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African Review
of BUSINESS and TECHNOLOGY

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"Africa has many attributes that are causing the world's leading economies to pivot to the continent."
Elise Donovan, CEO of BVI Finance

57 YEARS
SERVING BUSINESS IN AFRICA SINCE 1964

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Editor's Note

Welcome to our combined issue for December 2021/January 2022. Stay in touch with all the latest key business developments in Africa as we move into the new year.

This month we have all the latest news and views from right across the continent, focusing on core industries from construction and technology to mining and power.

Inside, we look in-depth at the prospects for the sub-Saharan economy in 2022 (page 18), and its recovery from a post-pandemic world, plus Nigeria and its latest development strategy (page 15).

Our energy coverage this month includes an exclusive interview with Aggreko's managing director for Africa, John Lewis (page 28), as well as an exploration into the rise of smart metering technology, which is helping to boost access to electricity in rural areas (page 25).

There's plenty of mining coverage too, including Mantrac's work at the Barrick Gold Mine in north Mara, Tanzania (page 46) and a glimpse into the little-seen world of commercial mining explosives (page 44).

You'll also find an events planner where you can identify major conferences and exhibitions coming up in the new year – and don't forget to explore the African Review website where you will find even more essential information, data and insight to help grow your business.

African Review: serving businesses across Africa since 1964.

Martin Clark, *Managing Editor*

Contents

Schneider makes P&G's Egypt manufacturing base more resilient and sustainable

Image Credit: Adobe Stock

The new systems will be monitored by Schneider Electric's EcoStruxure asset software.

Procter & Gamble (P&G), the world's largest FMCG manufacturer, will have a future-ready production site with Internet of Things (IoT) capability and the capacity to integrate renewable resources, thanks to Schneider Electric, who will handle the installation at its Egyptian factory.

Schneider Electric were chosen to install a range of future technologies that will improve production efficiency, minimise unplanned downtime and improve resource sustainability at the company's factory in Cairo's 6th of October Industrial zone.

P&G's manufacturing department wanted to integrate a solution that enhances production by eliminating downtime and improving machine reliability. Schneider Electric, in turn, proposed a combination of hardware, software and service-based solutions to future-proof the site and guarantee safety and quality at the factory in its future operations.

"This is one of our most important factories in the region, and it's a manufacturing hub both for Egypt and for the wider Middle East and Africa," said Karim Hussein, P&G October IV plant manager.

"We were looking for technologies that would benefit our production lines, to make them more resilient and sustainable. What Schneider Electric proposed was a design that would help us become much more efficient and optimise our energy usage moving forward."

The solution comprises low- and medium-voltage equipment, along with uninterruptable power supply units, all of which are internet-enabled, allowing it to be monitored by Schneider Electric's EcoStruxure software.

"Procter & Gamble has always been a pioneer in terms of its operations, and this technology will ensure that the factory will remain an exemplary facility," said Marc Charabati, Schneider Electric's field services vice-president. "Our technology will reduce downtime and response time for any equipment issues, increase system lifetime due to predictive maintenance, and ensure overall system reliability. Just as importantly, this technology will help Procter & Gamble reduce capital and operating costs, whilst optimising energy usage, making this facility more sustainable and productive."

TOTALENERGIES EXPANDS PRESENCE IN LIBYA

During the Libya Energy & Economy Summit, initiated by the Government of National Unity, TotalEnergies signed various agreements with the Libyan authorities for the sustainable development of the country's natural resources. Included was a MoU for solar projects contributing 500MW capacity to the national grid.

Patrick Pouyanné, chairman and CEO of TotalEnergies, explained, "These agreements reflect TotalEnergies' willingness to strengthen its investments in Libya's energy sector. We aim to assist the country in building a more sustainable future through a better use of the country's natural resources, including solar energy, which will directly improve the accessibility of cleaner, more reliable and more affordable electricity.

"These agreements further illustrate the sustainable development model of TotalEnergies, a global multi-energy company that supports producing countries in their energy transition."

ALTUS TO VEND MOROCCAN PORTFOLIO TO EASTINCO

Creating a new strategic metals company, and 15 new royalties generated on copper, silver and tantalum projects, Altus has confirmed that it is vending its Moroccan portfolio to Eastinco.

The company entered a sale-and-purchase agreement with Eastinco Mining and Exploration plc, solidifying its sale of the company's 100%-owned subsidiary Aterian Resources Ltd.

Aterian Resources Ltd is advancing its portfolio of 15 primarily copper and silver exploration projects (Aterian Projects) across Morocco and Eastinco is currently advancing a portfolio of tantalum exploration and development projects across the Republic of Rwanda.

The transaction agreement remains subject to certain conditions, including the admission to trading of Eastinco's entire issued share capital.

Altus will earn up to 25% of Eastinco and an Altus appointee will join the Eastinco board as part of the agreement. Altus will also receive warrants for an up to 10% additional share in Eastinco.

Eastinco, in turn, will transform into a pan-African strategic metals development company, and change its name to Aterian Plc on completion of the transaction.

Steven Poulton, chief executive of Altus, commented, "We are delighted to announce the proposed divestment to Eastinco of our 100% owned Moroccan focused exploration subsidiary, Aterian, as part of Eastinco's proposed LSE Standard Listing and subsequent name change to Aterian Plc. The enlarged entity will have a strong and unique portfolio of strategic metal exploration and development projects in Morocco and Rwanda.

"We look forward to the completion of the Transaction, the successful admission of Eastinco and supporting the team."

BRIEFS

Nokia, UNICEF and Orange launch UPSHIFT programme

Image Credit: Nokia

The strategic partnership equips young people with key skills.

The UPSHIFT programme, launched by Nokia, UNICEF and Orange Foundation, will aim to train young people across Morocco in key skills.

At least 1,400 young people (of which 60% will be women) will receive training in teamwork, self-esteem and communication.

More than 500 young people will benefit from the social innovation curriculum, while around 250 will be assisted in developing projects to launch youth-led initiatives.

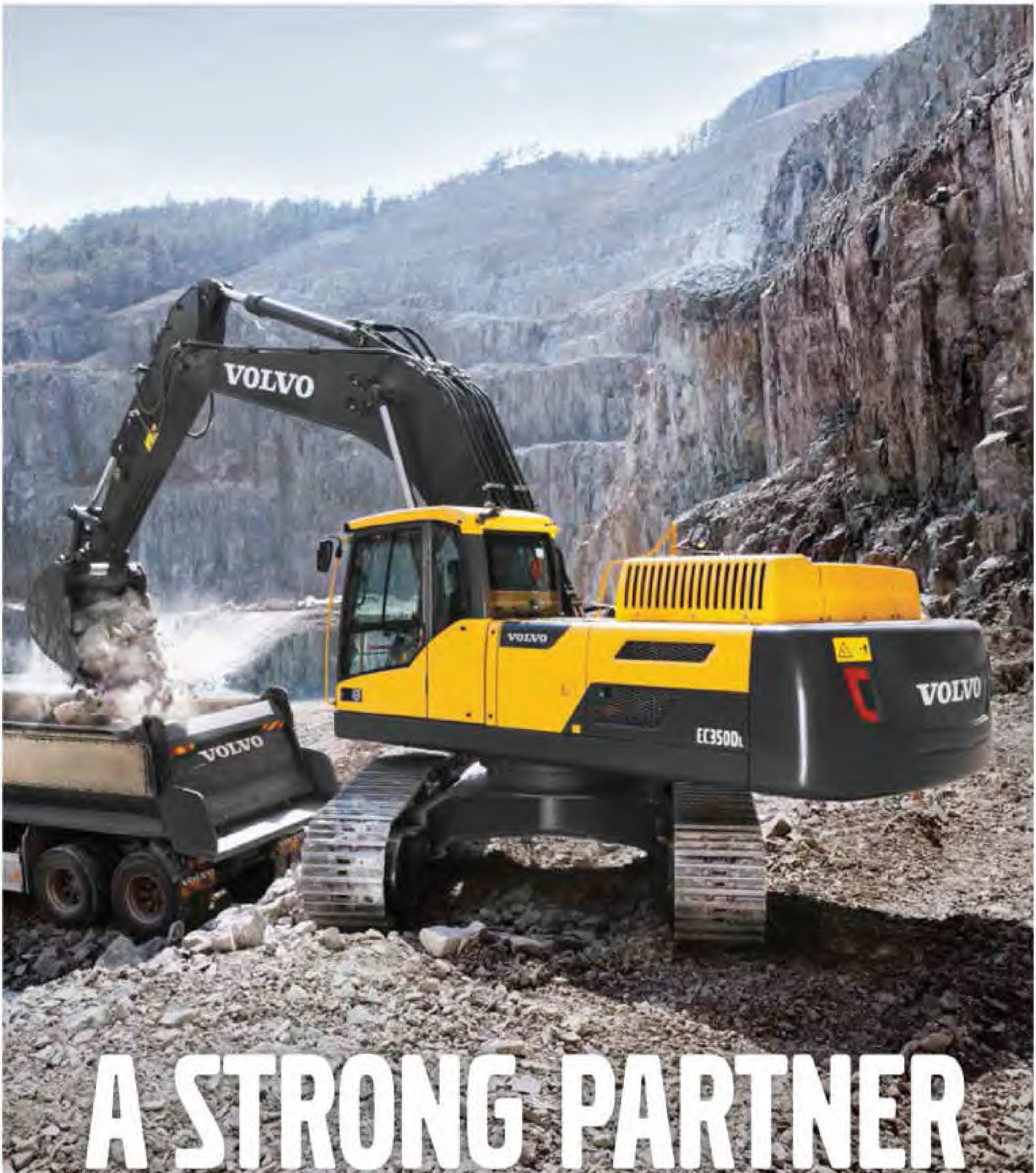
Telecom Egypt deploys GeoMesh

Image Credit: Adobe Stock

Telecom Egypt deployed the technology on its subsea network.

Egypt's first integrated telecom operator, Telecom Egypt, has deployed Ciena's WaveLogic 5 Extreme coherent optical technology to maximise capacity along the Mediterranean segment of Telecom Egypt's Middle East North Africa submarine cable system and Egypt's mesh network.

WaveLogic 5 Extreme increases capacity per wavelength, therefore reducing cost per bit, providing best-in-class spectral efficiency, space utilisation efficiency, and power efficiency.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WEC Projects bring clean water to residents in Guateng

Image Credit: WEC Projects

WEC Projects' plant will supply potable water to one of the most populous communities in Gauteng, benefitting an estimated 500,000 local residents.

WEC Projects, a water and wastewater treatment solutions provider in South Africa, has designed and built a water treatment plant that will supply potable water to one of the most populous communities in Gauteng. The plant is considered to be the company's flagship facility and is set up as a joint venture with local construction, concessions and manufacturing groups.

The US$16mn plant has been designed to provide 60 Ml/day and was commissioned as part of a US$62.4mn upgrade project for the community which has experienced a considerable increase in demand for potable water over the last few years.

The scope of work for WEC Projects included the mechanical, electrical and instrumentation work. Wayne Taljaard, managing director of WEC Projects, said, "This project certainly rates as one of the most challenging that we have undertaken. The design of the plant required the water to undergo a complex processing solution in order to achieve the quality level required by the local municipality. We were also required to integrate the new plant module into the existing treatment plant. As a result, the plant integrates a sophisticated and advanced control and instrumentation system to ensure consistent quality and plant uptime."

WEC Projects explained the primary process of the plant; the raw water is drawn from a nearby dam and pumped to the facility where it initially undergoes clarification to remove suspended solids. After the primary clarification process, the water undergoes dissolved air flotation to remove any remaining solids and oils. The clarified water then enters a rapid gravity sand filtration system to remove particles. This type of filtration system was specified due to the higher filtration rate it provides compared to conventional sand filters, a necessity for a plant that is required to supply more than 500,000 people. After exiting the sand filter the water is pumped to the ozonation facility for rapid oxidation and disinfection. It then undergoes a second filtration process, this time through a filter system containing granular activated carbon. This process removes organic chemicals and other similar impurities. The final process sees the chlorification of the water to ensure that any harmful impurities such as bacteria are removed.

MINING OUTPUT IN SOUTH AFRICA SUFFERS BROAD-BASED DECLINES

According to a research study by Oxford Economics Africa, output data shows a decline in the South African mining industry. Seasonally adjusted mining production fell by 3.7% m-o-m in September, after a revised figure in August of -2.0% m-o-m (-2.4% m-o-m previously). The report said that on an annual basis, mining output declined by 3.4% most recently, after rising by a downwardly revised 0.7% y-o-y during the month before. The largest contributors to the annual decrease in September were coal at -8.9%, PGMs at -7.5% and finally, gold by -6.9%.

According to Oxford Economics Africa despite the setbacks faced due to the global pandemic, the mining sector is still seen as the mainstay of South Africa's economy and its performance is highly subjected to elevated commodity price environment and robust global demand.

MTN MOMO PARTNERS WITH NEDBANK TO LAUNCH EFFICIENT ATM SYSTEMS

MTN Mobile Money (MoMo) app, through a partnership with Nedbank, has introduced its new ATM cash-out option, allowing customers to withdraw money at all Nedbank ATMs or any of the participating retail stores, across South Africa at competitive rates. The fees range from R10 for transactions of up to R1000, R20 for transactions between R2000 and R3000 and R30 for transactions between R2000 and R3000.

According to MTN, the programme aims to achieve financial inclusion for all South Africans, and the 'MoMo Cash-out' via Nedbank ATM or any of the participating retail stores, such as Pick n Pay, Shoprite, Checkers, OK foods and USave builds on the rollout of mobile money solutions by the company over the past year.

"Achieving cost savings, driving efficiency and bringing the digital world closer to the needs of customers is at the heart of this solution," said Felix Kamenga, chief officer for mobile financial services from MTN South Africa.

MTN said that the 'Cash-out' feature adds to the existing MoMo services of handling personal money transactions along with bill payments and prepaid services, among others.

It is also important to note that the service in its current version is only available between 7am in the morning till 6pm in the evening and MoMo customers will not be able to request a Cash-out via Nedbank ATM outside of these times.

MTN also said, through digital money initiatives, it is aiming to harness the power of technology to enable informal economies the ability to access money through mobile devices, while providing affordable and enhanced access to a stable, reliable and advanced network.

