved to supply electricity to different areas within Kamoa-Kakula's mining footprint.

“We began to manufacture these long lead time items in 2019, and delivered two medium voltage VSDs and two 3,3kV motors for the mine's 7,000kW primary ball mill and its 7,000kW secondary mill,” said Joe



Zest WEG's solutions will help reduce greenhouse gas emissions at the Kamoa-Kakula project.

Martins, mining sector specialist at Zest WEG.

“Our high voltage motors and medium voltage VSDs were selected to drive the two 1,200kW high pressure grinding rolls (HPGRs) in the plant.”

WEG high voltage motors and automation solutions drive the underground ventilation fan applications, providing fresh air to the underground mine workings.

Significantly, Kamoakakula will be among the world’s lowest greenhouse gas emitters per unit of copper produced, and Zest WEG’s energy efficient motors and automation solutions will contribute to this.

The first phase order included more than 700 WEG low voltage IE3 premium efficiency motors, supplied to various local and international original equipment manufacturers (OEM), and installed throughout the concentrator plant.

These motors drive equipment such as rock breakers, conveyor drives, flotation cells, thickeners, slurry pumps, winches and other mechanical OEM packages.

“Underpinning the performance of our equipment at the mine will be high levels of service and support from Panaco, who is our Value Added Reseller (VAR) in the DRC,” added Martins.

Panaco, a 100% locally owned business, was chosen to promote



Image Credit: Zest WEG

The Kamoakakula copper project could develop into the second biggest copper mining complex in the world.

and support Zest WEG’s offering all across the region.

“Its team includes technical

specialists and the company’s operating methodologies and culture are closely aligned with ours,

and will aid in supporting our current installed base, client network and growth expectations in the region,” noted Martins.

“Kamoakakula will be among the world’s lowest greenhouse gas emitters per unit of copper produced, and Zest WEG’s energy efficient motors and automation solutions will contribute to this.”

A local boost

Work continues apace with Kamoakakula Copper’s phase 2 concentrator plant approaching 93% completion and ‘hot commissioning’ set to begin in April 2022. Ivanhoe Mines noted in January that 2022 production guidance for the complex is between 290,000 to 340,000 tonnes of copper in concentrate.

For the DRC economy itself, and its people the development’s impact will be huge.

Last August, Kamoakakula Copper extended an existing finance agreement with DRC’s state-owned power company, SNEL, to facilitate the upgrade of turbine 5 at the Inga II hydropower complex.

Turbine 5 will produce 162MW of renewable hydropower, providing the copper mine area and associated smelter with sustainable electricity for Phase 3 and future expansions.

A combined 240MW output from the Mwadingusha and Inga II hydropower plants will also benefit local communities and help nurture small businesses. ■

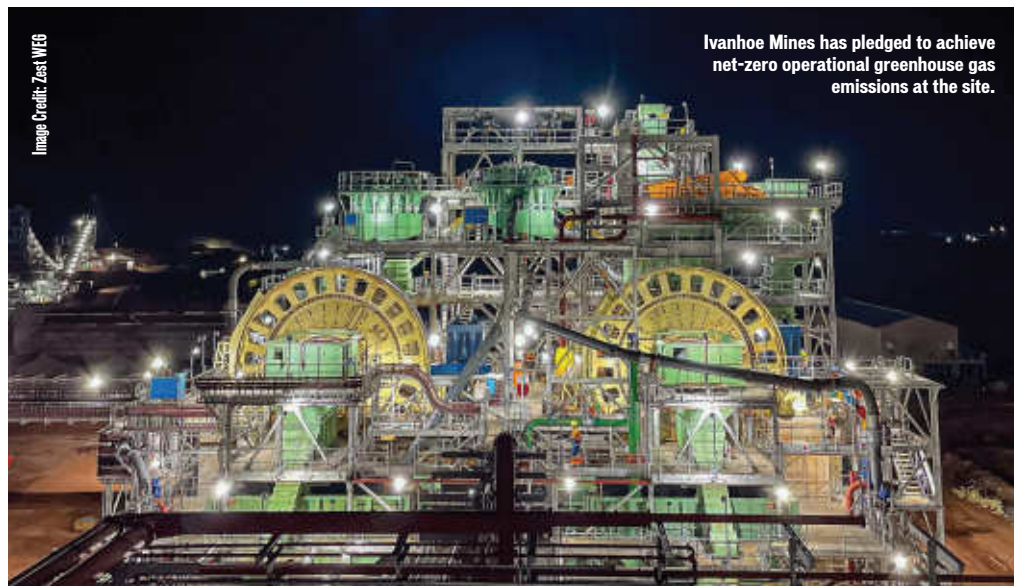


Image Credit: Zest WEG

Ivanhoe Mines has pledged to achieve net-zero operational greenhouse gas emissions at the site.

Sun Exchange brings solar installation online

Sun Exchange, the global solar leasing platform, has announced that the 510kWp + 1MWh solar-plus-storage installation to power Zimbabwean agriculture leader, Nhimbe Fresh, has started generating electricity.

Sun Exchange previously completed the crowdsale for the project, with approximately US\$1.4mn of solar cells bought by over 1,905 individuals across 98 countries.

This is the first of a multiphase solar-plus-storage project that will provide fresh produce grower and exporter with lower cost and reliable electricity and almost entirely eliminate its reliance on the grid. The Sun Exchange model enables Nhimbe Fresh to cut energy-related costs by roughly 60%, and with solar power replacing coal and diesel generation/backup, its emissions will be reduced by more than 1,000 tonnes per year.

The landmark project will power the Nhimbe Fresh packhouse and cold store facilities. It marks Sun Exchange's 44th completed solar installation, is the largest Sun Exchange solar project to date, first outside of South Africa, and first to feature battery storage.

Abraham Cambridge, CEO & founder, Sun Exchange, commented, "With African countries under pressure to decarbonise while simultaneously growing their economies, we need innovation that enables clean energy for businesses without placing a burden on national budgets or hindering development. With our technology and community-driven approach to solar, businesses like Nhimbe Fresh can access affordable, reliable solar power, protect their operations from power outages, reduce energy costs and lead efforts to create a sustainable future."

Energea Global, a renewable energy developer and portfolio manager, also purchased thousands of solar cells in the Nhimbe Fresh solar project.



Image Credit: Sun Exchange

The project will power the Nhimbe Fresh packhouse and cold store facilities.

40MW SOLAR PROJECT FOR KENYA

The Emerging Africa Infrastructure Fund (EAIF), part of the Private Infrastructure Development Group (PIDG), is providing a US\$35mn loan over a 15-year term to the 40MW Kesses solar generation facility to be built near Eldoret in the Rift Valley, Kenya.

The project will cost a total of US\$87mn. The first part of the loan was disbursed to Alten Kenya Solarfarms BV, the Kenyan business of the Alten Group, in late December 2021.

Alten Energías Renovables Group is an independent power producer (IPP) with international know-how in developing, financing and operating solar power plants. Alten will sell all its output to Kenya Power and Lighting Company (KPLC), the national energy utility, on a 20-year take-or-pay Power Purchase Agreement.

Standard Bank was the lead arranger of the project finance to Alten and is supplying US\$41mn in debt comprising a term loan, VAT and Debt Service Reserve facility.

"With the Kesses Project, Standard Bank has been able to provide continued support to the use of clean energy across the African continent allowing for a more sustainable future. This is the second project Standard Bank has funded with the Alten Group and we were pleased to be able to bring in and partner with EAIF for the funding," said Sherrill Byrne, executive energy and infrastructure finance at Standard Bank.

Building the Kesses plant will improve access to energy for thousands of people supporting SDG 7 and create up to 400 construction jobs, with 15 permanent jobs.

Eldoret has the largest population concentration in the Rift Valley with centre for local government, higher education, financial services, textiles, and more.

GLOBELEQ HELPS POWER KENYA'S NATIONAL GRID

Globeleq, a leading independent power company in Africa, and its project partner, Africa Energy Development Corporation (AEDC), has announced that its 52 MWp Malindi Solar photovoltaic (PV) plant has been exporting 40MWac of power into the national grid since 14 December 2021. The power plant is delivering enough clean and renewable power to supply approximately 250,000 residential customers.

Made up of 157,000 photovoltaic panels, it is one of the first IPP owned utility scale solar plants in Kenya and the only renewable power plant located in the coastal area. The US\$69mn solar plant is located in Langobaya, Malindi District, and construction started in 2019. Electricity is being sold through a 20-year agreement with the national distribution company, Kenya Power.

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Green hydrogen potential

Despite the challenges, Africa has limitless green hydrogen potential, says Ulrich Vögtle, head of market intelligence and global sales support, MAN Energy Solutions SE.

Featuring in the spotlight for some time, green hydrogen has been envisaged as a pivotal fuel in the future energy mix and could play a pivotal role in the ultimate move away from fossil fuels. In an exclusive interview with *African Review*, Vögtle notes that supposed restrictions to this fuel are beginning to be overcome, even on the African continent.

He remarks, “One of the limitations is acceptance – you need a pool of customers – and here it is against fossil fuels and the prices of those resources. The prices of green hydrogen need to be brought down but there is a lot of investment going into this globally and in Africa (where there is limitless renewable potential).”

“Companies are keen to invest as they can make a lot of money out of it and we are also seeing investment move away from fossil fuels. Renewable prices are going down, which is needed in order to produce attractive green hydrogen.”

Logistics is another barrier as green hydrogen can be difficult to transport over long distance due to their low volumetric energy density. Nevertheless, Vögtle is bullish on this issue, noting that there are power-to-x-technologies available now for this and in the case of CO2 neutral synthetic natural gas, for example, a lot of the fossil fuel infrastructure such as gas pipelines and LNG tankers can be used.

Big prospects

“Europe is looking to build its hydrogen economy and countries are looking for partners to import green hydrogen. Africa, due to its location, could be one of these exporters. There is simply huge potential for green hydrogen in Africa,” Vögtle comments.



A power-to-X plant.

Image Credit: MAN Energy Solutions SE

In addition, Vögtle is keen to emphasise, African green hydrogen might not solely be used as an export commodity but instead could play a big role in the continent’s decarbonisation efforts and help bring green electricity to the population due to its energy storage potential safeguarding the security of supply.