BRIEFS

New mining research centres at Wits Mining Institute

Image Credit: Adobe Stock

The research centres will conduct research to create new knowledge about mining technology.

The Wits Mining Institute (WMI) at the University of the Witwatersrand (Wits) will boost its contribution to the future of mining by hosting two of the new research centres established through the South African Mining Extraction Research, Development and Innovation (SAMERDI) strategy. The two centres will focus their research on Real-Time Information Management Systems (RTIMS) and Successful Application of Technology Centred Around People (SATCAP) respectively.

Bosch Rexroth delivers plant-specific training

Image Credit: Bosch Rexroth SA

The training aims to cover areas such as working principles, routine maintenance, and practical equipment.

Bosch Rexroth South Africa, one of the continent's leading hydraulics, pneumatics and automation companies, has announced its programmes for upskilling personnel. The Continuous Professional Development (CPD) Validation and MerSETA accredited training courses have been made available at the group's training facilities based in Johannesburg. The company's programmes also include system-specific and plant-specific training at the clients' premises throughout Africa.

EGP RSA Garob wind farm achieves commercial operation

Image Credit: Adobe Stock

The wind farm will be able to generate 573GWh every year.

The Enel Green Power RSA (EGP RSA) Garob wind farm, located near the remote Northern Cape town of Copperton in the Siyathemba Local Municipality, will be able to generate 573GWh every year.

Awarded to Enel Green Power in April 2015 as part of the fourth tender round of South Africa's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), the wind farm is supported by a 20-year Power Purchase Agreement with South African energy utility provider, Eskom.

The wind farm will potentially be able to prevent 600,000 tons of CO_2 emitted to the atmosphere globally.

Its completion brings the number of operational Enel Green Power RSA wind and solar sites in South Africa up to ten projects, with an overall installed capacity of more than 800MW.

The construction of Garob wind farm, which commenced in Apr 2019, included the on-site building of concrete towers instead of prefabricated steel towers. The work was completed by local contractors, providing employment for about 511 people from the local community at peak of the construction phase of the project.

Several creating shared value (CSV) initiatives have been conducted in underserved communities that are in close proximity to the wind farm. Some of these include; donation of wooden pallets and cable drums to communities for making furniture; the issue of PPE to health workers during the peak of Covid-19; provision of blankets to old age homes; provision of tablets for students; and the granting of full scholarships to two learners to further their education at any university within South Africa.

Now that the site is operational, EGP RSA will launch Enterprise Development (ED) initiatives such as the Herbal Lean Incubation Programme. The programme provides mentoring and support services to start-ups in the agro, bio and food technology field.

Additional sustainability projects planned in the Northern Cape province include the installation of an artificial turf football field that captures and stores rainwater; a water purification facility to clean the rainwater and provide clean drinking water; and free Wi-Fi to local communities.

EDF RENEWABLES BAGS NEW ENERGY PROJECTS

EDF Renewables, a sustainable energy production company in South Africa has been awarded three wind energy projects in the 'bid window 5' of the South African Renewable Independent Power Producer Programme (REIPP).

According to the company, while coal and diesel currently represent more than 80% of the country's energy mix, these new projects will contribute to the South African Government's goal of increasing renewable energy by 2030.

In 2021 alone, EDF Renewables has won nearly 850MW worth of projects in the country. The company said that this is in line with the group's CAP 2030 strategy, which aims to double its net renewable energy generation capacity from 28GW to 60GW between 2015 and 2030.

HYPHEN WINS BID TO IMPLEMENT GREEN HYDROGEN PROJECT

The Government of Namibia has announced that HYPHEN Hydrogen Energy has been seen as the preferred bidder to develop the country's first large-scale vertically integrated green hydrogen project in the Tsau Khaeb national park.

The project, worth an estimated US$9.4bn, will ultimately aim to produce 300,000 tons of green hydrogen per year for regional and global markets, either as pure green hydrogen or in its derivative form as green ammonia.

The announcement came after a competitive tender process, legal proceedings and entering into the contractual agreement that will hand HYPHEN the right to construct and operate the project for a 40-year period. This is said to be preceded by the successful conclusion of a feasibility study and official sign-off from the Government.

Marco Raffinetti, CEO at HYPHEN commented, "The first phase, which is expected to enter production in 2026, will see the creation of two gigawatts of renewable electricity generation capacity to produce green hydrogen for conversion into green ammonia, at an estimated capital cost of US$4.4bn.

"Further expansion phases in the late 2020s will expand combined renewable generation capacity to five gigawatts and three gigawatts of electrolyser capacity, increasing the combined total investment to US$9.4bn."

According to the company, the project once fully developed, will provide 15,000 direct jobs created during the four-year construction period and a further 3,000 jobs created permanently, post completion. This is also said to hand Namibia a major boost in terms of foreign direct investment.

BRIEFS

ATEN to boost its local presence

Image Credit: ATEN International

The showroom is said to include a control room environment, a boardroom and also demonstration models.

ATEN International, an AV/IT connectivity and management solutions provider has announced its local presence in Johannesburg. The move aims to forge closer ties with local resellers and channel partners, enabling them to meet market demands with its range of solutions and generate new revenue streams. The company has also made an investment in a showroom for prospective resellers and partners to showcase ATEN's solutions to their end-user customers.

Lesotho's first-ever electronic farmer registry

Image Credit: Adobe Stock

The registry will classify farmers based on farm size.

Food and Agriculture Organization (FAO) in partnership with the Ministry of Agriculture and Food Security, Lesotho has started to develop a 'Farmer Registry'.

The web-based application will contain verified farm data to ensure lawful access to Government subsidies and will maintain a nationwide database of Lesotho's agriculture and allied sectors.

About 10,000 farmers have been registered in the two districts so far covered.

Four solar plants for Burkina Faso


Image Credit: Adobe Stock

The solar plants will increase generation capacity in Burkina Faso to 456MW.

FMO has announced that the financing and contracting for the construction and operation of four solar plants in Burkina Faso has now been finalised.

The solar plants will be located near the cities of Nagréongo, Kodeni, Tenkodogo and Dédougou and will generate 110MWp.

FMO's financing will consist of four loans. The first three of the projects were partially financed through the Access to Energy Fund while the fourth project was partially financed by the Building Prospects Fund.

In addition, co-financiers include the Interact Climate Change Facility (ICCF) and Proparco. The financing round illustrates the recent Team Europe approach, allowing European member states to better work together to offer collective support to partner countries.

Only 60% of the urban population and only 3% of the rural population have access to electricity in Burkina Faso. Until now, 85% of the country's grid has been powered by diesel generators, with the fuel imported by road or through electricity imports from Ghana and Ivory Coast.

The solar power plants, once operational, will increase the generation capacity in Burkina Faso to 456MW of which 172MW is renewable energy. SONABEL will be the off-taker for the electricity generated by the four solar plants.

"FMO supports the construction of these four solar plants to increase the electrification in Burkina Faso in a sustainable way, lessening the reliance on fossil fuels. At the same time, creating more access to electricity helps reduce inequalities, allowing, for example, studying at night and longer business hours. These projects rely on many parties being committed to the same impact goal, and we are thankful for their partnerships," said Huib-Jan de Ruijter, chief investment officer of FMO.

"Building much-needed renewable energy projects in Africa requires multiple finance partners working together. With ICCF we have a very efficient channel to achieve this, enabling European development finance institutions to join forces and foster a joint answer to the urgent climate change challenge," added Peter Thimme, chair of ICCF.

GHANA WELCOMES GREEN HOUSING PROJECT

IFC and Ghanaian real estate developer, Rehoboth Properties have announced the first affordable housing project in Ghana to achieve IFC's Excellence in Design for Greater Efficiencies (EDGE) green building certification, helping Accra reduce greenhouse gas emissions while conserving energy and water usage.

Rehoboth's 1,700-unit Knightsbridge community in the suburb of Kwabenya features efficient lighting, natural ventilation, low-flow faucets, and dual-flush toilets, among other energy efficient technologies, reducing electricity and water use by a third for residents.

The Knightsbridge community was built from materials that require 50% less energy to manufacture, transport, and install compared to materials used in other buildings in Accra.

"Rehoboth is proud to offer Ghanaians a triple-edged chance to save on purchase price, on utilities, and the Earth, leading to a significantly lower total cost of ownership," said Gideon Akrofi, CEO, Rehoboth.

AIRPORT REHABILITATION IN THE GAMBIA COMPLETE

The Saudi Fund for Development (SFD) recently took part in an official inauguration ceremony to mark the completion of the Banjul International Airport Rehabilitation and Development Project in the Republic of The Gambia.

The Saudi Fund for Development provided a loan worth US$31mn to fund the project which will increase the airport's operational capacity by 43%, enhancing trade and supporting economic growth.

In addition, the SFD has provided a further US$10.5mn loan to build a VIP airport lounge which will provide facilities to host official delegations and international conferences.

At the inauguration ceremony, The Gambia vice president Dr Isatou Touray thanked Saudi Arabia through the SFD for its commitment to sustainable infrastructure projects, including the development and expansion of Banjul International Airport, which will increase the living standards of two million people.

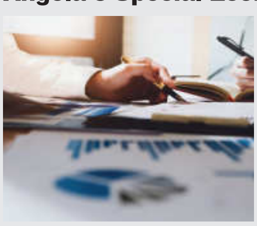
The CEO of the Saudi Fund for Development, Sultan bin Abdul Rahman Al-Marshad, said, "This is an important milestone in the growth and prosperity of The Gambia. The development of Banjul International Airport is an extension of the ongoing support provided by the Kingdom of Saudi Arabia to the Republic of The Gambia, which includes 14 development loans and five grants with a total value of US $215mn across transport, education, water, and economic development.

"This scheme is just one of over 20 projects the SFD has supported in the air transport sector around the world at a value of US$294mn, including the construction of runways, provision of engineering consultancy, and expansion of navigational services, aimed at stimulating sustainable economic and social growth."

BRIEFS

Angola's Special Economic Zone inaugurates GAI

Image Credit: Adobe Stock



The GAI will help integrate business investors into the ZEE's business environment.

The Luanda-Bengo Special Economic Zone (ZEE) has launched a new tool for investors, the GAI (Guiché de Apoio ao Investidor), or Investor Support Office.

In addition to supporting the presidential directive to facilitate access for national and foreign investors, it will eliminate bureaucratic obstacles that can hinder the actions of those who want to access Angola's privatised assets or those businesses already established within the ZEE.

Estimate announced for Douta Project

Image Credit: Adobe Stock

The Makosa Maiden Resource Estimate is the company's first major milestone at the project.

Thor Explorations, a mineral exploration company, has announced an initial NI 43-101 standard Maiden Mineral Resource Estimate (MRE) for the Makosa Deposit which is located in the southern portion of the Douta Gold Project in Senegal. The MRE provides a foundation for continued resource growth along strike to the north from Makosa North together with the satellite deposits that are currently being assessed along the 30 km-long Makosa gold corridor.

WIOCC completes US$200mn debt and equity capital raise


Image Credit: Adobe Stock

The capital will be used to support WIOCC's expansion strategy across Africa.

WIOCC Holding Company Limited (WIOCC) has completed a US$200mn debt and equity capital raise to expand its connectivity within Africa and internationally, and through Open Access Data Centres (OADC) – a newly created WIOCC Group company – to launch a network of pan-African data centres optimised to serve the needs of the cloud provider and wholesale community.

Along with introducing a strong new investor into the company, the capital will be used to support WIOCC's expansion strategy across Africa and boost its investment in enhancing the continent's digital infrastructure. Strategic investments in the new Equiano and 2Africa international subsea systems will augment and complement WIOCC's existing core network infrastructure, cost-effectively adding multi-Terabits of capacity and significantly increasing its options to deliver high-availability solutions demanded in markets across Africa. WIOCC's terrestrial strategy, which includes deployment of metro and national networks in key locations, will include new countries and metropolitan areas, increasing its portfolio of end-to-end solutions for clients across Africa.

Part of the capital raise will be used in funding OADC, which is creating a transformational interconnected pan-African network of open-access, carrier-neutral data centres. First-phase locations will house key submarine cable landings in Lagos, Durban and Mogadishu, supporting the drive to land international submarine capacity directly into carrier-neutral data centres. Each will provide clients with bespoke colocation facilities and ultra-reliable, seamless connectivity directly into new international subsea systems, eliminating the costs and risks traditionally associated with terrestrial backhauling. Construction and fit-out is underway in Lagos and Durban, with both to be launched early in 2022, whilst the Mogadishu data centre will be ready before the end of 2022.

WIOCC raised the equity capital from CAPE IV, a fund managed by leading Africa focused private equity fund manager, African Capital Alliance (ACA). Chris Wood, CEO of WIOCC, said, "This will enable a very significant expansion of our hyperscale infrastructure through investment in new high-capacity subsea systems and terrestrial network."

ZEMBO SECURES FUNDING TO SCALE ITS ELECTRIC MOTORCYCLE BUSINESS

PIDG company InfraCo Africa, along with a consortium, including DOB Equity and Mobility 54, has signed an agreement with Zembo, together committing over US$3.3.mn to support the growth of the company's electric motorcycle business in Kampala, Uganda.

Zembo allows drivers to buy electric motorcycle taxis (boda boda) or to pay for them on a lease-to-own basis. The investment will enable the company to grow the number of electric motorcycles on the road. Étienne Saint-Sernin, co-founder of Zembo, said, "Zembo's mission to improve incomes for Uganda's boda boda riders while cutting air pollution is shared by our supporters and is a driving force for this partnership. We look forward to continuing to serve our customers and making sustainable mobility a reality in Uganda."

EQUITY GROUP DEEPENS PARTNERSHIP WITH PROPARCO TO SUPPORT MORE MSMES IN KENYA

As part of French Minister Delegate for Foreign Trade and Economic Attractiveness, Franck Riester's visit to Kenya, Proparco granted Equity Bank two guarantee facilities, ARIZ and EURIZ totalling US$43.7mn to help the Kenyan bank further support job creating MSMEs. Proparco also granted a US$617,000 technical assistance facility to support Equity Group Foundation's health projects.

The EURIZ guarantee and the technical assistance grant benefitted from support from the EU and the Organization of African, Caribbean and Pacific States.

After the completion of the signing, Dr James Mwangi, managing director and CEO of Equity Group Holdings Plc, said, "Our strong relationship with Proparco is one that we greatly value. Our shared vision for the transformation of lives and livelihoods on the African continent is one we are both committed to. It is this shared mission that continues to support and expand opportunities for wealth creation on the continent for our people, and which will allow Africa to thrive and prosper in the post-Covid economy and underpins our collaborations under the French 'Choose Africa' and Equity's post covid Africa resilience and growth plan."

Over the past three years, Proparco and Equity Bank have grown to become strong partners, thanks to a US$22.8mn loan granted in 2019 and a US$100mn loan granted in October 2020. Both of which were intended to support the Bank's commitment to Kenya's MSMEs.

Riester, Proparco and Equity further strengthened their relationship by signing two new guarantees and of a technical assistance grant.

BRIEFS

Wakandi Tanzania inaugurates its new office in Dar Es Salaam


Image Credit: Wakandi

Stain Andreassen speaks to guests at the inauguration party.

Wakandi has inaugurated its new office in Dar Es Salaam, the largest city and the former capital of Tanzania. This will help the company strengthen its hold in the Tanzanian market, enabling the team to interact better with the clients and the local community. Stian Andreassen from Wakandi said, "I look forward to seeing a day when everyone without exception will have the opportunity to be included financially."

Wentworth and Vitol SA sign MoU to partially offset the impact of carbon emissions


Image Credit: Adobe Stock

The MoU was signed to align projects to the UN SDGs.

Wentworth Resources (Wentworth), the Tanzania-focused natural gas production company, has entered into an MoU with Vitol SA (Vitol) regarding the supply of carbon credits to partially offset the impacts of its emissions footprint at Mnazi Bay. The companies will co-design the projects with stakeholders, local implementation partners and government, so that projects are aligned to the UN Sustainable Development Goals (SDGs).

Moove partners with Lori Systems to boost financing for African trucking and logistics

Moove, an African mobility fintech, has signed an exclusive partnership with Lori Systems, the leading e-logistics company in Africa.

The partnership marks Moove's first foray into the logistics industry, as it leverages its revenue-based financing model to bridge the gap across one of the continent's most highly fragmented sectors.

The partnership marks Moove's first foray into the logistics industry.

Moove and Lori Systems' partnership will focus on delivering access to affordable vehicle financing within Africa's trucking and logistics industry where penetration for truck financing is lower than 1%. By combining Moove's revenue-based financing model and credit-scoring technology with Lori Systems' data-driven logistics marketplace, both companies aim to increase the capacity of transporters to match demand across East and West Africa.

The launch in Kenya will be followed by a rollout in Nigeria using the same revenue-based financing and credit decision model that Moove has developed as Uber's exclusive vehicle financing and vehicle supply partner in sub-Saharan Africa. Loans will be allocated to a pool of highly rated transporters on Lori Systems' platform, allowing them to expand their fleet, as well as through a drive-to-own programme for all truck drivers. With up to 100% of the purchase price underwritten by Moove, customers will be able to pay back the loans using a percentage of their weekly revenue.

Ladi Delano, co-founder and CEO of Moove, said, "We knew from the get-go that our mission to democratise vehicle ownership would take us beyond cars. We're thrilled to be joining hands with Lori Systems to empower truck drivers in Africa, and are excited about the positive impact our revenue-based financing solutions will have on their lives. Lori's efforts to leverage data-driven and tech-enabled solutions have recorded significant progress in driving further efficiency."

"Lori's mission is to drive down the cost of goods in frontier markets. We've grown a marketplace that brings transparency and data to the forefront of the continent's critical haulage industry. The partnership with Moove enables us to design innovative and flexible financing options, using data we have captured over the years, to allow transporters fund new trucks and increasingly grow their fleet and businesses," said Uche Ogboi, CEO of Lori Systems.

AFDB AND BURUNDI SIGN AGREEMENT TO FINANCE NATIONAL ENERGY ACCESS PROJECT

The African Development Bank (AfDB) Group and the Government of Burundi have signed a US$29mn grant agreement to finance Phase 1 of the Access to Energy Project, which is part of the country's infrastructure development programme.

The agreement was signed during an official meeting in Bujumbura between the AfDB Group's director general for East Africa, Nnenna Nwabufo, and Burundi's Minister of Finance, Budget and Economic Planning, Domitien Ndihokubwayo. Phase I of the Energy Access Project will benefit not only the population but also private sector development, said Ndihokubwayo.

The Minister stressed that co-operation between the African Development Bank and the Government of Burundi was well under way. "Our support will not be limited to the energy sector. It will also take into account agriculture and job creation for young people."

TWIGA RAISES US$50MN SERIES C ROUND TO EXPAND ACROSS AFRICA

Kenyan B2B e-commerce platform Twiga has raised a US$50mn Series C funding round to help it scale its affordable food solutions across Africa.

Founded in 2014, Twiga is a B2B food distribution company that builds fair and reliable markets for agricultural producers and retailers through transparency, efficiency and technology.

The startup operates a B2B e-commerce system to simplify the supply chain between fresh food producers, FMCG manufacturers and retailers that removes the need for many intermediaries, significantly lowering the cost of food for consumers.

Twiga is one of the best-funded tech startups on the continent, securing a US$10.3mn Series A funding round in 2017, a further US$10mn in November 2018, US$34.75mn across two rounds in 2019, and US$29.4mn in debt funding from the International Finance Corporation (IFC) last year.

It has now banked a US$50mn Series C round, led by Creadev, the French investment company. The round includes significant follow-on investment from tech-oriented shareholders Juven, TLcom Capital, IFC Ventures and DOB Equity, while OP Finnfund Global Impact Fund I and Endeavor Catalyst Fund participated as new investors. The transaction was also the opportunity for certain early investors to access liquidity via a US$30mn secondary sale, generating up to a 100% annualised return.

Twiga plans to expand its offering to the rest of East Africa in the coming months and West Africa in 2022. It is also deploying part of the funding towards a proof of concept to develop its own fresh produce, using precision agriculture and satellite imagery to drive up crop yields.

BRIEFS

Kenya has been seeking maritime hub status.

Kenya's modern shipbuilding facilities ready for use

The work for two modern shipyard facilities in Kisubu and Mombasa, Kenya, are now complete. This opens a new frontier for the country as it seeks maritime hub status and to tap into the blue economy. The military-run ship building agency, Kenya Shipyards Ltd (KSL), is at the heart of the government's bid to ward off stiff competition from Tanzania for lucrative cargo transport deals with Uganda and Rwanda.

The Ezra Power plant.

Ezra power plant celebrates two-year anniversary

The Ezra Power plant, located in Kondokoro Mangalla County, has celebrated its second anniversary. The power plant produces the bulk energy supplied to the Juba Electricity Distribution Company Ltd.

It took the Ezra Construction & Development Group (ECDG), a subsidiary of the Ezra Group, just over two years to get the first phase of the plant running after being awarded the contract in 2017.

Upcoming Events Calendar 2021 / 2022

DECEMBER

8-9

GLOBAL OFF-GRID SOLAR FINANCE SUMMIT
Live and online
https://global-off-grid-solar-finance.get-invest-matchmaking.eu/home

9-10

U.S.-AFRICA ENERGY FORUM
Houston, Texas
https://energycapitalpower.com/event/us-africa-energy-forum/

14-15

RENPOWER MAGHREB 2021
Virtual
https://us02web.zoom.us/webinar/register/WN_DSkcDae5So-FdfJMKtVLeQ

16-17

MSGBC OIL, GAS & POWER 2021
Diamniadio, Senegal
https://energycapitalpower.com/event/msgbc-oil-gas-power-2021/

JANUARY 2022

17-19

WORLD FUTURE ENERGY SUMMIT
ADNEC, Abu Dhabi
www.worldfutureenergysummit.com

FEBRUARY 2022

10-12

6TH SOLAR TANZANIA 2022
Dar-es-Salaam, Tanzania
www.expogr.com/tanzania/solarexpo/index.php

16-18

SOLAR POWER AFRICA
Cape Town, South Africa
https://solarpowerafrica.za.messefrankfurt.com/capetown/en.html

MARCH

1-3

AFRICA ENERGY INDABA 2022
Live (Cape Town) and online
https://africaenergyindaba.com/

1-3

MAURITANIDES
Nouakchott, Mauritania
www.mauritanidesmr.com

8-9

FUTURE OF ENERGY
Amsterdam, The Netherlands
https://futureofenergy-event.com/#home

11-13

ELECTREX AFRICA 2022
Nairobi, Kenya
www.mxmexhibitions.com/electrex_africa/

16-18

POWERING AFRICA SUMMIT 2022
Washington DC, The USA
www.poweringafrica-summit.com

PROPAK 2022 ASSEMBLES PACKAGING INDUSTRY LEADERS IN JOHANNESBURG

Packaging is much more than to preserve and protect food. Rather, it is used as a marketing tool to create a visual identity for the content to attract the consumer's attention.

The African packaging market has shown a notable growth and the players in the market are continuously focusing on expanding their customer base across foreign countries and leveraging strategic collaborative initiatives to increase market share and profitability.

According to Mordor Intelligence, the Africa packaging market is expected to reach a CAGR of 8.4% from 2021-2026. The market is driven by an expanding population of youthful consumers, increased demands for consumer products, burgeoning individual incomes and growing domestic economies-particularly those in East and West Africa.

In line with this trend, Montgomery Group, the organiser of Propak Africa, is all set to provide a platform in 2022 for information exchange with exhibitors from all over the world. The event will showcase innovative technologies and the latest developments in the packaging, equipment and materials segment.

The four-day event will be held from 8-11 March 2022 at the Expo Centre Nasrec in Johannesburg, South Africa. This event will showcase products such as competitive packaging, food processing, plastics, printing and labelling industries. The co-located shows include FoodPro, Pro-Plas Expo, The Gapp Print Expo and Pro-Label Africa.

Industry leaders across the packaging and related industries will exhibit cutting-edge products, services and solutions to thousands of receptive local and international visitors with high purchasing power. Additional drawcards for visitors include educational conferences, free seminars and experiential activities.

The 2019 event showcased products such as competitive packaging, food processing, plastics, printing and labelling industries.

Exhibitor profile:

- Packaging Materials - aluminium, flexible packaging, board, labelling, substrates, paper, polymers, tinplate and rigid plastics
- Packaging Supplies – adhesives, boxes, cans, closures, containers, cartons, components, glass and plastic bottles, drums, pouches, tubes and others
- Packaging and Ancillary Machinery – bottling, capping, canning, conveying, cartooning, form-fill seal, shrink-wrapping.
- Converting Equipment – for packaging, plastics, printing; and consumables
- End-of-Line/Materials Handling.

"Degraded forest landscapes not only intensify the effects of climate change but also severely threaten the ecological functions that are vital to building prosperous and resilient economies to the communities. The urgent need to reverse these negative and devastating trends has prompted African leaders to commit to the restoration of the continent's ecosystems. Through its roadmap for development, Agenda 2063, the African continent commits to ecosystems restoration by protecting, restoring and promoting sustainable use of terrestrial ecosystems, sustainably managing forests, and combating desertification."

Image Credit: NEPAD

IBRAHIM ASSANE MAYAKI

Chief executive officer, African Union Development Agency - NEPAD

"The business landscape in Tanzania is evolving rapidly with massive digitisation opportunities on the horizon, making it the right time to focus on holistic growth and overall business development in the country."

DENNY MARANDURE

Chief executive officer for Raha Limited, Tanzania

"The pandemic clearly demonstrated multisectoral convergence, particularly agriculture, food security, public health, safety, and employment. But it is not all doom and gloom. The pandemic has provided us with an opportunity for self-reflection to rethink our development path. We should recognise this opportunity and build back better, re-examine current partnerships and aspire for genuine global solidarity and support."

JOSEFA SACKO

Commissioner for Rural Development, Blue Economy and Sustainable Environment at African Union

"The investment in decarbonising our mining operations is a systematic and responsible approach to the energy transition without introducing risk to the country's electricity generation. The collaboration amongst Exxaro, Seriti and Eskom is exemplary of the possibilities achievable through co-operative and constructive relations between business and government in securing livelihoods and a future for South Africa."

Image Credit: Exxaro

MXOLISI MGOJO

CEO of Exxaro

"All infrastructure is ultimately related, as water, energy and telecommunications are essential for growth. We also have the opportunity to ensure that our infrastructure is future-proofed and capable of ushering in a new era of growth in Africa. By 2040, we want to see a continent where every person has access to potable water, electricity and connectivity."

Image Credit: Osmotic Engineering Group

FRANK IGBOAMALU

CEO of Osmotic Engineering Group (OEG)

"We are steadily picking up momentum in the continental vaccination effort. In September, the first tranche of AVAT-purchased vaccines began rolling out to 39 countries. Now we are announcing the delivery of vaccines purchased through the Saving Lives and Livelihoods initiative. And we are working hard on the ground to get jabs in arms, which is the ultimate measure of success."

JOHN NKENGASONG

Director of the Africa Centres for Disease Control and Prevention

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

AFDB UPS FINANCIAL CONTRIBUTION IN MOZAMBIQUE TO US$2.5MN

Image Credit: Adobe Stock

The grant is earmarked for SME targeting local content and women-owned business.

The African Development Bank Group (AfDB) has approved a grant of US$1.5mn to Mozambique to boost the development of local content.
The grant is earmarked for small and medium-sized enterprises (SME) targeting local content and women-owned business in the natural resources sector of the nation.
The new approval brings the Bank's total commitment to SME development to US$2.5mn, following an announcement of a previous financial package of US$1mn in June 2021 to the Instituto para a Promoção das Pequenas e Médias Empresas (IPEME) under the Local Content Development Project for youth-led and women in business MSMEs (MOZYWEB). IPME is funded by the Youth Entrepreneurship and Innovation Multi-Donor Trust Fund (YEI MDTF).
Estevao Pale, CEO of ENH, said, "The implementation of gas projects, foreseen in the next 12 to 24 months, of the Coral Floating LNG and Area 1 (by TOTAL), in the Rovuma Basin, as well as the construction of the Central Termica de Temane (CTT) project, calls for an urgent materialisation of LINKAR's four areas of action: capacity-building, funding, technical assistance and hiring of SMEs." The CTT project is projected to generate an average of 450MW of power and the production of 30,000 tons of LPG (domestic gas), in the Inhambane Basin.
This support follows the board of directors approval of a US$400mn senior loan project in November 2019 to 'Mozambique LNG Area 1.' The loan agreement carried a recommendation to build capacity in developing local companies by specific technical assistance programs in order to create decent jobs in the country.