Vögtle expects that the green fuel will start to play a key role around 2030-35, following continued investment in renewables and sustained decarbonisation efforts. MAN Energy Solutions is ready to support green hydrogen’s assault on

the energy mix and sees Africa as a big part of this.

“We have acquired H-TEC SYSTEMS to expand our offering of electrolysis technology. Our current standard product is a containerised 1MW turnkey electrolyser solution. We are scaling up our product portfolio into plants suitable for double-digit MW green hydrogen projects. This new system design will be available by the middle of the year. We are investing a huge amount of money to scale this up and reduce production costs to follow market demands.”

The company is making

significant advances into power-to-X technology and can offer reactors for methane or methanol. In terms of logistics, MAN Energy Solutions offers compressors for the distribution of green fuels and can supply the entire value chain of hydrogen compressors to suit client needs.

A vital aspect of these fuels are the engines which ultimately take these fuels, and Vögtle adds that his company is delivering gas engines that can already now accept a hydrogen share of 25% to bridge the gap between fossil fuels and hydrogen and as well as 100% hydrogen powered engines.

Vögtle concludes, “Africa is important for us, and we have offices across the continent in countries such as South Africa and Senegal. We think this is a fantastic opportunity for the continent as, in many areas, it can be approached from a greenfield perspective. We really see big potential with a lot of possibilities which we can support.” ■

“Renewable prices are going down, which is needed in order to produce attractive green hydrogen.”

ULRICH VÖGTLE, HEAD OF MARKET INTELLIGENCE AND GLOBAL SALES SUPPORT, MAN ENERGY SOLUTIONS SE

A transition enabler

African governments must encourage the development of LNG infrastructure in order to facilitate the energy transition, says Kweku Frempong, area general manager for West and Central Africa at Aggreko.

The threat of climate change has been firmly in the spotlight, with several discussions and commitments at the recent UN Climate Change Conference in Glasgow, Scotland.

With natural gas emitting almost half the carbon dioxide of coal, according to the US Energy Information Administration, the importance of gas as an enabler of the energy transition in Africa is again being highlighted.

Governments across the continent must look at creating environments that are conducive to investment in liquified natural gas (LNG) infrastructure and create the demand needed for private companies to invest. They also need to support the industry through the relevant policies to encourage and support them through this energy transition.

“There is an urgent need to expand in-country gas infrastructure and develop competitive gas markets on the African continent. While we are already seeing a slow increase in the use of gas for energy generation, this accounts for less than 40% of energy in Africa, so there is an opportunity to increase that dramatically to lower the continent’s carbon impact,” Frempong says.

Over the past 10 years, several African countries have announced gas discoveries yet it is estimated that almost 40 countries on the continent currently do not have access to gas and have therefore not introduced gas into their energy mix.

“If you look at countries outside of the United States, where gas exists as a commodity and where LNG has been easily accessible for several years already, there is still relatively limited LNG



The importance of gas as an enabler of the energy transition in Africa is being highlighted.

infrastructure. And here investors in the infrastructure need to weigh up the different options, such as physical pipelines or virtual gas pipelines, to ensure that their needs are met,” comments Frempong.

“Pipelines can be used, but these tend to only be economic where there are large populations and large users of gas such as cities or coastal areas. But when you get to things like electricity generation, which can often be miles inland, or when you get to mining, it is not economical to run pipelines. Therefore, transporting the natural gas by other means must be an option.”

This requires virtual gas pipelines, which is when the gas is transported by sea, road or rail, as well as the infrastructure to convert it from natural gas into a liquid and then regasification to restore it into its gaseous state.

“There is an urgent need to expand in-country gas infrastructure and develop competitive gas markets on the African continent.”

KWEKU FREMPONG, AREA GENERAL MANAGER FOR WEST AND CENTRAL AFRICA AT AGGREKO

Building infrastructure

Frempong adds that small-scale LNG technology still needs to be developed more so that the economics of building infrastructure can be improved. “Many countries do not have LNG and the clusters of demand need to increase. We know energy is being consumed, but it is being generated by liquid fossil fuels that place a heavy burden on the environment. What is needed is an increase in demand for lower-carbon fuels and this will be driven by country-level policies.”

Public opinion also has a role to play, as was seen in Senegal where years of public opposition and issues have led to a new Sendou power station being cancelled, with the future of the plant being unclear.

“Mining is another area where there is increasing pressure for operations to become more environmentally friendly,” remarks Frempong. “In many cases, the mines are internationally owned, and the global investment community is emphasising the need for mines to move away from diesel and invest in lower-carbon energy generation.”

While it is unclear who will finance the energy transition in Africa and provide the much-needed investment in infrastructure, one thing is very clear. “It is no longer a question of whether the transition is going to happen, but rather when,” concludes Frempong. “Globally we are seeing increasing pressure to reduce carbon impact and the continent cannot afford to ignore this.

“Governments in Africa, therefore, need to prioritise finding ways to bridge the financial gap, to allow them to capitalise on more carbon-neutral fuels such as LNG to kickstart the process of transitioning to cleaner energy.” ■



Kweku Frempong, area general manager for West and Central Africa at Aggreko.

HOLCIM PARTNERS WITH ENI ON CARBON CAPTURE, UTILISATION & STORAGE

Holcim, a leader in innovative and sustainable building solutions, is partnering with energy company Eni to advance its carbon capture portfolio, repurposing CO₂ from its operations into its green cement.

Eni is drawing on its carbon capture and mineralisation expertise to store CO₂ in olivine, a widely available mineral. Researchers at Holcim's Innovation Center are exploring the use of this carbonated olivine as a new low emission raw material for the formulation of its green cement. Holcim and Eni's global operations, combined with olivine's broad availability worldwide, would make this Carbon Capture, Utilisation and Storage (CCUS) solution highly scalable. It would enable the permanent sequestration of CO₂ into building materials for greener construction, adding to Holcim's broad



CO₂ will be stored in olivine, which will then be used to make green cement.

range of innovative low emission raw materials.

This partnership is in line with Holcim's net-zero journey as well as Eni's commitment to decarbonisation.

Edelio Bermejo, head of Holcim's Innovation Center said, "The world needs transformational technologies to accelerate our transition to net zero. With the storage of CO₂ in new minerals like olivine, we are expanding our range of green cement solutions, to make sustainable construction a reality around the world, while reducing the footprint of our operations. Our work with Eni is in line with our open innovation ecosystem, partnering with like-minded organisations, from startups to multinationals, to make a bigger difference together."

Holcim is currently mapping its most relevant sites in Europe to conduct industrial-scale pilots, to decarbonise its operations while expanding its green cement range. This new partnership adds to Holcim's CCUS portfolio, with more than 30 projects across the USA, Canada and Europe.

Image Credit: Adobe Stock

KOHLER JOINS EFUEL ALLIANCE

Kohler is progressing its sustainability and electrification strategy by becoming a member of the eFuel Alliance.

The European organisation represents the interests of companies producing synthetic fuels from renewable energy on an industrial scale. Its mission is to proceed on the path of synthetic or biogenic fuel production as an alternative to conventional fuels and, in this way, contribute to climate protection.

"Kohler is proud to be a member of the eFuel Alliance. E-fuels, electric motors and hybrid solutions represent an additional solution for the reduction of CO₂ emissions," said Nino De Giglio, director of marketing, communication and channel management at Kohler Engines.

"At Kohler we have always been innovation-oriented; that's why we are ready to develop clean energy solutions for our customers and the users of their machines and equipment. We are thus committed to playing an active role in the new association."



Using biofuels or gas reduces the amount of emitted pollutants and CO₂.

Image Credit: Kohler

HIMOINSA extends its Stationary range

HIMOINSA's new HS models.



Image Credit: HIMOINSA

HIMOINSA has extended its HS-Stationary range, which until now has consisted of generator sets ranging from 10 to 50 kVA, to include new models up to 90 kVA. This extended range includes FPT engines and has been integrated into the HS40 canopy. At the same time and following the positive reception that the incorporation of the 10 to 50 Kva models has had in the market, HIMOINSA's R&D team is continuing to work on the development of new generator sets that will allow the company to extend its Stationary range to higher power ratings.

HIMOINSA's Stationary range features four different canopy sizes that can house different models depending on the power. The canopies guarantee high levels of anti-rust and anti-oxidation, featuring self-extinguishing polyurethane foam and high-density rock wool.

Ever since the HS Range was launched on the market at the end of 2020, many projects have demanded these units for fixed installations where they work both continuously and in emergency situations, in industrial, residential and commercial sectors.

The HS Range has been designed to guarantee a user-friendly installation of the generator set. It incorporates anchorage points for the installation of standardised lifting rings. It also features an extraction kit that facilitates the handling of the genset during checks, maintenance work, or the installation of the different fuel tanks without the need for a bridge crane. The new design includes fully removable doors to provide full access to the interior of the machine to carry out maintenance and to clean the internal components.

HS generator sets incorporate two distribution cable entries that provide easy connection and operation. The location and layout of the air intakes are designed to mitigate sound emissions and prevent water from entering the machine.

The HS range incorporates a new silencer design which ensures comfortable sound emission levels in industrial environments.

VOLVO PENTA'S D13 GENSET ENGINE GETS POWER UPGRADE

Volvo Penta has strengthened its generation engine portfolio with the introduction of the TAD1346GE 500 kVA power node to its D13 mobile genset engine. Volvo Penta's D13 500 kVA gives full power output the second it starts up – an essential feature for a backup genset particularly for those being used in emergency/stand-by operations, such as in hospitals, pharmaceutical companies, or data centres. It can be used in a wide variety of applications even in the toughest conditions.

The D13 500 kVA is considerably smaller and lighter when compared to previous models. This allows for downsizing – resulting in a smaller engine room, smaller alternator, and ultimately fuel saving. It has a fuel-saving of 4-5%, compared to previous models. This is, in part, due to the quality and viscosity of the lubrication oil which influences the internal friction in the engine, which plays a vital role in fuel consumption.

"This is a great addition to our strong full engine range," said Giorgio Paris, president of Industrial, Volvo Penta. "Volvo Penta is committed to continuing to improve today's products to become even more reliable. But it's not just about the final product, we are committed to supporting our customers every step of the way with a strong aftermarket support present in more than 130 markets worldwide."

Volvo Penta, through its partnership with Al Masood Power Division, is showcasing its new D13 power node at Middle East Energy from 7-9 March in Dubai.



The D13 500 kVA.