ENGIE COMPLETES ACQUISITION OF XINA SOLAR ONE IN SOUTH AFRICA

Image Credit: ENGIE

ENGIE will have a total installed capacity of 1,320MW in South Africa.

ENGIE has completed the acquisition of Abengoa's indirect stake in Xina Solar One (Pty) Ltd.
Following completion of the transaction, ENGIE will hold a 40% equity stake in the Xina Solar One 100MW Concentrated Solar Power (CSP) plant, as well as a 46% of the Xina Operations & Maintenance Company (Pty) Ltd.
The Xina Solar One plant, located at Pofadder in the Northern Cape, provides approximately 400GWh of clean, sustainable and dispatchable electrical energy to 95,000 South African households and prevents the emission into the atmosphere of approximately 348,000 tons of CO_2 each year.
The plant uses parabolic trough technology to generate renewable, sustainable and dispatchable power from the sun. Furthermore, this power plant features a thermal energy storage system that uses molten salts to store the necessary energy for a further 5½ hours supply, and thereby assists in meeting the South African peak demand.
With this acquisition, ENGIE will have a total installed capacity of 1,320MW in South Africa and consolidates its position as a major IPP player. The group is present in the country with around 520 employees in electricity production, engineering and energy solutions.

SAESA PARTNERS WITH ENLIT AFRICA TO SHOWCASE SECTOR'S SOLUTIONS

Image Credit: Adobe Stock

The developments in energy storage will make a difference to the efforts to achieve net zero in carbon emissions.

SAESA and Enlit Africa have announced a partnership to launch Africa's first platform for Integrated Storage and Alternative Power Solutions that will look at both renewable and energy storage solutions in a holistic manner, offering real world solutions.
This will be showcased at the next live, in-person Enlit Africa conference and exhibition in Cape Town from 7-9 June 2022.
"The developments in energy storage will make a massive difference to the efforts to achieve net zero in carbon emissions over the next period," said Jo Dean, board member and spokesperson for the South African Energy Storage Association (SAESA).
"We represent the interests of cutting-edge technology companies, which will collectively change the landscape of renewable energy and distributed generation in South Africa."
The platform showcasing Integrated Storage and Alternative Power Solutions will take a technology-agnostic approach for real-world solutions aimed at the private sector, municipalities and energy-intensive power users looking for practical, implementable, and financially viable alternatives.
In addition, there is a need to set up new regulations and standards to build confidence in this sector and reduce project risk.

ZIMBABWE TO PRIORITISE POLICIES ON VALUE CHAINS TO SPUR INDUSTRIALISATION

Image Credit: Adobe Stock

The action plan aims to accelerate industrial development and economic integration in Southern Africa.

ECA Sub-Region Office for Southern Africa has supported a two-day workshop to work with Zimbabwean experts to develop an action plan on alignment and harmonisation of regional and national frameworks on industrialisation in Zimbabwe.
The action plan is being developed as part of support under the United Nations 12th Tranche project. It aims to accelerate industrial development and economic integration in Southern Africa by enhancing the capacity of regional member States to develop and implement harmonised natural-resource based industrialisation policies, frameworks and strategies.
To anchor the development of action plans and the support to member States, SRO-SA commissioned an analytical study on Alignment and harmonisation of regional and national frameworks on Industrialisation, and National Domestication of Regional Strategies and Policies to support Industrial Development in Southern Africa, focusing on Malawi, Zambia and Zimbabwe.
Oliver Maponga, ECA economic affairs officer presented the overall objectives of the workshop which were to finalise the recommendations of the study and develop an implementation plan with specific deliverables and nominated champions. The experts reviewed the recommendations from the study and proposed an implementation plan to address gaps identified in the study.

Setting Nigeria on a resilient recovery

Moin Siddiqi examines the new key pillars of Nigeria's development strategy which could help the country recover in a post-pandemic world.

Nigeria's private sector has long struggled from infrastructure bottlenecks; anti-competitive trade practices such as price regulation and dominance of big firms in some industries; red tape related to small, and medium-sized enterprises, including multiple taxation and limited financial inclusion; among other obstacles. Agriculture, energy, transport, value-added manufacturing and the digital economy could be the new pillars of Nigeria's development strategy. Channelling resources to these sectors would help to 'build forward better' a more robust economy that reflects the nation's capabilities.

The Covid-19 downturn and volatile oil markets provide a challenge for Nigeria to re-examine industrial policies and foster a diversified private sector-led economy. The path Nigeria chooses now will have far-reaching impacts over coming decades. The International Monetary Fund (IMF) estimates that concerted structural reforms in the fuel and power sectors and currency regime, as well as better governance and business regulations (notably reducing protectionism) could lift GDP growth to 4% over the medium-term.

Challenges and Opportunities

***Economic diversification:** Nigeria's export structure has not fundamentally changed since the 1970s, with oil & gas still accounting for 90% of total exports (Table 1). Successful diversification requires trade openness and competition policies - i.e., shifting towards 'export-oriented' industrialisation. Modest gains over decades from 'inward-oriented' policies in terms of low non-oil growth suggest that a new industrial strategy is needed. The import substitution policies have stifled competition – thereby making Nigeria a less attractive foreign direct investment (FDI) destination.

The IMF noted weak institutions and lack of collective knowhow are key obstacles to Nigeria's diversification drive. Policies should steer factors of production in technologically sophisticated industries and encourage fair competition in domestic markets.

***Sufficient power supply:** Lack of reliable power stifles economic activity – costing US$25bn per year (World Bank estimated). According to Sustainable Development Goal (SDG)-7 report, 85 million Nigerians lack access to electricity. To achieve universal access to electricity by 2030, Nigeria needs to connect 500,000 to 800,000 households per year. The renewable energy sector is a key growth area as Nigeria starts to exploit vast solar PV potential. The average amount of sunshine hours across Nigeria is estimated at 6.5 hours, which gives an average annual solar energy intensity of 1,934.5-kilowatt hour (kWh/m2/year). Industry experts estimated an average of 1,770 TW h/year of solar power falls on Nigeria's entire landscape.

***Present currency regime:** This creates uncertainties due to fragmented exchange rates: Lagos parallel rate and investors and exporters window rate, plus non-transparent rules for forex allocation. Recent measures are encouraging, such as the removal of official exchange rate from the Central Bank Nigeria (CBN) website, but further reforms are needed to achieve a fully unified/market-clearing rate. Policy clarity would attract larger capital inflows, including (FDI), which have dropped significantly in recent years (Table 2).

A realistically valued Naira and a clear currency policy would also foster domestic industrialisation than through a system of forex rationing where relative prices do not move.

***Strong demographics:** To absorb swelling influx of young people entering the labour market, Nigeria needs to create at least five million new jobs per year over the next decade compared to nearly two million job losses per year on average during the past five years. This demands robust growth relying on labour-intensive services sectors. These policies can also increase FDI inflows along with productivity and employment gains. Investing in education, vocational training and health will help nurture a more productive workforce.

***Downstream petroleum sector:** Increasing the sophistication of the hydrocarbons industry and producing 'value-added' oil products would enhance Nigeria's

Table 1: Nigeria Oil Dependence (% share of Oil in Total) (2010-19 average)

Gross Domestic Product	
Oil & Gas	11
Hydrocarbons-related	
Industries	30-35
Exports	93
FGN revenue	48
Banking-sector loans	
(2015-19 avg)	29
Revenue of Public-listed Companies	
Oil & Gas	23-41
Hydrocarbons-related	44-58

Sources: National Bureau of Statistics, World Bank, IMF and World Investment Reports.

Table 2: Nigeria Economic & Financial Data Summary

			Projections		
	2018	2019	2020	2021	2022
Real GDP Growth (% yr-yr)	1.9	2.2	-1.8	2.6	4.2
Average Growth in Sub-Saharan Africa	3.3	3.1	-1.7	3.7	4.0
Non-oil GDP Growth (% yr-yr)	2.0	2.1	-1.3	2.4	2.2
Inflation (% average)	12.1	11.4	13.2	16.0	13.0
Overall Fiscal Balance (% GDP)	-4.3	-4.7	-5.8	-6.1	-6.0
Net Public Debt (% GDP)	27.7	29.2	35.0	35.7	36.9
Net Foreign Direct Investment (US$mn)	6,401	3,299	2,700		
Exports of Goods & Services (US$bn)	66.0	69.9	40.0	36.1	
Current Account Balance (% GDP)	1.5	-3.3	-4.0	-3.2	-2.2
External Official Forex Reserves (US$bn)	43.1	38.6	36.0	40.39*	

**As of 18 October 2021 (Central Bank Nigeria data).*

Note: The economy has started to gradually recover supported by services and agriculture sectors but inflation and budget deficit remain high. A large share of government revenue is spent on public debt service payments. Strong pressures on the balance-of-payments expected to abate with upturns in oil prices and remittance flows. Nigeria is the largest recipient of private remittances in SSA.

Sources: National Bureau of Statistics, World Bank, IMF and World Investment Reports.

comparative advantage. But Africa's biggest producer is a major importer of refined oil products – eating into forex reserves. This should change as the Dangote refinery (due online 2022) will meet Nigeria's full liquids consumption – thereby improving the balance of payments.

The complex will have an annual refining capacity of 10.4mn tonnes (Mt) of Euro-V quality gasoline, 4.6Mt of diesel and 4Mt of jet fuel. It will also produce 0.69Mt of polypropylene, 0.24Mt propane, 32,000Mt of sulphur and 0.5Mt of carbon black feed – making it the world's biggest single-train facility. It is expected to generate 4,000 direct and 145,000 indirect jobs.

***Non-oil sectors:** Nigeria boasts one of the world's largest 'untapped' mineral resources (see Facts and Figures), thus attracting foreign investment and expertise is key to developing the mining sector. It is an African leader in terms of farm output, exporting cocoa, peanuts, rubber and palm oil, among other soft commodities. Productivity gains in the agriculture sector demand addressing challenges, including the outdated land tenure system, mechanisation, irrigation, seeds, procurement, distribution, storage, access to market, and the adoption of research and technologies.

***Advanced technologies:** Encouraging digitalisation in strategic industries and government services holds large potential for economic gains. Wireless telecommunication enables firms to build business in e-commerce and fintech areas, whilst ensuring more efficient delivery of public services. Nigeria has a young dynamic population, hence investing in information and communications technologies can build human capital and boost jobs.

***The African Continental Free Trade Area:** This holds promises for job-rich growth through regional trade and economic integration. Enhancing trade facilitation and easing trade policy red tape, such as expediting customs clearing time, and removing import bans and non-tariff barriers, are critical to boosting intra-regional trade.

***More revenue mobilisation:** Nigeria has Africa's lowest tax-to-GDP ratio of just 4% (one-third of regional average). The Covid-related downturn and plunging 2020 oil prices exhibited the importance of 'non-oil' revenues to sustain public services in tough times. There is scope for revenue-yielding measures such as charging fees for electronic money transfers; rationalising tax expenditures; removing loopholes in tax laws (customs duty waivers) and improving tax compliance; enhancing digital infrastructure; and upgrading on-time filing and payment.

According to the IMF, Nigeria could raise tax-to-GDP ratio to 7%, bringing an additional N10 trillion (approximated US$24bn) over the next three years though fairer efficient tax systems. World Bank estimates with right reforms, Nigeria's tax-to-GDP ratio could be comparable to Ghana (12%) and Kenya at (15%).

Quest for higher prosperity

Nigeria is at a critical juncture facing declining per capita income, double-digit inflation, fiscal vulnerabilities and limited buffers. Real GDP should recover to pre-pandemic trends by 2022. However, despite stiff challenges, Africa's No.1 economy accounts for more than one-fifth of sub-Saharan Africa's household consumption and 15% of manufacturing output. A booming middle-class population, strong demographics, large tracks (60%) of uncultivated arable land and plentiful raw materials for heavy industries make Nigeria a worthy recipient of foreign and domestic investment. Technological change is accelerating and e-commerce revenue in Nigeria has doubled each year since 2010.

Strong institutions are a prerequisite to ensure the successful pursuit of reforms, thus capitalising on output potential. A healthier Nigeria is vital for the Economic Community of West African States (ECOWAS) in terms of intra-regional trade. As global business recovers and transnational corporations plan their next expansion, Africa's largest economy offers viable opportunities in several key sectors. ■

Nigeria needs to create at least five million new jobs per year over the next decade.

Image Credit: Adobe Stock

NIGERA: FACTS AND FIGURES

Federal Capital: Abuja
Commercial Capital: Lagos
Population: 206.14 million in 2021 – the largest in Africa
Population forecast: 263 million by 2030 (International Energy Agency)
Nominal GDP: US$514.05bn 2021 (Statista.com) – Africa's biggest economy
Real non-oil GDP growth: 4.7% (annual average) 2010-19 (IMF)
GDP composition (% share 2020): Agriculture 24.4; Oil industry 6.7; Non-oil industry 21.9; Services 47% (World Bank)
Gross Capital Formation: 26% of GDP, 2019 (World Bank)
FDI Inward Stock: US$98.62bn in 2019 (World Investment Report UNCTAD) – second largest after South Africa
Labour Force: 63.2 million in 2019 (World Bank)
Sovereign Credit Ratings: Fitch (B); Moody's (B2); Standard & Poor's (B-) – long-term foreign debt rating
Market Capitalisation: US$56.57bn in 2020; Listed-companies: 177 (Nigeria Stock Exchange)
Top-five Stocks 2019: MTN Nigeria Communications Plc; Dangote Cement Plc; Nestle Nigeria Plc; Guaranty Trust Bank Plc; Zenith Bank Plc
The Banking-sector: Remains liquid and well-capitalised
Manufacturing Value-added: US$38.32bn 2018 (World Bank) – Nigeria aims to double manufacturing output to 20% of GDP by 2025
Power-generation (2020 installed capacity): 12,500 megawatts – dominated by natural gas (88%) with hydro and oil comprising the rest
Proved Hydrocarbons-resources (2020): Crude oil 36.9bn barrels – Africa's second-largest after Libya; Natural gas 193.3 trillion cubic feet – Africa's largest
Solid Mineral-deposits: Columbite, gemstones, tantalite, talc, rock salt, granite, tin, iron ore, uranium, limestone, lead, zinc, gold, coal, marble, bentonite & baryte, bitumen and gypsum.
Mobile cellular, subscriptions per 100 people: 99.1 (World Bank)

Supporting the next frontier

Elise Donovan, CEO of BVI Finance, discusses why the world's leading economies are pivoting towards Africa and how the BVI can support the continent to achieve its potential.

Elise Donovan, CEO of BVI Finance.

African Review: What excites you most about Africa right now?

Elise Donovan: Africa is unquestionably the next frontier. It has many attributes that are causing the world's leading economies to pivot to the continent to explore investment opportunities. What is happening now and the potential for the future is itself cause for major excitement.

Africa is abundant with vast untapped resources – gold, diamond, platinum, iron, chrome, oil, gas, bauxite, copper, coal, uranium, and agriculture. But, perhaps the most exciting resource is the dynamic, energetic, creative, and innovative young Africans who are leading the continent into the future – they will determine what happens in all sectors.

AR: How will the African Continental Free Trade Agreement (AfCFTA) benefit economic development?

ED: The AfCFTA creates the world's largest free trade bloc, bringing together a collective GDP of US$3.2 trillion that is expected to catapult the economies of the continent and enhance its long-term growth and development. The United Nations Economic Commission for Africa estimates that the AfCFTA will boost intra-African trade by 52% by 2022. In turn, this will create tremendous opportunities to attract more foreign direct investment in the continent.

> "What is happening now and the potential for the future is itself cause for excitement."

AR: How can the BVI help facilitate foreign direct investment (FDI) into Africa?

ED: For the AfCFTA to succeed and for the continent to realise its potential, it needs to continue to secure international development finance, particularly into its financial and infrastructure sectors. Much of that finance will come through FDI which, is often mediated through International Finance Centres (IFCs) like the BVI. In fact, flows through FDIs into Africa rose 11% annually to US$46bn in 2018, according to the United Nations Conference on Trade and Development, World Investment Report 2019.

30% of international investment is mediated through IFCs, such as the BVI. IFCs have a crucial role to play in mobilising finance, as they can provide secure jurisdictions, fund structuring and tax neutrality for both private investors and public–private co-financing.

Based on independent research produced by ODI in 2019, IFCs such as the BVI were estimated to galvanise additional finance to developing countries of US$1.6 trillion between 2007 and 2014, boosting their GDP by US$400bn and tax revenues by US$100bn during that period.

The BVI specialises in creating neutral platforms to facilitate cross-border trade, investment and finance and can play an integral role in the development of AfCFTA and the continent. By creating effective vehicles for joint-ventures, the BVI brings parties together to participate and invest in economic opportunities in the continent.

AR: What are the advantages of using the BVI for cross border trade?

ED: The BVI provides tax neutrality in that there are no taxes or duties assessed in the BVI on a BVI company or its international investor. This, of course, does not negate the tax liabilities of companies where they conduct business or of investors in where they are tax resident or otherwise liable to pay taxes.

The BVI also provides jurisdictional neutrality, where neither jurisdiction in a joint venture gains special advantage by being governed under its own laws. The BVI provides a very effective third jurisdiction in which neither of the principal parties will have particular advantage.

The BVI also functions as a conduit for development finance in the continent. This is bringing together investors from different jurisdictions, pooling their resources and collectively investing in deploying funds in businesses and countries within the continent.

AR: How does the BVI help protect both African businesses and international investors?

ED: One of the best ways to mitigate risks in international business is to have the most effective and efficient corporate structure governing the business. The BVI Business Company and the BVI Company Law, based on English common law, receives top billing for its flexibility and protection by sophisticated investors, lawyers, bankers, accountants, lenders, compliance professionals and regulators.

The BVI has an impressive dispute resolution regime and is home to a well-regarded and renowned commercial court backed by a robust legal framework. The court system has distinguished independent judges, and it deals with matters expeditiously, economically, and proportionately. Its highest court of appeal is the London Privy Council.

The BVI also has a leading International Arbitration Centre, which has developed a strong reputation for alternative dispute resolution.

AR: Do you see BVI as being a big part of Africa's development going forward?

ED: The BVI innately understands both the challenges and the opportunities faced by public and private enterprises in Africa. We are ready to lend our expertise and the attributes of our world-renowned IFC to not only facilitate international investment into Africa, but also to stimulate home-grown businesses and entrepreneurs by offering them a stable and secure platform for their wealth and assets.

The ability to incorporate entities in the BVI, and the expertise we offer around trusts, investment funds and joint partnership agreements make our jurisdiction the perfect international partner for investment into and out of Africa. There are challenges ahead, but there are tremendous opportunities for Africa and for the BVI to fulfil our long-term potential for mutual prosperity. ■

SSA economy on a steady recovery path

Moin Siddiqi reports on the growth of the sub-Saharan economy, which is recovering following the 2020 regional downturn.

Soaring metal prices and food commodities have surpassed pre-pandemic levels.

Image Credit: Adobe Stock

The International Monetary Fund (IMF) has estimated the sub-Saharan Africa (SSA) economy grew at 3.7% in 2021 (following the 2020 regional downturn) led by expansion in industry and services, but still experienced weaker growth in gross fixed investment.

A strong recovery in global trade and surging commodity prices have revived growth in mining and export-oriented sectors.

In 2021, only Angola, the Central Africa Republic and the Republic of Congo; were in recession, i.e., negative GDP growth compared to 2020 (see Table).

Soaring metal prices (copper, cobalt, lead, manganese, nickel, zinc) and food commodities (coffee, sugar, wheat) have surpassed pre-pandemic levels. While oil prices are buoyant with demand rising faster than supply, but output (especially in West Africa) remains low. Rystad Energy projects West Africa crude production at 3.39mnbpd this year, down from 4.12mnbpd and 3.71mnbpd, respectively, in 2019 and 2020. Weak jet fuel demand, reduced investment and security issues have affected mostly the two largest producers (Nigeria and Angola).

Robust rebound in developing Asia (led by China) and most advanced (OECD) economies revived Africa's key exports, foreign direct investment (FDI) and remittance inflows. FDI (which fell to US$30bn) in 2020, is expected to grow modestly in 2021-22, thanks to higher commodity demand, approval of priority infrastructure projects, and the finalisation of the African Continental Free Trade Area's (ACFTA) Sustainable Investment Protocol. Regional remittances are expected to grow by 2.6% in 2021 after falling by 13.4% in 2020 (IMF data).

> "A strong recovery in global trade and surging commodity prices have revived growth in mining and export-oriented sectors."

The Covid-19 downturn highlighted the region's debt vulnerabilities with several countries reporting a steep increase in public debt, related to GDP (see Graph). Increasing reliance on commercial funding has raised the exposure of SSA frontier markets to interest rate, exchange rate, and rollover risks. As of Sep 2021, SSA-countries have raised US$13.2bn in Eurobonds (IMF data) – compared to US$5.9bn raised throughout 2020 - but costs remain higher than previous years.

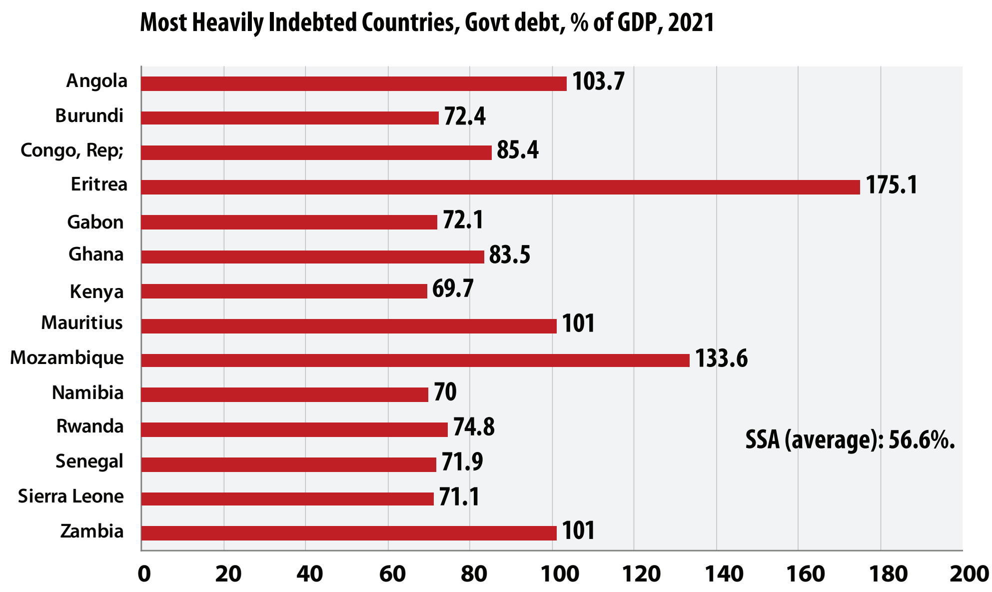
The 2021 recovery masks noticeable diversity across country groups. Growth projections for oil-exporters are 2.2% due to lower forecast for Angola; non-oil resource-intensive countries (4.7%), reflecting elevated metal prices; and non-resource-intensive countries (4.1%) mainly due to anaemic growth in Ethiopia. While for tourism-dependent countries (Cabo Verde, Comoros, The Gambia, Mauritius, São Tomé and Príncipe, Seychelles) – where travel/tourism constitute 18% of GDP on average – growth is expected at 4.5% or higher.

On downside risk, the vaccine rollout in SSA has been the slowest in the world, leaving the region vulnerable to repeated waves of Covid-19.

External positions are expected to improve in resource-rich countries underpinned by rising commodity prices, although widening among non-resource countries. Last August, the Board of Governors of the IMF approved a general allocation of Special Drawing Rights (SDR) US$650bn to boost global liquidity. Of this amount, around US$24bn was allocated to SSA countries (3.7% of total) – major beneficiaries are Angola, Congo, DRC, Ghana, Nigeria, South Africa, Zambia, Cote d'Ivoire and Sudan.

Updates on Major SSA countries

- Nigeria's economy (Africa's largest) will grow by 2.6% in 2021, led by recovery in non-oil sectors and higher oil prices, even though crude production still remains below pre-Covid-19 levels. The IMF expects growth at under 3% level over the medium term, allowing GDP per capita to stabilise at current levels, notwithstanding deep-rooted structural problems and elevated uncertainties.
- South Africa is expected to grow by 5% in 2021, reflecting faster first half recovery and strong base effects from 2020 to its national accounts. Economic activity faltered in the second half due to the June lockdown and social unrest in some provinces which caused an estimated R50bn losses. The pace of structural reforms to labour and product markets is likely to remain sluggish – with real GDP growth slowing to 2.2% in 2022.
- Angola remains in prolonged recession, with elevated debt levels and rising inflation. The economy is expected to contract by 0.7% in 2021 – fifth consecutive year of recession – before returning to positive 2.4% growth in 2022 fuelled by higher oil prices. Its petroleum sector is affected by falling investments in new greenfield projects and recurring technical problems. The non-oil sector will remain the key driver of economic growth, with commerce and agriculture likely to recover to above pre-pandemic levels in 2022-23.
- Economic activity in Kenya is projected to rebound from -0.3% growth in 2020 to 5.6% this year. The World Bank expects real GDP to grow at an average of 4.8% in 2022–23. This positive outlook reflects improvements in the construction, education, information and communication, and real estate sectors.
- Ghana is projected to register growth of, respectively, 4.7% and 6.2% in 2021 and 2022, underpinned by higher demand for its exports – mainly in the agriculture and industrial sectors. The economy proved quite resilient despite the outbreak of the Delta variant, thanks to fiscal support to businesses. Ghana received the equivalent of US$1bn from the IMF, part of which was allocated for the Covid-19 Action Recovery and Economic Stimulus (CARES) programme.
- Côte d'Ivoire – largest member of the West Africa Economic Monetary Union (WAEMU) – is projected to expand at 6% and 6.5% in 2021 and 2022, respectively. The forecast reflects an increase in (public and private) investment, partly reflecting the political normalisation after peaceful and inclusive legislative elections, and ongoing efforts in the national reconciliation.
- Ethiopia's decade of expansion averaging 9.3%/year (2011-20) plunged to just 2% this year. The Tigray conflict and slow pace of vaccination casts uncertainty over the 2022 growth outlook. The country, however, undertook business-friendly reforms, chiefly liberalising the telecoms sector, which should attract more FDI contingent. ■



Source: IMF database

Real GDP growth (annual percent change)

	2020	2021
Angola	-5.4	-0.7
Botswana	-8.5	9.2
Burkina Faso	1.9	6.7
Cameroon	-1.5	3.6
Congo, DRC	1.7	4.9
Congo, Rep;	-8.2	-0.2
Cote d'Ivoire	2.0	6.0
Equatorial Guinea	-4.9	4.1
Ethiopia	6.1	2.0
Gabon	-1.8	1.5
Ghana	0.4	4.7
Guinea	7.1	5.2
Kenya	-0.3	5.6
Mali	-1.6	4.0
Mauritius	-14.9	5.0
Mozambique	-1.2	2.5
Namibia	-8.8	1.3
Niger	3.6	5.4
Nigeria	-1.8	2.6
Rwanda	-3.4	5.1
Senegal	1.5	4.7
Sierra Leone	-2.2	3.2
South Africa	-6.4	5.0
Tanzania	4.8	4.0
Uganda	-0.8	4.7
Zambia	-3.0	1.0
Zimbabwe	-4.1	5.1

Source: IMF database.