Image Credit: Volvo Penta

COLLABORATION FOR SUSTAINABLE BATTERY CELL SOLUTIONS

PPG has partnered with Cellforce Group, a joint venture between Porsche and CUSTOMCELLS, to develop exclusive sustainable battery cell solutions to better serve the electric vehicle and mobility segment.

PPG will supply cathode binder systems, which are free of N-Methylpyrrolidone (NMP) solvent, to the Cellforce Group.

The collaboration will eliminate the use of NMP in producing the conductive-carbon slurry that forms cathodes for Li-ion batteries. NMP, which is widely used in electrode manufacturing, has been identified as a reproductive hazard by several global regulatory agencies and was recently identified by the U.S. Environmental Protection Agency (EPA) as an "unreasonable risk" to workers in certain conditions.

"PPG is eager to partner with the Cellforce Group to build the next generation of battery cell technology that will define a new level of sustainability for the electro-mobility segment," said Markus Vogt, PPG general manager of mobility. "Additionally, the partnership enables collaboration to provide critical technology development to increase cell performance and safety."

PPG provides solutions for automotive electro-mobility, such as sustainable binder solutions for the battery cell and coating solutions for the battery pack.

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Bartosz Kozik joins Dressta as global sales director

Dressta, the full-line dozer manufacturer, has strengthened its sales capability with the appointment of Bartosz Kozik as global Dressta sales director.

Kozik will have full commercial responsibility for developing and implementing Dressta's global sales strategy and managing and expanding its sales and distribution channels. He brings with him more than 18 years of commercial and strategic experience, having enjoyed senior roles at Volvo CE, Ammann, Ingersoll-Rand, and most recently, as European business director for Holms Attachments.

Howard Dale, president of the board at LiuGong Dressta Machinery said, "We are delighted to welcome Bartosz to the Dressta team. He joins us at an exciting time of investment, expansion and growth. We are launching a full line-up of next generation dozers including our new TD-15M and our all new, Red Dot award winning TD-16N. It's our strongest product portfolio to date and we are confident Bartosz's proven ability and enthusiasm will help to take Dressta to the next level."

Commenting on his new position, Kozik said, "I'm honoured to be joining the Dressta team. The Dressta brand is one of the most respected brands in the construction equipment industry with a great history, amazing people and a bright future. I am excited to have the opportunity to help shape the next chapter in its story."



Image Credit: Dressta

AFDB ESTABLISHES PUBLIC PRIVATE PARTNERSHIPS STRATEGIC FRAMEWORK

The Board of Directors of the African Development Bank (AfDB) Group has approved its first strategic framework for the development of public-private partnerships. Public-private partnerships are already a key feature of infrastructure projects being supported by the Bank, among them several transport and energy sector projects in all the regions of the continent.

Bank Group president Akinwumi A. Adesina said the new framework would form the bedrock of the Bank's engagements in the infrastructure sector.

"This eagerly awaited strategic framework will go a long way to enabling the Bank to provide much required assistance for the development and implementation of public-private partnerships in our regional member countries, and we look forward to its success."

The strategic framework streamlines Bank-wide public-private partnership efforts across various departments and provides guidance on financial instruments and resources. It recommends a selective approach to operations and markets, based on the Bank's comparative advantage in Africa's infrastructure sector, its convening power on the continent, and the level of maturity of the different markets respectively.

Vice president of the Private Sector, Infrastructure and Industrialization Complex, Solomon Quaynor, said the framework would enable African countries to scale up private sector investment in transport, energy, ICT, and the social sector, including healthcare and education. It would also ensure better debt sustainability and management, innovation and efficiency, and enhance the competitiveness of their economies.

The Bank will engage clients and partners and begin dialogue with member countries to identify priority areas.

SHIMONI PORT CONSTRUCTION

Kenya Ports Authority (KPA) has confirmed that the construction of the first phase of Shimoni Fishing Port will commence in April. KPA acting managing director John Mwangemi, speaking at the Kwale County headquarters at a meeting with Governor H.E Hon. Salim Mwura, said that the groundbreaking ceremony for the project is scheduled for April 2022, adding that Kshs 2.6bn (approx. US\$22.9mn) has been set aside for the project, which is expected to be completed within a period of 24 months after its commencement. Mwangemi commented that the project will be beneficial not only to Kwale County but to the entire nation, adding that it would come with diverse economic opportunities. According to KPA's general manager infrastructure development Eng. Vincent Sidai, the key components of the project include construction of a jetty parallel to the existing one, refurbishment of current offices, construction of the yard, cold storage facilities and construction of a fish market.

► BRIEFS



The Hugenot tunnel is South Africa's longest road tunnel.

Lighting solution for tunnel

BEKA Schröder has supplied the LED lighting and control solution for the Hugenot Tunnel near Paarl, Western Cape, South Africa's longest road tunnel. More than 6,000 LED striplights and more than 200 LED adaptation luminaires were supplied and are managed by the Advanced Tunnel Solution (ATS) control system. This installation will result in energy, maintenance and cost savings, according to the company, as well as having a positive impact on the safety of road users.



The number of projects under construction in Lagos rose in 2021.

Lagos construction on the up

The real estate sector in Lagos saw a 19% increase in the total number of projects under construction in 2021 compared with the year before, according to the 2022 Lagos Pipeline Report by Estate Intel. Weak performance from traditional sectors including office, retail, and hospitality has pushed real estate investors to explore new territory such as data centres, students and young professionals housing, industrial, as well as healthcare real estate.

New-generation plasticiser used on Musina Bridge project

A new-generation, water-reducing plasticiser, CHRYSO Plast Omega 174, has been successfully applied to the concrete for the Nancefield bridge, part of SANRAL's Musina Ring Road project in the Limpopo province.

The project allows the N1 to bypass Musina, and is due for completion by Q2 2022.

CHRYSO Plast Omega 174 was applied after being found the most suitable based on available aggregate, temperature, and site distance.

Ben Myburg, technical consultant at CHRYSO Southern Africa, said, "CHRYSO Plast Omega 174 improves the cohesion and lowers the viscosity of a concrete mix, which results in an improved homogeneity and compaction, allowing for superior off-shutter finishes thereby eliminating the risk of repairs. By reducing the need for extra water, it increases the durability of concrete by reducing permeability."

Challenges arose from the temperatures up to 45°C in Musina's summers, with the concrete needing to be kept under 30°C to prevent thermal cracking. The concrete was kept under shade and cooled with sprayers. CHRYSO Plast Omega 174 allowed the mix designs to be optimised, giving more open time on the fresh mix concrete.



Image Credit: CHRYSO Southern Africa

The Nancefield bridge project is expected to be completed in Q2 2022.

FORTUNA PROVIDES CONSTRUCTION UPDATE AT SÉGUÉLA GOLD PROJECT IN CÔTE D'IVOIRE

Fortuna Silver Mines Incorporated has confirmed an update of the construction processes at its Séguéla gold project.

The project has completed 32% of its construction and the 156-person accommodation camp is ready and waiting for occupants and workers.

The mine's main processing plant is currently expected to begin construction in March 2022. Contracts have been awarded for the construction of the tailings storage facility, water storage dam and sediment control structure.

Paul Criddle, chief operating officer for West Africa, commented, "The Séguéla Project is advancing on schedule following the construction decision at the end of the third quarter of 2021."

"The project is successfully transitioning from detailed engineering design to construction and remains on budget and on schedule to pour gold by mid-2023."

Once operational, the mine is expected to process 3,750 tonnes per day, with the first gold pour anticipated in mid-2023. Initial capital budget accrued as of December 31, 2021 sits at US\$173.5mn.



Image Credit: Fortuna

The project's first gold pour is currently penned for 2023.

SANRAL CONFIRMS INVESTMENT IN XHARIEP

The South African National Roads Agency SOC Limited (SANRAL) has confirmed an investment of more than R90 million (approximately US\$5.9mn) on a road infrastructure project in the Xhariep District Municipality in the Free State Province.

Following an address to the local business community of Trompsburg, SANRAL's Eastern region transformation officer, James Takalo, commented, "The Contract Participation Goal (CPG) plan has been acknowledged by the project liaison committee (PLC) members and work is ready to start. We are excited at the economic prospect that this will bring, particularly as the road construction industry begins to recover from the onslaught of Covid-19."

"Our aim is to ensure that the previously marginalised sectors of our economy play a meaningful role and succeed in a construction industry that has largely been non-transformative."

"We will continue to do this guided by our transformation policy and our Horizon 2030 strategy," concluded Takalo.



A business address confirmed the project is ready to begin work.

Image Credit: SANRAL

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Building opportunity in the DRC

DP World and the Government of the Democratic Republic of the Congo (DRC) have laid the foundation stone for the port at Banana.

The DRC is set to benefit from its first deep-sea port, which will be located at Banana along the country's 37 km coastline on the Atlantic Ocean.

DP World will develop an initial 600 metre quay with an 18 metre draft, capable of handling the largest vessels on the market.

According to the UAE-based company it will have a container handling capacity of around 450,000 TEUs per year and a 30 ha yard to store containers. It will also boast the latest technology and equipment in order to run as efficiently and effectively as possible.

A long time coming

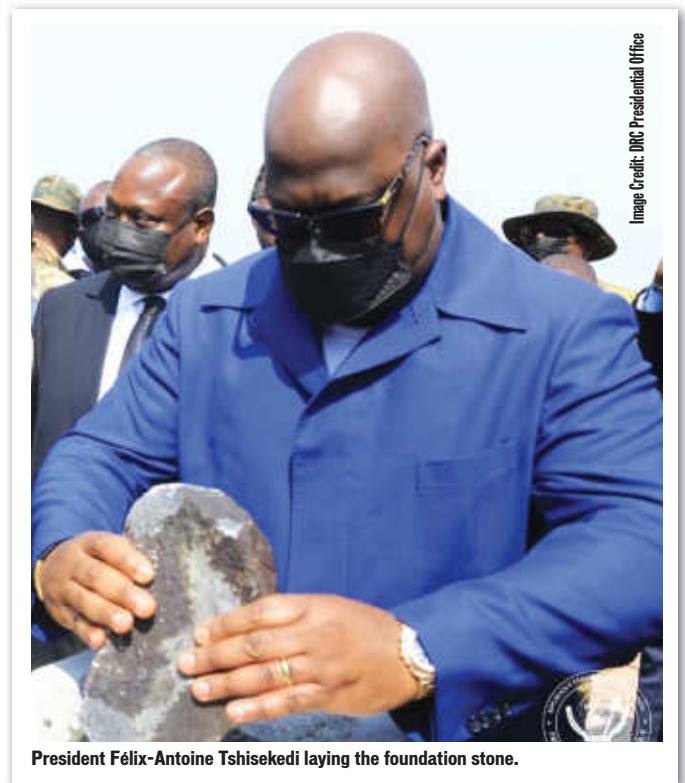
The initial contract for the deep-sea port's development was signed in March 2018 when DP World was awarded the 30-year concession to develop and manage the Banana Port. Little progress was made

thereafter until May 2021, when a team sheet summarising amendments to the initial contract was agreed upon. Swiftly following this, at the end of 2021, a collaboration agreement was signed by representatives of DP World and the Government of the DRC, paving the way for construction to begin.