Supporting Africa's post-pandemic growth

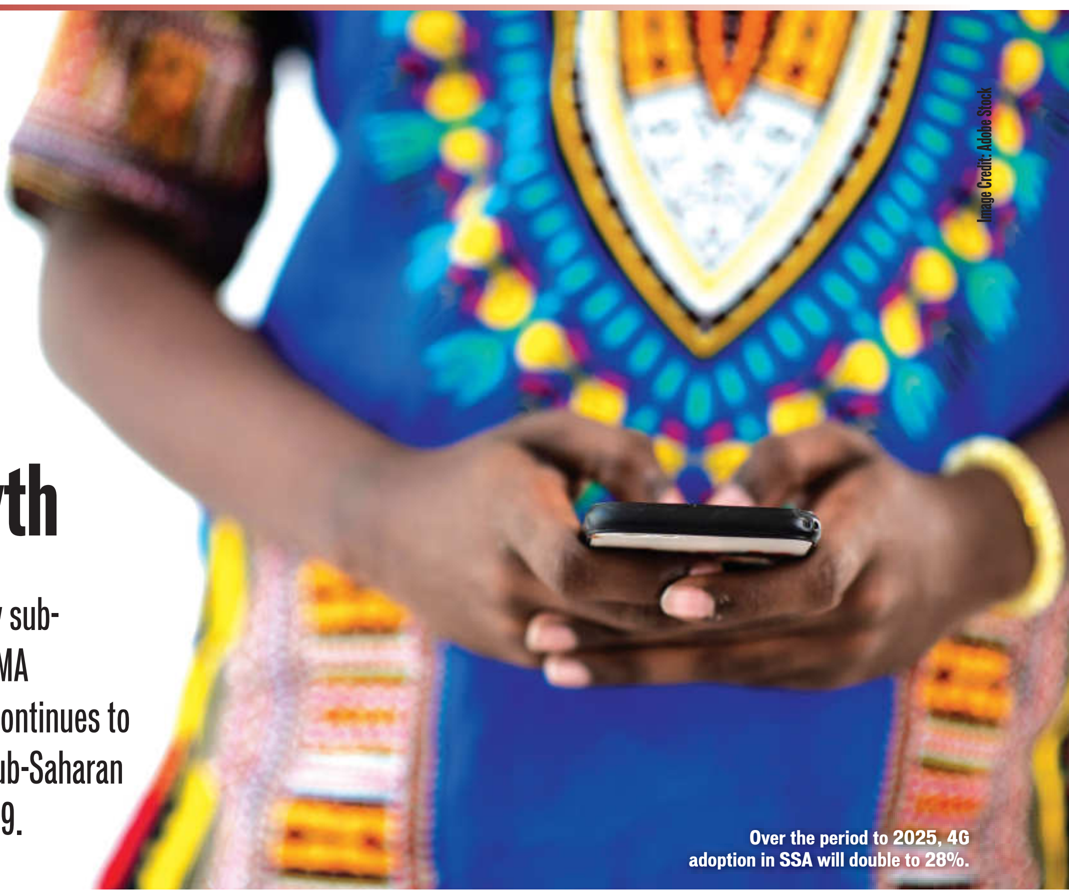


Image Credit: Adobe Stock

Over the period to 2025, 4G adoption in SSA will double to 28%.

According to 'The Mobile Economy sub-Saharan Africa 2021' report by GSMA Intelligence, the mobile industry continues to play a crucial role in supporting sub-Saharan Africa's (SSA) response to Covid-19.

GSMA Intelligence, a definitive source of global mobile operator data, analysis and forecasts, has published the report on the mobile economy in sub-Saharan Africa to analyse the region's mobile market and showcase its critical contribution to the population's welfare.

Supporting Covid-19 response and recovery

According to the report, the mobile industry in SSA is continuing to play a key role in the response to Covid-19, and mobile networks are becoming a lifeline for society and businesses during this time. The utility of mobile technology during this time is reflected in the significant increase in the adoption and use of mobile services since the start of the pandemic, particularly mobile data and mobile money. GSMA predicts that mobile technology will become even more integral to people's lives and business operations as economies continue to recover and restrictions ease.

The rise of 4G

4G adoption in SSA remained sluggish in the latter part of the last decade, despite 4G networks covering half the population, but this is beginning to change as pandemic-driven demand for better connectivity and improved affordability of 4G smartphones (mainly due to innovative financing solutions) is driving uptake.

The growth of 4G in the region appears to be at the expense of 3G, with adoption set to peak by 2023. Over the period to 2025, 4G adoption in SSA will double to 28% (which is still relatively low compared to the global average of 57%).

As of June 2021, there were seven commercial 5G networks in five markets across SSA. GSMA predicts that 5G will play an important role in the future digital landscape, enabling advanced connectivity solutions for the consumer and enterprise segments. However, the immediate focus of the industry will continue to be on 4G, and by the end of 2025, 5G will account for just 3% of total mobile connections in the region.

Youth drive growth

By the end of 2020, 495 million people subscribed to mobile services in SSA, representing 46% of the region's population. This was an increase of almost 20 million compared to 2019. With more than 40% of the region's population under the age of 15, young consumers will remain the primary source of growth for the foreseeable future.

According to the report, there will be around 120 million new subscribers by 2025, taking the total number of subscribers to 615 million (50% of the region's population). At the end of 2020, 303 million people across SSA were connected to the mobile internet, equivalent to 28% of the population. By 2025, more than 170 million people across the region will have started using mobile internet for the first time, taking the penetration rate to just under 40% of the population.

Sustaining economic growth

In 2020, mobile technologies and services generated more than US$130bn of economic value added (8% of GDP) in SSA. This will increase to US$155bn by 2025, as countries increasingly benefit from the improvements in productivity and efficiency brought about by the increased take-up of mobile services.

In April 2021, the mobile sector was credited by the United Nations (UN) for achieving a critical breakthrough towards its mission of combatting climate change. Being the first major sector to achieve the rigorous criteria set by the UN's Race to Zero campaign demonstrates the commitment and leadership of mobile operators in the drive to meet the goals of the Paris Agreement.

The continued rollout of 4G and the first stages of the 5G era open up opportunities in areas such as healthcare, digital commerce, industrial automation and smart city infrastructure. Realising this potential requires policy measures to support network investments and improve the affordability of digital services for consumers. The GSMA report therefore advises governments and regulators in the region should therefore adopt forward-looking spectrum management and fiscal policies, including:

- creating a spectrum roadmap to ensure there is enough spectrum to meet surging demand for mobile services in both the short and long term
- ensuring access to mid-band spectrum, in particular 3.5 GHz, given its importance to the future of 5G
- accelerating access to sub-1 GHz spectrum to provide widespread rural mobile broadband services
- applying best-practice principles of taxation as recommended by international organisations such as the World Bank and the IMF. ■

East Africa's sea freight ebb and flow

East Africa's largest economies are bolstering port facilities in order to handle and further encourage growing sea freight into the region. Tim Guest reports.

Sea freight routes from China, India and Japan are the most active and growing passages for container shipping into East Africa and particularly the region's largest economy, Kenya.

Image Credit: Rinson Chory/Unsplash

Sea freight routes from China, India and Japan are the most active and growing passages for container shipping into East Africa and particularly the region's largest economy, Kenya, with more than a third of all sea freight imports into the country coming from China alone. These Indo-Pacific routes and sources of goods are crucial for economies in East Africa.

They are not, however, alone in their importance for the prosperity and economic progress of the region. Sea freight into Kenya from neighbouring Tanzania and southern giant, South Africa, is also crucial. But these sea routes also carry Kenya's exports overseas, with agricultural vegetable products, including tea and coffee, forming a large proportion of these on-the-move commodities.

Indeed, this sea-freight traffic into and out of Kenya accounts for a large percentage of all the continent's seaborne imports and exports, which, considering African countries own no more than around 1% of global shipping fleets, sea freight logistics is a huge divested responsibility and lost opportunity for the whole continent.

A long-standing set of challenges, however, may play a part and include cargo theft, poor road and rail infrastructure to and from various ports, as well as weak port infrastructure itself.

Yet, major projects are improving some of these, often underpinned by overseas finance, particularly from China, as well as public-private partnerships (PPPs).

> "Lamu Port has the potential to become a premier trans-shipment hub for all cargo destined for the continent."
>
> **UHURU KENYATTA, PRESIDENT OF KENYA**

Kenya's second big port

One such project, recently opened with at least one berth operational, is Lamu Port.

According to Kenya Ports Authority (KPA), the new port will be a major link in the Lamu Port-South Sudan-Ethiopia Transport (LAPSSET) corridor project. This will connect Kenya to South Sudan and Ethiopia and is also expected to link northern Kenya to the Middle Belt of Africa, which runs from Dakar, Senegal in the west to Lamu in the east.

Kenya's President, Uhuru Kenyatta, was present at the commissioning of Lamu's first berth in late May, when the port received its first two container vessels: the MV Cap Carmel was the first vessel to enter the new facility, followed by MV Seago Bremerhaven.

After cargo was offloaded from the two container ships, President Kenyatta said that the "operationalisation" of the port marked an important milestone towards transforming regional economies through increased trade, integration, and inter-connectivity; a key objective of the country's Vision 2030.

"With one of the deep-water harbours on the east coast of Africa, Lamu Port has the potential to become a premier trans-shipment hub for all cargo destined for the continent," President Kenyatta said. "Furthermore, Lamu now joins Mombasa Port as being a key entry and exit point of cargo, deep into and out of Africa's hinterland."

He added that Lamu Port is strategically located at the middle of major shipping routes, and will enable Kenya to realise “long-cherished goals” of opening northern Kenya to international trade, fortifying the country's position as a major gateway to Africa, and harnessing the economic potential of this historically under-served region.

The port is eventually expected to have a total of 23 modern berths, each with a 400 metre quay, a 17.5 metre depth and capable of accommodating Panamax and new Panamax vessels with a capacity of over 10,000 TEUs. However, since the opening, only five vessels have used the port, due to a lack of onshore cargo-handling equipment, and requests for further US$157mn funding were issued by KPA in September to ease this problem and complete work on berths two and three (Phase 1). This was originally due by October, although yet to complete.

Sixteen berths: three bulk, three container, six general cargo, one liquid bulk, one coal, one LNG and one product oil, are planned in Phase 2 of the project, with the final phase involving the construction of four berths comprising one container and three general cargo berths.

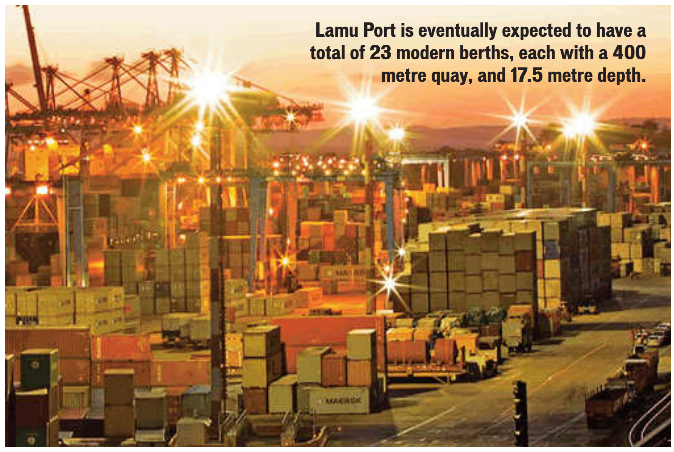

Lamu Port is eventually expected to have a total of 23 modern berths, each with a 400 metre quay, and 17.5 metre depth.

Image Credit: Kenya Ports Authority

> “Lamu Port will enable Kenya to realise long-cherished goals of opening northern Kenya to international trade, fortifying the country’s position as a major gateway to Africa.”

Private investors under PPPs are expected to support the remaining phases.

Enormous potential

The potential for Lamu Port to handle line operators and shipping companies such as Maersk, MOL, Luna Shipping, EON Logistics and their 10,000-TEU vessels is real, but financial challenges remain.

Construction of the first three berths has been conducted by China Communications Construction Company at a cost of some US$367mn; exactly how the remainder of the project proceeds is one to watch, as its importance to the whole region – as well as its understated geo-strategic potential to China – is enormous. ■

Maersk to form joint venture in South Africa

A.P. Moller Maersk has partnered with Grindrod Limited to provide logistics solutions in a bid to enhance its capabilities as a global integrator of logistics in South Africa.

As part of the venture, the logistics activities of Grindrod Intermodal business and the ocean activities of Ocean Africa Container Lines (OACL) will support Maersk’s ocean capability and logistics & services in order to provide customers seamless access to a wider range of end-to-end supply chain solutions.

Bringing together logistics operations skills and capabilities under this new proposed joint venture will create a base for growth and enable Maersk to excel in the logistics and services products execution through better serving customers via intermodal solutions in trucking, rail, depots, warehousing, and ocean feedering.


Maersk will hold a 51% share in the proposed joint venture.

Image Credit: Adobe Stock

“Grindrod has been working with Maersk for many years in an area that both organisations are passionate about, understanding our customers’ requirements and finding cost effective and efficient routes to market. Our combined service offering will provide further flexibility and will ultimately contribute to making a positive difference in South Africa’s trade with the world,” commented Xolani Mbambo, CEO of Grindrod Freight Services.

Jonathan Horn, Maersk southern Africa and islands area managing director, added, “We are looking forward to partnering with Grindrod in this proposed joint venture, so that we can offer our customers even better value and true end-to-end integrated logistics solutions in South Africa. We will have a far greater ability to seamlessly integrate solutions between ocean and the landside whilst weaving into our organisation an increased capability and experience through colleagues from Grindrod, which has long held a strong reputation in the landside logistics space.”

Wärtsilä hits Africa milestone

Since beginning African operations in 1975, Wärtsilä has delivered more than 600 installations and supplied power plants in 46 countries; generating 25% of the national electricity supply in more than 25 countries. Total installed capacity now exceeds 7GW of which one-third is covered by operation and maintenance contracts.

With more than 650 employees and service hubs located in Kenya, South Africa, and Senegal, Wärtsilä has contributed to many industry firsts. These include Africa's largest gas engine power plant on the Kribi coast of Cameroon with 216MW capacity, as well as Africa's highest installation, the 175MW power plant in Sasolburg, South Africa, sitting at 1,700 metres above sea level.

Another first, the KivuWatt power plant in Rwanda, is the first ever power plant to use the naturally occurring methane from lake Kivu to generate electricity and reduce the environmental risks associated with such high concentrations of gas. Today's power output is 25MW but future planned expansions to this project will increase capacity by an additional 75MW.

Wärtsilä is committed to accelerate broad-based electrification across Africa as demonstrated by recent contracts such as the 120MW power plant project in Gabon and the 90MW gas conversion project in Senegal.

Image Credit: Wärtsilä

Wärtsilä is committed to accelerate broad-based electrification across Africa

SOUTH AFRICA ORDER FOR AZELIO

Azelio has received an order for eight units with 1.3MWh clean electricity supply of its long duration energy storage, TES.POD, from South Africa-based farming company Wee Bee Ltd, a mixed farming company with annual energy consumption of around 1.9GWh. The order has a value of approximately US$1.2mn over 15 years including expected price increases.

Azelio's TES.POD system in combination with solar PV will reduce annual CO_2 emission by 323 tonnes compared to the grid, as well as securing energy supply around the clock. The system is planned for delivery by end of 2021 and the installation start up and commissioning will be carried out by Azelio in collaboration with its partner Alec Energy.

With an energy demand for day and night operations, reliable and cost-effective energy supply is of great importance for Wee Bee. The current grid connection that is unreliable, expensive and fossil-based and so Azelio's long duration energy storage TES.POD will make a difference in reducing energy related CO_2 emissions and securing energy supply around the clock together with solar PV.

"It is important for the farming community in South Africa to gain access to affordable and reliable energy to ensure their facilities can operate as effectively as possible. Our TES.POD system will secure clean power for around the clock energy supply to Wee Bee Ltd.'s farming activities, while allowing them to focus their strategy and capital on farming activities and not energy related issues," said Jonas Eklind, CEO of Azelio.

Afreximbank pens debt financing for the Geometric Power IPP Power Project

African Export-Import Bank (Afreximbank) has signed a US$50mn term loan facility with Geometric Power Limited in connection with the Aba Integrated Power Project in Nigeria.

The facility provided by Afreximbank to Geometric Power Limited will finance the initial capital required to acquire rights to the Aba Ring Fenced Area. It will also support the completion of remaining works, and the commissioning and commencement of operations of the Aba Integrated Power Project in southeastern Nigeria.

Image Credit: Afreximbank

The deal was signed during the second Intra-African Trade Fair 2021.

The Aba Integrated Power Project is a fully integrated generation and distribution utility located in Osisioma, Aba, Abia State, in Nigeria comprising a gas-fired embedded power plant with General Electric Gas Turbines, with an initial capacity of 141MW, to be upgraded to its licensed 188MW capacity.

Prof Benedict Oramah, president of Afreximbank, commented, "Afreximbank is proud to be part of this great milestone achievement by having resolved this recapitalisation and financing. In line with the Bank's Fifth Strategic Plan and in particular the strategic pillars related to financing, industrialisation and export development, the commissioning of the Aba Integrated Power Project embodies Afreximbank's objectives in many dimensions and could possibly be a tipping point towards the industrialisation of Nigeria through stable power supply."

Bart Nnaji, chairman and CEO of Geometric, added, "The Aba IPP will supply electricity to over two million people and more than 300,000 electricity customers including small, medium and large enterprises, thereby directly touching many lives in southern part of Nigeria, with a ripple effect on the value chain across the nation.

"Being one of the only 24hr reliable power supplier, Aba IPP will revive moribund industries, power the Enyimba Economic City as well as markets such as the famous Ariaria International Market that harbours entrepreneurs mostly involved in the export value chain."

The deal was signed during the second Intra-African Trade Fair (IATF 2021).

AFDB EXPLORES OFFSHORE POTENTIAL

The African Development Bank's (AfDB) African Natural Resources Centre and the Sustainable Energy Fund for Africa has hosted the first in a series of webinars discussing the potential of Africa's blue economy. The webinar centred around a study on the potential of offshore renewable energy in Africa.

Leontine Kanziemo, advisor on Natural Resources Management at the African Natural Resources Centre, said, "Offshore renewable energy can considerably support the expansion of renewable energy capacity, for coastal and island countries, while helping to lower the energy costs associated with importing fossil fuels."

Ong Seng, CEO at Urban Cooling, commented, "Financial institutions like the AfDB and other green energy funds should work with authorities in Africa and the small island development states to mobilise concessional finance to implement seawater air conditioning projects in their mitigation and adaptation efforts to combat the adverse effects of climate change and reduce dependence on fossil fuels."

AVEVA PARTNERS HELIOS IOT SYSTEMS

AVEVA, a global leader in industrial software, driving digital transformation and sustainability, has announced that it has signed a technology partnership with Helios IoT Systems, a specialised company with domain expertise in the renewables energy sector for operations and maintenance (O&M).

The collaboration extends AVEVA Insight with performance calculations specific to the solar energy industry.

The combined benefits of Helios' Apollo and AVEVA Insight's scalable AI and analytics will empower solar energy providers with access to deeper, tailored and consolidated information to optimise their operations.

Companies using the combined solution can expect quick detection of solar farm inefficiencies through AI and physics-based predictions, faster troubleshooting and root cause analysis, more targeted maintenance, and an overall reduction in lost power. This will be achieved through increased visibility of predictions, KPIs, metrics and performance of their assets. Through AVEVA Connect, AVEVA's cloud platform, customers will have access to the extensive portfolio of Cloud solutions and can easily expand to meet their evolving needs.

"Industry specific asset content combined with actionable analytics delivers a closed loop remediation that drives efficiency and safety. With our heritage of open access to information, strong visualisation and comprehensive analytics combined with the Apollo domain expertise for solar assets we can provide critical operational intelligence to deliver value," commented Kim Custeau, senior vice president, APM business, AVEVA.

"With this partnership with Apollo, solar energy customers can accelerate their digital transformation, fast-track their sustainability ambitions and derive valuable performance improvements."

BRIEFS

Image Credit: Adobe Stock

The MNGP was proposed in December 2016.

MNGP plans concluded

The Government of Morocco has announced that the plans to develop the proposed Morocco-Nigeria Gas Pipeline (MNGP) have finally been concluded.

The MNGP is an onshore and offshore gas pipeline project that aims to deliver natural gas resources of Nigeria to Morocco through West and North Africa. The project is set to deliver natural gas resources of Nigeria to 13 countries in the West and North Africa.

KenGen begins drilling in Djibouti

Image Credit: Adobe Stock

The drilling of the first well is expected to take around two months to complete.

Kenya Electricity Generating Company (KenGen) has commenced drilling of the first of three geothermal wells for the Djibouti Office of Geothermal Energy Development (ODDEG). The Djiboutian venture is part of KenGen's diversification strategy, in which the company is seeking to acquire new revenue streams by offering commercial drilling services, geothermal consulting and other related services across Africa.

Bboxx is delivering scalable solar energy access to remote communities linked to smart metering systems.

Image Credit: Adobe Stock

Getting smart about metering

Smart meters and prepayment systems have the potential to make a radical difference in delivering electricity to more people across Africa and in bolstering the finances of the region's debt-laden utilities, says Martin Clark.

Smart meters can help drive energy efficiency, boost business process digitalisation and achieve operational savings. For users, they are also a way to save money and have total visibility on energy spend and usage. These high-tech gadgets have a key role to play in the ongoing electrification of Africa, a continent where millions of people are still deprived of modern energy.

Prepayment metering systems combined with innovative new clean energy solutions are also unlocking a whole range of possibilities for those previously unable to access power, in much the same way that prepayment enabled mobile phone users to adopt cellphones in the 1990s.

It is not just electricity either, but other utilities as well, such as gas supply and water. Iskraemeco Egypt, a subsidiary of Elsewedy Electric, recently snared its largest ever order for its 3/4 inch water meters in a project to be implemented over the coming year. Water is perhaps a more prized commodity than electricity in the North African state. Earlier in the year, the company secured a deal with South Cairo Distribution Company (SCDC), one of Egypt's largest utilities, to integrate its smart prepayment meters into the power network over the coming decades.

For years, the Egyptian market has been raising the bar and settings standards for the advancement and modernisation of its electricity distribution network.

Iskraemeco's smart solution integrates a vending system with powerful AMI infrastructure, which supports a range of functions including remote prepayment, meter reading, and remote control. Using advanced communication and metering technologies, the smart prepayment system measures, detects, collects, manages, and analyses energy data automatically to provide valuable insight to SCDC technicians and engineers.

> "These high-tech gadgets have a key role to play in the ongoing electrification of Africa."

Nigerian market

Similar models are being rolled out elsewhere in Africa, including to more remote regions. Bboxx is a UK-based utility delivering scalable solar energy access to remote communities linked to smart metering systems. The company has been very active across parts of the continent for several years but recently announced its arrival in Nigeria, Africa's largest market, where reliable power supply remains largely a distant dream for ordinary people, especially those living in rural areas.

An estimated 85 million Nigerians still live without electricity, impeding quality of life and the nation's economic development. Bboxx aims to provide clean energy to 20 million people over the next 10 years, creating 10,000 jobs in the process and slashing carbon emissions too.

Operations have already commenced in southwest Nigeria, with a first shop opening in Ijebu Ode, Ogun State. Over the course of the year, the company will serve rural communities in other states including rural Lagos, Oyo, Ondo, Osun and Ekiti.

Bboxx is initially targeting small business owners and market traders with its innovative pay-as-you-go solar home system which makes energy access more affordable as people only pay for what they use.

"The off-grid clean energy market in Nigeria has significant untapped potential," said Mansoor Hamayun, Bboxx co-founder and chief executive. “As we expand our operations in the country, we’re empowering thriving SMEs and communities to unlock economic potential through affordable energy access.”

One of the barriers to development of the electricity sector, historically, has been the lack of cost-reflective tariffs and sustainable economics. The role of prepayment metering technology could adjust this balance, helping customers pay for only what they can afford and ensuring suppliers are compensated for any electricity sold.

Bboxx Pulse technology enables suppliers to incentivise good payment behaviour, for example, by remotely switching units on and off based on payments.

It is also a vital tool to manage the expansion of a network that is unlikely to look much like traditional European or American grid models as it matures.

The energy master plans in many countries now forecast local extensions of the main grid, alongside a growing role for mini-grid and solar home systems, typically linked to a smart metering system. This combination is a function of what different customers can afford to pay, while the advent of battery storage is also likely to play a role.

It is a major incentive for commercial businesses to continue to invest and roll out energy access across more of Africa’s rural and deprived areas.

Eastern Africa

On the other side of the continent, there is a similar level of interest in smart metering, including a move to adopt larger, corporate-wide initiatives.

Kenyan telecoms operator Safaricom has submitted a proposal to the state utility Kenya Power for the installation of a US$300mn smart metering system. The mobile phones company is looking to install and operate the system for eight years if the deal is approved, before transferring it to Kenya Power, according to a report by Reuters.

The adoption of smart meters using real time monitoring of the grid could have a fundamental impact both on revenue collection and improving network losses. The state-controlled utility, Kenya’s main power distributor, suffers from annual system losses of 23.46% on its transmission network, well above the global benchmark of 15%.

Safaricom proposes to split any additional revenues generated from lower system losses – projected at 71.7 billion Kenyan shillings (US$651.23mn) over eight years – with 75% going to the telecoms firm and 25% to Kenya Power.

Meanwhile in Zimbabwe, prepayment meters have also been identified as a potential solution to dealing with the outstanding technical and financial losses of the state power firm. African Export-Import Bank (Afreximbank) recently signed a US$110.4mn syndicated loan facility with the Zimbabwe Electricity Transmission & Distribution Company (ZETDC) to help improve revenue collection through the adoption of smart meters and prepaid meters.

Separately, the bank is providing the Central African Building Society with a US$40mn financing to support its participation in a syndicated facility aimed at improving the supply of electricity through the payment of legacy debt and the importation of prepaid meters.

The era of smart meters in Africa may have only just begun. ■

DIEHL METERING CELEBRATES 30 YEARS OF ULTRASONIC MEASURING TECHNOLOGY

The year 2021 marks three decades since Diehl Metering began developing its high-precision ultrasonic measuring technology. Since then, the company has launched several generations of ultrasonic meter, continually improving the technology thanks to close collaboration with its customers.

SHARKY heat meter: durability, reliability, and long-term measuring stability

In 1998, after years of development, Hydrometer launched SHARKY, its first ultrasonic flow sensor for the heating market. It then followed up with the SHARKY compact heat meter in 1999. Over the next few years, the company continued to improve its ultrasonic technology, unveiling the second generation of SHARKY in 2003. A year later, the third-generation ultrasonic compact energy meter SHARKY 773 integrated flow sensors with new transducers and electronics. It remains the basis for today’s ultrasonic meters from Diehl Metering.

HYDRUS: the first ultrasonic water meter on the market

In 2008, Hydrometer was the first company to market an ultrasonic water meter. The starting point for developing the HYDRUS meter was a

Image Credit: Diehl Metering

Today, there are over 5.2 million SHARKY meters and 4 million HYDRUS meters operating around the world.

customer experience in the Emirates.

Hydrometer had been working in the Middle East since 2005, when cities such as Dubai and Abu Dhabi began expanding rapidly. With water being such a limited resource in the region, high-quality meters were an essential tool for ensuring water was managed efficiently. However, the standard water meters of the time struggled to cope with the ever-present desert sand, which worked its way into the pipes, causing blockages and often permanently damaging the meters within just two or three years.

Named HYDRUS, a combination of Hydrometer and US, the abbreviation for Ultrasonic, the meter was a direct response to difficult desert conditions. It was designed to resist high temperatures and high humidity, as well as withstand sand and air in the pipes. With such a robust design, the HYDRUS meter is capable of long-term performance anywhere in the world.

Continuous improvement

Since SHARKY and HYDRUS were first launched, Diehl Metering has continued to listen to its customers and adapt its technology to their needs. The battery life has been extended to up to 16 years, and both ranges of ultrasonic meter are now available in all common nominal sizes. HYDRUS was also recently launched in an ultrasonic Bulk version.

From 2010, Diehl Metering integrated its IZAR radio technology into all its ultrasonic meters, replacing the previous plug-in system. With meters now IZAR-ready, utilities can immediately benefit from remote readings and automatic data transmission in a fixed network, as well as the potential of the Internet of Things.