Construction was expected to start within 12 months; however expectations were exceeded when the foundation stone was laid at the end of January 2022.

“The port will enhance the country's export capabilities and give it affordable access to international markets.”

SULTAN AHMED BIN SULAYEM, GROUP CHAIRMAN AND CEO OF DP WORLD



President Félix-Antoine Tshisekedi laying the foundation stone.

Boosting trade

Not only will the Banana Port directly benefit the Kongo Central

minerals such as cobalt and copper, hydropower potential, significant arable land and immense biodiversity. The opening of the Banana Port would help the country bring these resources to the international marketplace, allowing it to more fully exploit them for the betterment of the nation.

His Excellency, Félix-Antoine Tshisekedi, President of the DRC, commented, “This port will transform the DRC into a trade hub in the region, and in particular, will benefit Kongo Central with the creation of jobs, in addition to generating economic benefits and growth for our country.”

Sultan Ahmed bin Sulayem, group chairman and CEO of DP World added, “This agreement represents the vision of His Excellency, President Tshisekedi, and DP World, to provide the DRC with a modern, world class port and logistics infrastructure to support the tremendous opportunities for trade in this country.

“The port will enhance the country's export capabilities and give it affordable access to international markets.” ■

province by attractive foreign direct investment into the surrounding area, but it is expected to have a significant positive impact on the country as a whole.

The development of a modern port will allow the country to attract more direct calls from larger vessels from regions such as Asia, Europe and more, bringing significant cost and time savings for the country's trade in general.

In addition, the largest country in sub-Saharan Africa is endowed with immense and diverse natural resources, with the World Bank particularly noting its abundance of



The stone-laying ceremony.

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A number of governments in Africa are beginning to deploy the technology to build out the continent's first smart cities.

Image Credit: Adobe Stock

Africa's smart cities continue to evolve

The first high-tech smart city hubs are popping up across Africa, driving work and centralised facilities for leading technology firms and other companies.

The concept of the 'smart city' has captured the imagination of industry for many years.

In small, isolated pockets around the world, these so-called smart cities are now unfolding, with technology that embeds digitalisation in all areas of life, from voice-activated lighting and driverless transportation, to predictive health and even policing systems.

The smart city is controlled by a web of sensors and networks that feedback vast amounts of data to powerful control centres which keep things ticking over.

Whether citizens might choose to live in such a space is another question, but a number of governments in Africa are beginning to deploy the technology to build out the continent's first smart cities, from Cape Town to Cairo.

In June, Johannesburg will play host to a smart cities summit, where the challenge of how to plan for Africa's rising population – set to almost double by 2050 according to United Nations estimates – will be addressed.

Smart cities have been touted as a solution to more sustainable urban development, especially in the context of rising populations – though others may question the privacy and data security impact on ordinary humans in a space dominated by permanent 24/7 monitoring.

It is, of course, an immense opportunity for leading technology companies, both within Africa and globally – and with interest growing.

Zimbabwe's cabinet last year approved plans to develop a first smart city outside Harare, in part, in a bid to ease congesting in the capital.

Meltfort Smart City is to be located midway between Harare and Marondera.

The Government hopes it will become a major economic hub with a direct link to Robert Gabriel

Mugabe International Airport.

Cairo, the frontrunner

But other smart city projects in Africa are already much more advanced.

At the end of 2021, the Egyptian Government started moving to its New Administrative Capital (NAC), located east of Cairo, as part of an initial trial phase.

The new capital district is designed as a high-tech hub to accommodate 6.5 million residents and ease congestion in North Africa's biggest city.

NAC will include a government district, a business district, parks and a diplomatic area, along with hospitality, residential, entertainment and retail components.

It is perhaps the frontrunner among all of Africa's proposed smart cities, a place where residents will use smart cards and cashless apps to open doors – but also be extensively monitored.

A network of thousands of cameras will patrol activity on every street, tracking pedestrians and vehicles to regulate traffic and report suspicious activity. It is a world away from old Cairo's sprawling streets and creaky infrastructure.

But the project has enjoyed huge levels of investment already and is one of just 14 similar developments planned for other urban centres across Egypt.

Key technology partners include Huawei, Orange and Mastercard, again highlighting how the high-tech cities might benefit global corporations, perhaps to the detriment of Cairo's countless small street traders.

Indeed, China's Huawei has emerged as one of the leading tech providers in this evolving market segment, contributing to the establishment of

more than 100-plus similar smart city initiatives worldwide already.

Physical infrastructure

Spending on physical infrastructure is also huge, from new tower blocks to transportation.

In January, Schindler announced that it had landed a deal to supply 136 elevators and 272 escalators to the Cairo monorail project that will connect NAC with East Cairo.

Last year, it also announced the delivery and installation of 129 high-rise elevators to six NAC office towers currently under construction.

The monorail transit system is a project set to cost US\$4.5bn.

"With our state-of-the-art equipment we look forward to securing a seamless mobility experience to millions of passengers in Cairo," said Julio Arce, a member of the Schindler group executive committee responsible for Europe South.

Hotel group Accor said recently that it would bring the Sofitel Cairo New Capital Hotel & Residences to the area, with a first tower featuring 200 hotel rooms and 280 branded residences and a second to follow with offices and commercial space.

The group is collaborating with Edge Holding, an Egyptian real estate developer that is already active in NAC property development.

Strategically located at the centre of the NAC, with its parks, international airport, educational institutes, medical facilities and 20 skyscrapers – including Iconic Tower, now Africa's tallest building – the property will offer easy access to the main roads leading in and out of Cairo.

Smart cities may not be everyone's idea of smart living but their momentum is gaining ground rapidly. ■

Volvo excavator arrives on world market

Volvo Construction Equipment has expanded the distribution of its EC550E crawler excavator to benefit customers across the globe.



Image Credit: Volvo CE

The EC550E is available with a range of optimum-sized heavy-duty rock buckets.

The EC550E crawler excavator is suited for mining, mass excavation and large infrastructure projects. With the ability to fill a 35-40 tonne hauler or highway truck in just four to six buckets, optimum pass-matching and high levels of production are achieved at a low cost per tonne.

Short cycle times also boost productivity, made possible by digging forces and lifting capacity more commonly found in a 60/65-tonne excavator. Enhanced engine power, reinforced boom and arm, as well as boom/swing and boom/travel priority settings add to the machine's performance.

The EC550E is available with a range of optimum-sized heavy-duty rock buckets designed for use in abrasive conditions, with the Volvo Tooth System capable of making easy work of teeth replacements due to its place, push and click functionality. The optional system provides real-time information to eliminate under and overloading of haul trucks and also records total tonnage for complete production management.

A lower cost per tonne

The next generation electro-hydraulic system with Independent Metering Valve Technology (IMVT) and engine/pump optimisation, with lower engine rpm while optimising power, enhances fuel efficiency for customers. The main valve control uses IMVT which provides more precise control in comparison to a conventional system and contributes towards up to a 22% improvement in fuel efficiency.

User comfort

The ROPS cab, with low noise and low vibration, allows operators to experience the highest levels of comfort. Boom and arm bouncing reduction technology reduces machine shock, resulting in a more productive environment for the

operator.

Visibility is enhanced by the optional high visibility cab, one-piece front window, and rear- and side-view cameras. Additionally, the Volvo Smart View uses front, rear and side cameras to provide a real-time, overhead view of the machine, especially helpful when working in confined spaces.

Work harder for longer

The EC550E delivers maximum machine availability through a host of uptime-boosting machine features combined with the support of the Volvo dealer. The EC550E can also be fitted with a high-performance fuel filtration system which delivers 99.7% water separation efficiency consistently over the full service life of the filter.

CareTrack, the Volvo telematics system, also helps customers boost uptime and reduce repair costs. Customers can keep track of their machines themselves or allow Volvo to do so with ActiveCare. The Volvo Uptime Centre provides 24/7 machine monitoring, supplying weekly reports and notifying customers should preventative maintenance action be required. If so, grouped filters accessible from the ground level make servicing quick and easy, while the three-point right-hand access ensures the upper structure can be accessed with confidence.

Kwangsuk Jee, global product manager, Volvo CE, commented, "Delivering the type of durability and performance more commonly expected from a 60/65-tonne machine, the EC550E is a crawler excavator which truly punches above its weight. Customers in Tier 3 markets can get ready for up to 35% more productivity and 22% more fuel efficiency, combined with superb operator comfort and outstanding levels of uptime." ■

“ The EC550E is a crawler excavator which truly punches above its weight.

KWANGSUK JEE, GLOBAL PRODUCT MANAGER AT VOLVO CE

New for old

The market for used equipment in Africa is on the rise as companies rein in spending after the economic squeeze of the past two years.



Used equipment is often just the right budget fit for a limited, short duration contract.

The past couple of years, characterised by economic shutdowns triggered by the Covid-19 crisis, have taken their toll on businesses and their finances. It has made purchasing used equipment more appealing rather than buying brand-new.

That has always been a common thread across many of Africa's key industries, from construction to farming, where finances are tight. But in an environment where spending is being squeezed even more, it makes sense in many scenarios as an affordable alternative.

The rise of the used

According to Babcock Africa, the current financial climate has made prospective buyers more alert to the used equipment market.

Reduced budgets for new capital equipment, makes it "a more attractive option for prospective

buyers," it noted in a recent bulletin.

The South Africa-based group delivers engineering support services to the energy, process, mining and construction industries, and is an exclusive regional distributor for many leading international brands, including the likes of DAF Trucks and Volvo Construction Equipment.

But not all buyers are looking for new equipment, or able to afford it, hence the emergence of a vibrant used market.

Used equipment is often just the right budget fit for a limited, short duration contract.

Good quality used equipment with low operating hours may also be an easier entry into the market for start-up companies with contracts where proof of machine ownership is a requirement.

Key parameters buyers might look for when selecting used equipment, it says, include brand preference, duration of contract, as well as the production environment.

The right fit

But what are some of the possible deal killers in buying used equipment, and what are the things that should make potential buyers

back away from a used machine?

Lack of service records, clear ownership and proof of settlement, according to Babcock.

To progress with a deal, it says, a good live test should be conducted with the machine's condition where possible to tie up with the recorded operating hours.

Purchasing from a reputable supplier is also essential given the rise of remote, unseen sales and online marketplaces.

"Buying from a reputable supplier is of paramount importance, particularly in the current environment where the market is flooded with machines, and deals are often done remotely without seeing the equipment."

The brands for sale in the used equipment market are global names – from Volvo and Hitachi to Caterpillar and Hyundai – though many of the facilitators and deal makers may be less well known,

“Not all buyers are looking for new equipment, or able to afford it, hence the emergence of a vibrant used market.”

“The advent of online auctions, offering high-quality inspection reports, alongside images and videos of any relevant machinery, makes it easier than ever to facilitate sales.”

from second-hand dealers to global online auction platforms.

Indeed, the arrival of online platforms, such as Iron Planet, which offer detailed pre-sale inspections and therefore greater peace of mind, means buyers no longer have to travel to see items in stock. This is a trend that looks set to flourish given the impact Covid-19 has had on world travel.

A changing market

The range of brands and equipment has also diversified over the past decade or so, as more investment from China has brought with it large amounts of heavy construction and other machinery to facilitate flagship projects facilitated by cash from Beijing.

This has resulted in typically less expensive Chinese products competing against more traditional European or Japanese equipment.

While buyers demand all kinds of machinery and equipment, it is often the simpler the machine, the higher the demand in the African context.

Other notable drivers are also likely to fuel interest in used equipment sales in the years ahead, including the roll out of new infrastructure spending in Africa, on top of budget constraints. This is putting a strain on new machinery rolling off the production line.

There are also well-documented supply chain issues too that have come into prominence in recent times.

UK equipment maker JCB announced recently that some of its key products for the construction and farming markets, including diggers, forklifts and tractors, are sold out for as long as 12 months, about four times the usual wait time.

JCB's chief executive Graeme Macdonald cited labour and raw materials issues, as well as inflationary pressures, as reasons behind the challenges. Its competitors have also flagged rising costs and supply chain bottlenecks.

At the same time, demand for new equipment has been spurred on by rising infrastructure spending as governments seek to reboot their economies in the wake of the pandemic.

That means opportunity for used equipment specialists, especially in markets like Africa. Potentially, it could also bring with it a premium for prices as buyers seek alternatives to brand new machinery.

Growth prospects will vary by market but the conditions are ripe for solid growth in this niche.

The Kenyan used construction equipment market, for instance, is projected to grow at 5.4% yearly through to 2027, according to a recent research report by Research & Markets.

It also suggests that contractors are shifting toward the acquisition of used equipment for certain specific jobs, identifying tasks like earthmoving, piling, and compacting.

The advent of online auctions, offering high-quality inspection reports, alongside images and videos of any relevant machinery, makes it easier than ever to facilitate sales.

It all points to a healthy, vibrant climate ahead for Africa's used equipment sector. ■

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The Cat 426F2 - a superior backhoe loader

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

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

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

1. Price
2. 100% reliability
3. Durability

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

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

delivers excellent performance at the operator's fingertips.

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

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

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

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

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

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

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

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

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

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

The Cat 426F2 backhoe loader.



EFFICIENT SOIL STABILISATION WITH A TRACTOR

BOMAG is expanding its machine portfolio with the RS 250 and RS 300 tractor-towed stabilisers, which have a working width of 2.5 m and a milling depth of up to 40 cm and 50 cm.

The tractor-towed stabilisers are optimally designed for flexible use in soil stabilisation and road and path construction. The power-packed machines are driven by the rear PTO shaft of a powerful tractor with 200-300 hp or 300-450 hp.

Tractor-towed stabilisers are a new addition to BOMAG's product range. Their design is based on numerous tried-and-tested technologies and many years of experience in the field.

Modern tractors are versatile pulling and driving machines. In combination with optimally matched attachments, they are constantly opening up new areas of application and can even be used for heavy earthmoving work.

The new BOMAG RS 250 and RS 300 tractor-towed stabilisers can now fill a void in the fleets of construction companies and service providers looking for a flexible and economical tractor solution for milling, stabilising and mixing soils. The light and manoeuvrable systems are the



Image Credit: BOMAG

The tractor-towed stabilisers are designed for flexible use in soil stabilisation and road construction.

perfect complements, especially on smaller construction sites.

The stabilisers ensure even better utilisation of tractors, which have become indispensable on modern construction sites due to their versatility and flexibility. One core application scenario is soil stabilisation; the tractor can now be used universally and flexibly to pull a binder spreader, water tank or tractor-towed stabiliser.

BOMAG product manager, Sebastian Ibal, explained, "When stabilising, there is no need to

replace non-load-bearing soils. Stabilising is therefore usually the better choice, both economically and ecologically, compared to removing reusable soils. This is also required by the German Waste Management and Product Recycling Act (KrWG).

"By mixing in binders such as lime, this method removes moisture from the soil on site, thus improving its compaction properties and load-bearing capacity. Through the precisely dosed addition of cement and water as a hydration shell, even non-load-bearing soils can easily be made permanently load-bearing, firm and frost-resistant. With our new tractor-towed stabilisers, the highly efficient BOMAG technology for milling, mixing and stabilising can now be used even more easily and flexibly on smaller construction sites.

"Optimised power transmission and high-performance cutting technology meet sophisticated and maintenance-friendly holder systems. They guarantee maximum milling performance, uniformly smooth surfaces after milling and comparatively low fuel consumption," Ibal commented.

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LIEBHERR ADDS NEW CRANE TO ITS EC-B SERIES

Liebherr's successful EC-B series has a strong new addition – the new 470 EC-B Flat-Top crane. With a maximum lifting capacity of 16 or 20 tonnes, this crane is now the largest in the 'Tough Ones' family. From transport and assembly to operation on site, Liebherr's new machine with steel rope design meets all the relevant requirements of a modern crane fleet.

The flagship crane with intelligent assistance systems offers a jib length of 80 metres. This reach can be increased to 83 metres by means of a jib extension, thereby breaking new ground in the competitive market.

At a jib length of 80 metres, the 16-tonne version of the 470 EC-B has a jib head load capacity of up to 3,200 kilograms; the 20-tonne version impresses with a jib head load capacity of up to 3,000 kilograms. The jib can be divided



Image Credit: Liebherr

The tower crane is exceptionally economical to operate, assemble and transport.

into two-and-a-half metre sections so that it can be perfectly adapted to meet a variety of operational requirements.

The focus during development wasn't only on performance but also on assembly and transport. As a result, the jib and counter-jib can be attached to the slewing platform easily, conveniently and safely.

Liebherr's quick assembly connections make it all possible. Only five trucks are needed to transport the slewing part with jib, including counter-ballast, to the site. This saves time, money and also helps reduce emissions.

The 470 EC-B features a connection for both 24 HC 420 and 24 HC 630 tower systems. Its compact dimensions allow individual elements to be moved cost-efficiently.

The 470 EC-B has been optimised for the 24 HC 420 tower system; together they are the most cost-effective combination for freestanding hook heights of up to 67.8 metres.

WIRTGEN GROUP ROLLS OUT PREMIERES AT WORLD OF CONCRETE

A highlight from the World of Concrete 2022 show was Wirtgen's complete concrete paving train comprising the new WPS 102i placer/spreader, an SP 94i slipform paver, and a TCM 180i texture curing machine.

With the TeleMold, the show also saw the presentation of an innovative system that makes construction sites more efficient through the ability to flexibly and rapidly change working widths when paving.

The solutions shown at the Wirtgen Group booth at this year's event were rounded off by the SP 15i and SP 25i offset pavers.

When road surfaces and paths are paved over pre-placed steel rebar, concrete can often only be supplied to the machine from the side. The placer/spreaders from Wirtgen are the perfect choice for this task.

As the leading machine in a paving train, they travel over the pre-placed steel rebar ahead of the slipform paver and the texture curing machine. A truck feeds the concrete from the side, and the placer/spreader then evenly distributes it across the entire working width.

The new WPS 102i is Wirtgen's latest addition to its range of two-track placer/spreaders. The concrete can be placed for working widths from 12 to 40 ft (4 to 12 m) at thicknesses of up to 20 inches (500 mm).

Thanks to the fully modular machine design with standard hydraulic quick-change couplings, the WPS 102i can be as quickly and easily reconfigured as its "little brother," the WPS 62i. This ensures fast transport from job to job and maximum machine availability.

Volvo CE launches new digital service business for load out solutions

A new business entity, Global Load Out Solutions AB, has been launched by Volvo Construction Equipment (Volvo CE) to expand the market for its load out solutions portfolio and enable more customers to transform the efficiency and sustainability of their operations.

Brand agnostic, this new digital service will be available to a wide range of customers who are looking to make use of tools such as Efficient Load Out and Connected Load Out to improve work flow, boost profitability and reduce environmental impact. It also forms an important part of Volvo CE's target to double revenue from services to 30% by 2030.

Global Load Out Solutions will be a separate business entity led by managing director, Annika Nissen, who joined Volvo CE to take up the role. The aim is to make it easier for customers to access and take full advantage of connectivity tools which maximise the fill rate of construction trucks and therefore cut down on the amount of work cycles – loading tools which form just one part of Volvo CE's connected solutions.

"The market for digital services is growing and we anticipate strong demand for this new solution from organisations looking to explore how new technologies can transform the way in which they work," Nissen added.

Gunnar Thorud, chairman of the Board for the new company, added, "At Volvo CE, we are always adapting to challenges such as digitalisation and changing customer needs. We are proud to be launching this new company to build on our already impressive load out solutions and accelerate our ambition to support our customers to work more efficiently."



Image Credit: Volvo CE

This new digital service will be available to a wide range of customers.

Tharisa signs MoU with Total Eren and Chariot

Tharisa, a platinum group metals and chrome producer, has signed a MoU with Total Eren, one of the leading international renewable energy independent power producers, and Chariot, the Africa-focused transitional energy company.

Under the terms of the MoU, the partners will develop, finance, construct, own, operate and maintain a solar photovoltaic project for power supply to the Tharisa Mine, located in South Africa.

Anticipated to initially provide 40MWp, with demand expected to increase over the life of the Tharisa Mine, adequately covering Tharisa Mine's current energy requirements.

On 29 September 2021, Tharisa outlined its commitment to reduce its carbon emissions by 30% by 2030 and become net carbon neutral by 2050. The reduction of the use of grid power by the Tharisa Mine will be accelerated through the implementation of this and other renewable energy projects.

Tebogo Matsimela, head of ESG at Tharisa, commented, "Tharisa plays a significant part in the global energy transition movement, and we are committed to producing these key metals in a sustainable manner. The solar



Tharisa has outlined its commitment to reduce its carbon emissions by 30% by 2030.

power solution provided by Total Eren is but one of several steps we are taking to ensure our flagship Tharisa Mine, which has a life of mine of over 50 years, has a reduced carbon footprint. Our goal is to reduce our carbon emissions by 30% by 2030 and ultimately become net carbon neutral by 2050.

"Projects such as this solar development, are achievable with the commitment from our company as well as the commitment from our partners in this venture. We challenge all our business partners to implement initiatives that will ensure that we will make our planet a better one for all, while providing sustainable returns to our stakeholders, community and shareholders."

Image Credit: Adobe Stock

PERSEUS TO ACQUIRE 15% INTEREST IN ORCA GOLD

Perseus Mining Limited has agreed to acquire a 15% interest in Orca Gold Inc from Resolute Mining Limited (RSG).


Orca is a gold developer, listed on the TSX Venture Exchange. Its key assets include a 70% interest in the Block 14 Gold Project in northern Sudan and a 31.5% interest in Montage Gold Corp, which owns the Koné Gold Project in northern Côte d'Ivoire.

Perseus has agreed to acquire 39,092,233 million common shares in Orca from RSG representing 15% of Orca's common shares on issue.

Simultaneous with the RSG Share Acquisition, Perseus has agreed to provide Orca with a US\$5mn short term loan facility. Orca plans to use the loan for working capital and for further exploration and development activities at Block 14. The Orca Loan Facility matures on 30 June 2022 with interest charged at a rate of 7.5% per annum.

Prior to the RSG share acquisition, Perseus has engaged in exclusive discussions with Orca with respect to a possible change of control transaction whereby Perseus would acquire all the outstanding securities of Orca. Orca potentially provides Perseus with exposure to two highly prospective assets with significant resource bases and is consistent with Perseus' strategy of building a platform of long life, highly profitable African gold assets.


While the discussions regarding a possible transaction with Orca are continuing, any change of control transaction would be subject to, among other matters, the completion of outstanding due diligence including an assessment of the geopolitical situation in Sudan by Perseus and reaching agreement with Orca on definitive terms. As a result, there can be no assurance that any such transaction will be completed. Depending on market conditions and other factors, Perseus may, from time to time in the future, increase or decrease its direct or indirect ownership, control or direction over securities of Orca through market transactions, private agreements, subscriptions from treasury or otherwise.




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Caracal Gold plc moves to accelerate expansion at Kilimapesa gold mine

Caracal Gold plc, an East Africa-focused gold producer, has decided to accelerate implementation of the final phase of its initial three-phase operational plan to further increase gold production and improve efficiencies at its flagship Kilimapesa Gold Mining and Processing Operations in Kenya.

The decision to accelerate the third phase development activities at the Kilimapesa Gold Mining and Processing Operations and increase production to approximately 24,000 oz per year follows the successful completion of the first two phases of operational improvements and developments since listing in August 2021.

The accelerated development plan at the Kilimapesa Gold Mine and Processing Operations will now commence and be implemented over the next six months.

Run-of-mine (ROM) production from the existing open pit and underground mining operations are already at levels to support a 100% increase in the milling circuit capacity from 500tpd to 1,000tpd.

Construction of a new heap leach plant operation will commence, which will initially be loaded with approximately 40,000 tonnes of currently stockpiled low-grade material, and thereafter treat up to 10,000 tonnes of ore monthly from low-grade open pit and low-grade underground ROM feed.

Robbie McCrae, chief executive of Caracal Gold Plc, said, “The board has supported and approved the accelerated development plan for our Kilimapesa Gold Mining and Processing Mine after having seen the successful implementation of the first two phases which have already delivered a significant increase in production from the open pit and underground mining operations and record levels of throughput through the processing plant.

“We are both encouraged and excited to move very quickly to the next phase of development and operational activities at our flagship project, which once completed, will see gold production achieve the targeted levels of approx 24,000 oz pa.”



Image Credit: Adobe Stock

The board has supported and approved the accelerated development plan for Kilimapesa Gold Mining and Processing Operations after having seen the successful implementation of the first two phases.

POLYMETALS APPOINTS LEAD EXPLORATION GEOLOGIST

Polymetals Resources Ltd has appointed Nana Yaw Asante as its new lead exploration geologist.

Asante has more than 13 years' experience in both greenfield and brownfield exploration in West Africa. Most recently, Asante spent four-and-a-half years as senior exploration geologist with Golden Star Resources in Ghana, where he managed multiple drilling programmes at the Wassa and HBB projects which increased both the inferred and indicated mineral resources.

Speaking about the appointment, Polymetals Resources CEO Alex Hanly said, “Asante has spent his career working in West Africa and most relevantly to us, significant experience in the Siguiri Basin of Guinea where Polymetals is focused. Asante will plan and lead our exploration programs within the Siguiri Basin as the company progresses its gold discovery strategy.”

BME'S AXXIS TITANIUM INITIATES RECORD BLAST

Omnia Group company, BME, has notched up a record-breaking blast using its AXXIS Titanium electronic detonation system.

The blast of 5,209 detonators was conducted recently at a chrome mine in South Africa's North West province, according to Tinus Brits, BME's global product manager – AXXIS.

“While a record blast is always an achievement to be celebrated, this was a standard production blast requiring nothing different or extra from the mine,” he said. “The ease-of-use of AXXIS Titanium, the speed at which blasts can be prepared, and its rapid testing features make this possible.”

The dual voltage basis of the new system means that detonators can be tested while they are logged in, with the logging and testing conducted as a single function. As a result, this record blast could be primed, charged, tied-up, logged, tested and programmed in just two days.

“With AXXIS Titanium, the logger does everything for you,” Brits added. Multiple loggers were used on the blast, with each operator logging a portion of the blast to speed up the process; the log files are then seamlessly combined.

By consuming less energy, AXXIS Titanium allows up to 1000 detonators to be initiated by each blasting box – reducing the amount of equipment that is needed on site.

“This helps improve the reliability of blasts, as there are fewer items of equipment to communicate with each other,” said Brits. “These high levels of reliability ensure a quality blast with no misfires, even in single-prime blasts – where there is just one detonator per hole – as was the case in this record blast.”

Brits also emphasised the intuitive fault-finding capacity of the AXXIS Titanium system, which identifies those detonators which have not been logged onto the harness wire.

BRIEFS

Cora Gold's field work complete



Image Credit: Mike Stock

The study is set to be completed by the end of H1 2022.

Cora Gold Limited, the West African focused gold company, has made progress on its Definitive Feasibility Study for the Sanankoro Gold Project in southern Mali. So far, all hydrogeological and geotechnical drilling, associated pump testing and geotechnical test pits have been completed. Bert Monro, chief executive officer of Cora Gold, commented, “We continue to advance the Definitive Feasibility Study at Sanankoro at an encouraging pace and on schedule.”

Bell Equipment hands over ADTs to Alfieri Group



Image Credit: Bell Equipment Group

The Mining Equipment Manufacturers of South Africa (MEMSA) played a significant role in inviting key stakeholders to attend the event.

Bell Equipment Group has handed over 12 Bell B45E articulated dump trucks (ADTs) to the Alfieri Group at its Ikoti coal mine near Breyten in Mpumalanga, South Africa.

The ADTs will be used in the coal sector around Breyten area, providing meaningful jobs in the area. The Mining Equipment Manufacturers of South Africa (MEMSA), of which Bell is a member, played a significant role in inviting key stakeholders to attend the event.

A mining essential

A consistent flow of new innovations and releases ensures wheel loaders remain an essential piece of machinery on most mining sites.

A familiar spectacle found on most mining and construction sites around the continent, most contractors will look no further than wheel loaders to help transport heavy material.

Due to their versatility, mobility, speed and efficiency wheel loaders can function as a primary loading tool or can serve in a support capacity. In addition, their relative ease of maintenance makes these machines formidable pieces of equipment that most sites cannot do without.

Due to their importance, there is a consistent string of innovations and new releases which ensure wheel loaders continue to deliver the most effective performance.

In a bid to boost operator efficiency, Caterpillar has updated the Cat 966 and 972 Wheel Loader series and brought a host of standard technologies to the 7- to 9- tonne line.

Both boast standard Cat Payload with Assist for accurate weighing of bucket payloads and real-time data is fed to the operator display and allows manual tip-off function to improve final bucket adjustments and truck load accuracy. Remote Flash ensures the wheel loaders are operating with the most up-to-date software without impacting production schedules.

Amongst a host of features, the 966 and 972 models deliver consistently high bucket fill factors to increase productivity by up to 10% and their next generation design extends fluid and filter change intervals to lower maintenance costs up to 15% when compared to previous models.

Designed for mastery of even the toughest job site conditions, Hitachi has introduced a larger next-generation model from its Stage V-compliant wheel loader range. The ZW310-7 boasts industry-leading safety features and also focuses on operator comfort.

All-round visibility and intelligent systems bring protection for the operator and those on site and high levels of productivity are ensured by fast cycle times, a high breakout force and improved acceleration on inclines thanks to sensors installed on several machine components. Fuel consumption can be monitored via the new ECO gauge and reliability is ensured due to durable components such as axles and frame, intelligent prevention systems and easy maintenance features.



The 966 and 972 models deliver consistently high bucket fill factors.

Image Credit: Caterpillar

The company noted that owners will feel in total control of their profit thanks to the loader's powerful performance, low total cost of ownership and exceptional efficiency.

Sustainable operations

In addition to enhancing performance, there has been a clear intention from equipment manufacturers to deliver sustainable operations – a trend that is being incorporated into wheel loader engineering.

Komatsu, as part of its ongoing process to integrate its legacy brands into ONE Komatsu, has rebranded its hybrid wheel loader products and released the WE1850-3 wheel loader as part of its Generation 3 series.

The WE series of wheel loaders are complete with a fully regenerative SR Hybrid Drive system. During braking or retarding, electrical motors become generators and feed power back into the electrical system, allowing for up to 45% less fuel consumption than comparably sized mechanical drive wheel loaders. Considerable reductions in carbon emissions are also achieved because of this.

In addition, for faster cycle times without a commensurate increase in fuel usage, Generation 3 series wheel loaders include the Kinetic Energy Storage System (KESS), which works in concert with the SR Hybrid Drive to store horsepower captured from braking and direct it to supplement peak power demand.

CASE Construction Equipment has also received a sustainable boost after FPT Industrial approved B20 biodiesel for use in its NEF4, NEF 6 and CURSOS Tier 4 Final diesel engines. All CASE G Series wheel loaders (which feature the engines) have therefore been approved for use with the fuel which can significantly help reduce the carbon footprint of heavy equipment and can help contractors, municipalities, etc, better achieve their renewable goals.

This is the latest example of CASE Construction Equipment's commitment to the environmental cause as, just last year, it designed and commercially developed the industry's first electric backhoe loaders for utilities in New York. ■

As underground mines deepen, there is growing risk of mining-induced stresses and rock bursts.

Rock engineering bar raised

According to SRK Consulting experts, with the world's most accessible mineral deposits already discovered and developed, extraction conditions are becoming progressively more difficult - making rock engineering more demanding.

In open pits, slopes are often required to be steeper, with increased production pressures. As underground mines deepen, there is growing risk of mining-induced stresses and rock bursts. Orebodies also tend to be geologically more disturbed, making them harder to mine.

Orebodies are often exploited from surface using low-cost open pit mining, but as the orebody continues deeper, waste stripping becomes excessive and underground mining is considered. The transition from open pit to underground can be challenging. Many factors, such as the shape and size of the orebody, rock mass characteristics, geological structure, economics, underground mining methods, environmental constraints, management of water, surface infrastructure and impact on local communities need to be considered.

The decision to leave a crown pillar to prevent pit slope failure and subsidence or remove the crown and manage the failure impacts needs to be made at the very beginning. This decision also significantly affects the design of the access to the underground operation, which in turn affects the timing and cost of the transition. Rock engineering plays a major role in all decisions.

Among the underground mining methods available, block caving is often favoured wherever it is feasible, as its cost-effectiveness makes it possible to mine even low-grade deposits economically. However, it does require higher capital costs, including intensive upfront investigation and analysis. While some other methods provide opportunities to learn lessons

as mining progresses, block caving is less forgiving – the correct strategies must be adopted from the start.

Engineering effort required

All of this points towards the growing importance of rock engineering design and the various technical inputs that contribute to this complex field. This applies not only from an economic perspective, but equally from the point of view of health and safety as well as operational risk. More geologically disturbed environments present a higher safety risk, requiring greater engineering effort to execute the mine plan.

A comprehensive, integrated approach using a multi-disciplinary team is required, taking into account geological, geotechnical, structural and hydrogeological data. The interpretation of structures and rock mass is vital to anticipating hazardous conditions and can be incorporated into the mining strategies we recommend. The significant impact of water on the stability of pit slopes and underground excavations, especially in shallower operations, highlights the role of the hydrogeologist.

Various methods of analysis are available. Complex numerical modelling can assist in quantifying failure mechanisms, for instance, while a quantitative risk evaluation approach can be used to estimate the impact of slope failure on a mine's net present value.

The quality of the analysis is only as good as the quality of the data. The tools available to gather the necessary data are constantly

improving. SRK makes the most of existing data to focus engineering works from an early stage.

Incorporating new technologies improves investigation methods into rock mass conditions and allows data collection to be conducted remotely where access is unsafe or inaccessible. Some remote tools are also proving useful during the Covid-19 pandemic, when it is difficult to travel and to gain access to mine sites. LiDAR drone surveys have been employed to scan narrow-vein stopes before backfilling, for example. Bathymetric and three-dimensional sonar surveys have even been taken in a mine closed over 50 years ago, improving the spatial understanding of the mine workings themselves, as well as the quality of the rock mass and the stability of the excavation.

The data and analysis must lead to a practical solution, and in this regard there is no substitute for experience. At the end of a complex analysis, the experienced engineer must understand the risks that have been quantified and mitigate these in a safe and cost-effective strategy.

SRK can match the most appropriate team from its global network of consulting practices with the project deposit and operating conditions, including structural geologists, hydrogeologists and numerical modellers. ■

William Joughin, chairman and corporate consultant (rock engineering) at SRK; Ed Saunders, principal consultant (mining rock mechanic) at SRK; and Diane Walker, principal (geotechnical engineering) at SRK.

Image Credit: William Joughin

ABB OPTIMISES MINE HOISTS TO MEET DIGITALISATION TARGETS

ABB has released a new version of ABB Ability Performance Optimization for hoists in order to meet the need for increased digitalisation in the mining industry.

The upgraded digital service enables condition-based maintenance and a higher level of performance optimisation through more sophisticated predictive analytics.

ABB Ability Performance Optimization for hoists 3.1 ensures early detection of hoist abnormality in operations and builds on previous versions to improve uptime, availability, performance and productivity of mine hoists by providing actionable information on KPIs. Hosted on the ABB Ability Edgenius dashboard application, ABB Ability Performance Optimization for hoists enables quick analysis and insights into any plant operation.



Image Credit: ABB

Predictive analysis of a mine hoist's condition prevents operations from unexpected shutdowns.

The new version offers new KPI settings based on customer and ABB experts' inputs. New KPIs can be set for service hoist availability, hoist cycle statistics, EMS statistics, brake caliper spring operation times, accumulator pre-charge pressure, deceleration variation, guide rope tension, creep distance and clutching time.

Cyber security assessments and solutions for protecting customer data are included.

Predictive analysis of a mine hoist's condition prevents operations from unexpected shutdowns. Data is automatically collected, segregated and managed to be securely monitored and analysed for actionable insights that can help increase production performance, identify safety hazards and provide optimised maintenance scheduling.

Bengt Hedlund, global service manager hoisting at ABB, said, "As the industry looks to make operations more environmentally sustainable, digital services which support remote operation, such as ABB Ability Performance Optimization for hoists, can also play a major role in reducing CO₂ emissions and removing the need for on-site service maintenance visits."

Integrated Pump Rental breaks new ground

Sykes distributor and pump specialist Integrated Pump Rental is offering a readily available pump solution that is built entirely from stainless steel for customers in corrosive environments.

Steve du Toit, rental development manager at Integrated Pump Rental, said that initial interest has come from the mining sector, where mine water being pumped is often acidic. However, he is expecting further interest from the chemical and process industries where corrosive liquids are pumped and stored.

Toit said, "The design is based on our 'total solution' approach, where we consider the complete application and its challenges. While the upfront cost of stainless steel is obviously higher, the value gained by the customer in terms of longevity and reliability far outweigh this."

Among the applications is open pit dewatering where the water pH levels are low, as well as coastal applications where salt water and air cause rapid rusting of mild steel. Integrated Pump Rental has already successfully placed a stainless steel unit in a coastal application, where it is performing well.

"Different grades of stainless steel are used in the design, depending on which components have the most contact with the acidic medium," Toit added. "A range of materials is therefore employed to suit each application, and to achieve optimal performance at the most competitive cost."

This custom engineering is made possible by the company's range of technical skills and specialist experience that resides in its people. This in-house expertise includes draughting, fabrication and pump assembly, making use of coded welders and qualified boilermakers. Depending on the application, the stainless steel build can be supplied on a road trailer or with a site trolley.



Image Credit: Integrated Pump Rental

Integrated Pump Rental is offering a pump solution that is built entirely from stainless steel.

ASSESSING RARE EARTH SUSTAINABILITY

The global Rare Earth Industry Association (REIA) has partnered with BEC GmbH, Circularise, Grundfos and Minviro to lead a three-year EIT RawMaterials-funded innovation project to build a blockchain based Circular System for Assessing Rare Earth Sustainability.

Demand for rare earth metals is skyrocketing and by 2030, it is projected to reach 315,000 tonnes. These metals are irreplaceable and are vitally important to wind turbines, electric vehicles, mobile phones, computers, the defence industry and more. At the same time, the transition to a circular economy is considered crucial. As highlighted by the European Raw Material Alliance (ERMA) Action Plan, boosting supply security through better cooperation among stakeholders is a top priority.

The project will improve the transparency and sustainability of supply chains when it comes to rare earth materials. The partnering organisations aim to integrate REIA's standards on assessing sustainable performance and Minviro's LCA tool with Circularise's blockchain software. This is for traceability and transparency, and will allow Grundfos and BEC GmbH to test the system and business model and trace and measure the environmental impact of supply chains.

The project will contribute to the circular economy transformation in all sectors that depend on rare earths. It will create new business opportunities for manufacturers and recyclers and allow downstream players to ensure sustainable practices.

VULCO R67 DELIVERS SUPERIOR WELL LIFE

Vulco Rubber's abrasion- and impact-resistant rubber compounds are being continually refined by Weir Minerals' team of expert engineers and material scientists to keep them at the forefront of mill lining systems technology.

Having identified a need for higher-wearing rubbers for mill lining systems, the experts have developed a premium-grade rubber compound with superior wear life and performance in mill lining applications. The result was the Vulco R67 rubber – a material which is manufactured with proprietary new compounds and innovative methods of processing to deliver extended wear life and longer uptime.

Many mining operators from around the globe have implemented the R67 compound into their mill lining systems and have reported as much as 20-40% improvement in wear life,

which is resulting in fewer mill lining replacements and longer mill campaigns. This reduction in shutdowns can increase cost savings and improve plant availability.

The R67 elastomer compound is changing the way mills operate. Global trials and commercial installations in the market have resulted in a number of successful outcomes across a variety of different grinding applications.

As an example, a high-grade nickel and copper mining project had a problem where the liners in one ball mill were wearing out too quickly, leading to continued downtime and reduced processing. Initially there was reluctance from the mine, as they had loyalty to their original mill supplier, however after Weir Minerals conducted a series of trajectory simulations and discreet modelling, they agreed

Image Credit: Weir Minerals Africa



The Vulco R67 rubber compound combines state-of-the-art technology with advanced raw materials.

to trial the R67 liners. At the end of the trial, the R67 showed 30-40% better performance than the incumbent liners and the customer installed a full set of R67 liners in their mill.

Vulco R67 mill liners are made exclusively at Weir Minerals facilities in South Africa, North and South America, and Australia.

UNLOCKING THE POTENTIAL OF IRON ORE TAILINGS

In 2021, benchmark iron price surged by 62% to hit a high of US\$220 per metric ton in early 2021 before dropping to just over US\$80 in November.

"With the decline in price, one must ask how this will impact iron ore producers?" questioned Gravitas Minerals director Tebogo Kale.

A lower selling price equates to lower revenues for iron ore producers putting a strain on the economic viability of these operations and emphasising the importance of maximising recovery from orebodies.

This can be achieved by exploiting the tolerances of fine material in the export product by recovering the -1 mm fine iron ore fraction from the run-of-mine feed.

Gravitas Minerals has developed the Optima Concentrator gravity separator to recover iron ore from a -3 mm feed. It utilises hindered settling, fluidised bed and autogenous dense medium technology to separate iron ore from gangue based on density.

With high throughput capacities of up to 40 t/h.m2, this is a low-footprint, water-only solution for fine iron ore recovery.

The company has used the Optima Concentrator to develop its Kalahari Process, which produces an iron ore product with a minimum grade of 63% Fe from various iron ore feed sources and has yielded recoveries of up to 80%.

"By utilising the Kalahari Process, iron ore producers can unlock the full potential of their mineral resource. In so doing, they can prolong the lifespan of their tailings' facilities by up to 50%, reduce the disposal of iron ore tailings and the associated environmental impact, increase their revenues and boost profits," said Kale.

Sandvik's QI353 maximises performance

Sandvik is revolutionising rock processing with the first of its 3-Series, third generation offering QI353 mobile impact crusher.

Designed to provide more uptime, the QI353 is one of the most versatile, mid-sized mobile impactors available and is built utilising Sandvik's Prisec technology for primary or secondary applications. It can process up to 400 TPH, whilst reducing fuel and energy consumption.

At the core of the QI353 is a new mid-size Prisec impact crusher, which boasts the largest feed opening 1170 mm x 730 mm and the largest rotor diameter of 1150 mm in its class, for higher capacity and greater energy efficiency. Initial test results have shown up to 16% energy reduction in comparison with previous models.

Fitted with a host of safety features, the QI353 offers 3-sided 270° service access with ground level maintenance points including a new rear access platform. The optional HS323 hanging screen module has been enhanced to accept belt scales for TPH monitoring on fines and stockpile belts.

The QI353 is fitted with the brand new Optik intuitive user experience. This offers simplified operation controls and total integration with My Fleet telematics solution. With a host of easy-to-navigate features, this system allows operators to maximise uptime and optimise decision making with real time information, boost output with diagnostic assistance and enhance troubleshooting with pre-installed guides and accurate data collection.

Sandvik QI353 is fitted with the latest generation fuel-efficient powerpack which provides maximum performance and cost efficiency. The double-deck pre-screen maximises crusher throughput and reduces wear costs and energy consumption.



The QI353 is built utilising Sandvik's Prisec technology.

Image Credit: Sandvik

Case IH has added the 2150S Early Riser Model to its planter portfolio.



Image Credit: Case IH

Boosting farming productivity

New innovations continue to spur Africa's growing agricultural sector.

The most recent Africa Agriculture Status Report launched at the 2021 AGFR Summit indicated that Covid-19 demonstrated the fragility of the continent's food systems despite the progress made over the last decade.

There are, however, immensely positive signs emerging with sub-Saharan Africa registering the most rapid rate of agricultural production growth since 2000 of any region of the world (even if the growth was driven by the expansion of crop land over yield increases). This is a welcome but very necessary positive trend as the regional population is expanding at a rapid rate (expected to hit 2.5 billion people by 2050), which will require a substantial and robust agricultural foundation to support it.

Andrew Cox, AGRA's chief of staff and strategy, commented, "Raising yields and productivity on existing

farmland is among the most important ways to make African food systems more resilient and sustainable. Raising productivity on existing farmland will reduce pressures for continued expansion of cropland, and preserve valued forest and grassland ecosystems."

Within this context, the continued introduction of farming innovations and new machinery is essential and it is with great relief that Grain SA's NAMPO Harvest Day agricultural Trade Show will be returning live and in-person from 17-20 May 2022.

All sectors of the agricultural input suppliers are represented, ranging from tractor manufacturers to fertiliser companies. Exhibitors from across the world have participated in the show and attendees are looking forward to showcasing their solutions to benefit the African farming industry.

On display

One such company which has showcased at the NAMPO conference in previous years is Case IH, which offers a wide variety of agricultural and farming equipment.

The company has released the 2150S Early Riser front-fold trailing planter, which brings productivity-boosting split-row configuration to its lineup of 2000 series Early Riser planters. A 525 gallon fertiliser tank capacity – along with more seed capacity – enables operators to cover more acres between fills and make the most of their time in the field. The planters have been boosted with the agronomic benefits of the 2150S.

The company has also unveiled the Precision Disk 550 air drill which is designed to boost yield potential in a variety of crops and tillage practices. This series row unit maintains an industry-leading

parallel-link design with new features and enhancements.

A new closing system with indexable angle adjustments delivers effective seed trench closing and adjustments are simple with indexed settings to match field requirements. Additionally, a range of gauge wheel widths and styles accommodate different field and crop conditions and a tank capacity of up to 140 bushels helps operators maximise tendering and seeding productivity.

Trent Nowosad, Case IH marketing manager for seeding equipment, commented, "With this new row unit, every single detail is designed to optimise seed placement and deliver unmatched stand establishment. Even when Mother Nature isn't on your side, Precision Disk 550 air drills provide peace of mind that plants will get their best start possible." ■

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Tackling urban planning challenges

According to Mammoet, achieving efficient construction in urban environments can be challenging due to changing usage patterns and cities growing dense.

As time passes, infrastructure shows signs of age and is scheduled for replacement; a situation that has been worsened in many countries by burgeoning urban populations creating higher than expected levels of use. These higher populations demand more power, higher travel capacity and larger sewerage systems, meaning more infrastructure is laid on top of the old, making each repair or replacement work more challenging than the last. Declining public budgets only makes this process even more tough.

This all means that in busy, built-up areas with many projects in different phases of development, work on infrastructure can be an extremely complicated and technical challenge. One that must take place with strict guarantees limiting interference to city life, and therefore the wider economic prosperity of the region. But this work is critically important. If transport networks do not perform effectively then the flow of urban life breaks down. Businesses do not have the surety of being able to send or receive goods in a predictable or affordable timeframe, people struggle to commute to work or travel into the city for recreation, and, as a result, the wider economy will start to suffer.

Ageing asset

A driving force in the pressing demand for renewal is the ticking clock of ageing infrastructure, particularly in older cities where transport networks, water supply systems and the like can date back decades or even centuries. The lifespan for which assets such as bridges were built can vary widely – whilst more recently this is typically intended to be around 125 years, in

prior decades this has not been the case.

Rafael Martinez, sales manager at Mammoet explained, "In the 1950s, 1960s and 1970s, the lifespan of a bridge was usually only established to be around 50 years. Bridges built in fairly recent memory may be less durable than expected. In addition, the method of construction can vary markedly between bridges of different ages and localities, which means there is no one-size-fits-all solution to removing them when the time comes."

If not managed properly during its design, environmental conditions can prematurely age an asset.

Unpredictable usage patterns

Assets are only as good as the purpose they were designed for – so if usage patterns change suddenly this can create large challenges.

Nick Jones, commercial manager for Mammoet UK, said, "There are a number of reasons why the usage patterns of infrastructure can change. In some cases, this can be down to changes in government policy influencing how the likes of roads are used.

"But clearly, wider socio-economic factors are often a key cause – there is still a general trend away from rural living towards cities, which means many urban centers are still experiencing significant growth in population, in parallel with shifting economic development that can also influence the demand placed on water supply and telecommunications, or level of traffic using a bridge on an average day," Jones added.

Rising populations

Rising populations lead to larger, more complex infrastructure being put in place to support them which



Working around existing infrastructure can add several layers of complexity to a project.

Image Credit: Mammoet

presents a number of issues for project planners, as Richard van Looij, Mammoet segment lead for Civil, explained, "As developments expand to accommodate more people, there is not only a reduction in space available to manoeuvre equipment, but also a significant increase in underground services.

"This means that projects have limited room in which to operate equipment such as mobile cranes but will also have restrictions on where heavy equipment can be used as more of these services limit the maximum pressure that the ground can withstand."

"Smart engineering is needed to work around these challenges, getting the best results within the physical restrictions present. We find that early dialogue with stakeholders is key in achieving this – while we can respond to requirements, the changing nature of the city requires fresh thinking, new methods and equipment that can make a real difference in restricted spaces."

The situation can be complicated further by non-physical restrictions; limitations on noise and emissions levels are understandably also a major consideration.

Mammoet has dedicated

considerable resources to developing new equipment that can meet the changing demands of crowded, complex urban projects. It has pioneered the use of cleaner fuels such as hydrogen and electric power and has developed a new crane called the FOCUS30, which has been designed specifically for projects where greater lifting capability is needed within confined spaces.

The relentless nature of our growing cities means regular demand for refurbishment and replacement work to keep transport networks running smoothly. As more cities than ever before come to undertake this type of work, smarter thinking is needed to deliver projects in ways that minimise disruption and can accommodate complex surroundings.

Modern engineered heavy lifting techniques and technologies can offer a range of flexible solutions to meet these challenges; but suppliers must be large enough to offer the right depth of equipment and expertise to meet the unique challenges presented by infrastructure projects. If this can be combined with early involvement to ensure the most effective and bespoke solutions, then cities can be kept moving as freely as possible. ■

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