Thirty years after Hydrometer began developing its ultrasonic meters, the technology has become a cornerstone of Diehl Metering’s smart metering solutions. Today, there are over 5.2 million SHARKY meters and 4 million HYDRUS meters operating around the world.

Decarbonisation efforts have established investor confidence in green energy on the continent.

Image Credit: Adobe Stock

A sustainable answer to Africa's energy needs

At the African Energy Forum 2021, a host of stakeholders from across Africa gathered to discuss the obstacles restricting energy access on the continent and how these could be overcome in a green way.

Two issues took centre stage at the conference; addressing Africa's growing energy deficit and continuing the energy transition in order to achieve the goals set out in the Paris Agreement.

Up until 2019 the number of people living without access to electricity was dropping both globally and on the continent, mostly due to the energy access policies that were implemented before this time. This steady progress was, however, somewhat reversed by the Covid-19 pandemic which saw this figure climb back up to 600 million African people living without electricity with around 70% of Africans currently relying on biomass for meeting their simple cooking needs.

In addition to these challenges, whilst contributing the least to CO_2 emissions, the continent is also often the hardest hit and negatively affected by the impacts of climate change. Speakers therefore noted the urgency of addressing the energy deficit but doing so in a clean way. It is no surprise this sentiment was so strong as the conference took place just weeks after COP26 where a new climate pact saw trillions of dollars pledged to be invested inline with climate imperatives.

Renewables to lead the way

With these issues at the fore, focus was placed most keenly on the continued implementation of renewables. Impressive decarbonisation efforts being made in countries such as South Africa, Morocco, Egypt, Ghana and more has established investor confidence in green energy on the continent and now it is a case of building on this foundation to seize this opportunity.

The potential for renewables in Africa is seemingly boundless. Prominent speakers noted that the continent has the largest theoretical reserves of solar energy in the world at 40% alongside 12% of the world's total hydropower. This is bolstered by the fact that the price of solar and wind continues to fall, a trend that will only serve to facilitate more uptake of these sources in the future. At one session dedicated to building wind capabilities, it was noted that Africa has a stunning technical capacity of 59,000GW which is 250% more than it needs. In addition, if just 2% of the Sahara desert was covered in solar panels there would be enough power for the entire globe. From a wind and solar perspective the continent is therefore second to none.

However, at the present time, this remains just potential. Of the 244GW of current generation capacity on the continent just 3% is covered by solar and another 3% by wind in comparison with some more developed countries achieving 20-30% and even 50% of this covered by renewable sources.

Natural gas: The key to the transition

So while the potential for renewables is there, it will still be a long time before these sources can fully meet the energy demands of the continent. Therefore, to bridge the gap between meeting the energy deficit and achieving a green transition many attendees believed natural gas would be key.

In the short- to medium-term natural gas could function as a balance piece in the grid to support the implementation of more renewables. It can deal with issues such as seasonal energy intermittency which plagues solar and wind sources, effectively dealing with their shortfalls until such a time that renewables and storage are built up enough to completely support grids. As a prominent speaker noted, gas investment has to drive the energy transition and can anchor it until renewables can be fully relied on.

The fuel of the future?

A close accompaniment to natural gas is LNG a key benefit of which is that, alongside helping to balance the grid, it could serve as a forerunner to hydrogen, touted as the 'fuel of the future'.

Speakers noted that lots of the associated infrastructure around liquid gas could also be usable for hydrogen, which could form the essential groundwork to capitalising on the rapidly growing market – according to the IEA global hydrogen use is expected to expand from 90 Mt in 2020 to more than 200 Mt in 2030 and 500 Mt in 2050.

At one session dedicated to exploring the prospects of hydrogen in Africa, speakers acknowledged that the continent's immense renewable resources and abundance of available space for new facilities means that the it could become a principal component in the green hydrogen market of the future, potentially serving as an exporter to regions such as Europe.

While some panellists suggested that the continent could become an exporter of this fuel within five years others were less optimistic noting there remained considerable technological hurdles for this fuel to overcome globally let alone in less developed regions such as sub-Saharan Africa. The most obvious barrier is a logistical challenge as hydrogen must be transported in insulated tanks at -253^{o}C. Nevertheless, there is a big chance for Africa to take advantage of this future opportunity. ■

Aggreko: Supporting the green agenda

John Lewis, managing director, Africa at Aggreko, explains the importance of the continent to his company and what are the biggest opportunities coming to light.

Image Credit: Aggreko

John Lewis speaking at AEF.

Speaking at the opening session of the recent Africa Energy Forum (AEF) 2021 conference, John Lewis described how he was amazed at the decarbonisation efforts being made across the continent, noting that "Africa is set to make great strides towards achieving net zero, while addressing energy poverty."

In discussion with African Review, Lewis continued to convey his enthusiasm for the future of the continent, noting that there is clearly a lot of pent-up demand coupled with a lot of energy on display around meeting this. He said that Aggreko shares this passion and seeks to support the African energy sector reach its full potential. For instance, he added, one of the biggest challenges facing the continent is around finance with viability and risk often blocking the way for capital to reach the continent. Lewis remarked, "We see ourselves as playing a key role in the space where capital is coming to bear. We know how to operate in the most difficult environments and can bring tech online and operate it over the years."

The African continent remains a vital component in Aggreko's portfolio. Lewis explained that the company has been operating on the continent for around 20 years and has, at one time or another, worked in nearly every single country there. Currently the African market is an important part of Aggreko's revenue and cash flow, making up about 20% of the company's business. Lewis added that, within the continent, the biggest sectors Aggreko serves are various utilities, mining, oil and gas and it has also begun doing a fair amount of work for manufactures directly.

Projects in the pipeline

Over the last few years Aggreko has been anything but idle on the continent and has undertaken a number of impressive projects. For instance, last year they expanded to a 240MW gas-fired plant in the Ivory Coast which was connected to a local substation. Due to Aggreko's extensive experience, the cost-effective, utility-scale gas powered plant was delivered to support the local grid in just a matter of weeks.

Elsewhere, the company has recently upgraded a gas plant in Gabon (with cleaner and more efficient technology); has deployed batteries into an existing thermal plant at a mine in Mali; and has begun implementing a flare-to-power imitative in Egypt to capture wasted flare gas and convert it to electricity – something that is common in Eurasia but has not yet been introduced to Africa.

Lewis also explained how he has a keen eye on Namibia which has begun to focus on green hydrogen production as a method of effectively making use of its substantial solar and wind resources. He noted that in such projects, as demonstrated by their work with remote oil and gas fields, "Aggreko is a key enabler and is proficient in providing power for accommodation, facilities, etc. which enable those capabilities."

Top priorities

For further development on the continent, Lewis said there were many interesting areas which the company is exploring. For instance, there is strong demand from Egypt (a relatively new market for the company); potential for further expansion into the oil and gas sector is presenting a good opportunity; and, although still in infancy, the company has been talking to a number of governments about micro grid generation for rural communities by making use of battery deployment.

However, Lewis added, the strongest opportunities were emerging from the mining industry. "There is a lot of pull from the mining sector for cleaner solutions for energy production in remote areas. They are being pressured to have a green agenda so we are working quite hard to support them and allow these mining companies to make the next step in their energy transitions." ■

Image Credit: Aggreko

Aggreko's equipment deployed in the Ivory Coast.

HITACHI ENERGY LAUNCHES IDENTIQ DIGITAL TWIN FOR SUSTAINABLE POWER GRIDS

Hitachi Energy has launched IdentiQ, its digital twin solution for high-voltage direct current (HVDC) and power quality solutions, with an aim to advance the world's energy system to be more sustainable, flexible and secure, accelerating the transition towards a carbon-neutral future.

IdentiQ aims to provide relevant asset information, analytics and operational data in an intuitive and easy-to-navigate dashboard, which users can customise to match their needs. IdentiQ includes 3D interactive visualisation of the complete asset, combined with one-click access to all the associated plant and equipment information, including engineering documentation, operational and maintenance procedures, safety training and live operational data for monitoring and analytics.

"IdentiQ is a game-changing digital twin solution built on our unique domain expertise and leadership in power grid technologies and innovation," said Niklas Persson, managing director of Hitachi Energy's grid integration business.

Since digitalisation is essential to making electricity the backbone of the entire energy system and advancing a sustainable energy future for all, it is key to the integration of bulk and distributed renewables, as well as the electrification and decarbonisation of sectors like transportation, industries and data centers, and empowering countries and companies to meet their carbon emission reduction goals.

IdentiQ integrates with a range of enterprise business systems, including Hitachi's Lumada platform and the Lumada suite of asset and work management software, and together they provide system-wide visibility – from the site to the boardroom.

IdentiQ makes HVDC and power quality assets more:

- Sustainable and eco-efficient – by enabling comprehensive remote analysis and support and by digitalising paper-based information on older installations.
- Flexible – by adapting to continuously changing asset performance needs over the entire life cycle.
- Secure – by complying with industry-leading cybersecurity standards and protecting all asset data and information from being misplaced or destroyed; and safer, by providing virtual training on on-site procedures, required clothing and evacua-tion routes before visiting a site.

Percepto launches drone AI-powered analytics for 2022 AIM platform

Percepto, a provider of industrial robotic solutions for autonomous inspection, has launched its upgraded 2022 autonomous inspection and monitoring (AIM) platform and its Air Mobile drone.

Recently listed in TIME magazine's 100 Best Inventions of 2021, Percepto aims to offer the only end-to-end solution powered by AI to collate and streamline all visual data for accurate actionable insights.

Percepto AIM 2022's newly launched Insight Manager delivers AI-powered packaged solutions for sector-specific use cases, such as solar, mining, energy, oil and gas and other industries.

AIM 2022 can be integrated with autonomous drones and robots as well as other visual data collectors, now including DJI drones and fixed cameras. Reports and insights are automatically generated based on the combined visual data. Disseminated to relevant stakeholders on any mobile device, issues and faults are geotagged and displayed on a map, enabling effective action before escalating into more serious problems.

The drone-in-a-box (DIB) market leader has also introduced its new Percepto Air portfolio to support the enhanced platform, which will address the diverse needs and increasing demands of the market.

Percepto CEO Dor Abuhasira said, "Percepto AIM 2022 and the new Percepto Air line of drones, together with the most advanced change detection solution, alert and prevent failures and downtime within diverse use cases across many industries."

"Percepto AIM provides the most advanced and comprehensive enterprise inspection software that offers a complete data workflow – from capture to insight. With Percepto Air Max and Percepto Air Mobile, companies have a range of options to choose from depending on the size of their facilities and the flexibility needed to deploy drones."

AIM 2022 can be integrated with autonomous drones and robots as well as other visual data collectors, now including DJI drones, and fixed cameras.

Image Credit: Percepto

DOOSAN PORTABLE POWER UNVEILS SMALL GENERATOR MODELS

Doosan Portable Power has introduced a range of small generator models for the Middle East and Africa (MEA) market, alongside the LVL portable light tower the company recently launched for the same market.

As well as construction, rental and agriculture, the generators extend the Doosan Portable Power portfolio to a wider audience to cover applications such as home standby, telecommunications and back-up power for small businesses.

Jan Moravec, general manager, Doosan Portable Power for Europe, the Middle East and Africa, said, "The MEA market for generators in the range 10-75 kVA totals about 80,000 units with 45,000 in the Middle East and 35,000 in Africa. Doosan Portable Power has significantly grown sales in the region since 2017 and in 2021, the business is now able to provide a full range including rental specification products, which cover the majority of the market's needs."

As a result, the four small generators - the G20, G30, G40 and G60 - are all available as both stationary (XW) and rental (RW) configurations. The G20XW/RW, G30XW/RW, G40XW/RW and G60XW/RW provide prime power outputs of 18/19, 30/29, 41/43 and 58/59 kVA, respectively, and all are available in a dual 50/60 Hz configuration.

Moravec continued, "We developed the new RW line of generators, designed specifically for rental applications, working hand in hand with our customers. The RW line shines in situations where high manoeuvrability and fast installation are required while maintaining a low cost of ownership."

Kenya to construct Africa's largest 3D-printed affordable housing project


Image Credit: 14Trees

14Trees' first prototype house in Malawi was built in less than 12 hours.

14Trees, a joint venture between Holcim and CDC Group, will develop Africa's largest 3D-printed affordable housing project in Kilifi town, north of Mombasa, Kenya.

The 52 house Mvule Gardens project spring into existence in record time thanks to the exciting 3D printing technology. 14Trees, earlier this year, built the world's first 3D printed school in the Salima district of Malawi.

The company's first 3D-printed prototype house in Lilongwe, Malawi was built with precision in less than 12 hours, which significantly reduces the four days spent building a home with conventional building practices.

The new complex in Kenya underscores 14Trees' forward plan to support Africa's innovation in construction and further develop 3D printing technology across the continent.

This project was made possible by Holcim's proprietary ink, TectorPrint, giving the walls structural function to bear the load of the building. The new technique reduces the environmental footprint by more than 50% compared to traditional processes and lowers CO_2 emissions typical to standard methods of cement production.

Further, 14Trees identifies natural fibre components to strengthen best practices in 3D printing for construction in Africa and creates locally based skilled jobs in sustainability and 3D technology operations, among other areas.

The new 52 house community will be part of the Green Heart of Kenya regenerative ecosystem, a Kenyan model for inclusive and climate-resilient cities. 14Trees will begin construction of Mvule Gardens in the first quarter of 2022.

Jan Jenisch, CEO, Holcim, commented, "We are excited to be building one of the world's largest 3D-printed affordable housing projects in Kenya. With today's rapid urbanisation, over three billion people are expected to need affordable housing by 2030. This issue is most acute in Africa, with countries like Kenya already facing an estimated shortage of two million houses. By deploying 3D-printing, we can address this infrastructure gap at scale to increase living standards for all."

SAINT-GOBAIN ACQUIRES NAIROBI GYPSUM PLANT

Saint-Gobain, which designs, manufactures and distributes materials and solutions for the construction, mobility, healthcare and other industrial application markets, has acquired a gypsum plant in Nairobi, Kenya. This will be Saint-Gobain's first production site in Kenya, where it will also invest in a construction chemical production line on the same site. Saint-Gobain has also acquired a majority stake in a.b.e. Mauritius, a leading producer - and a licensee of Chryso - of technical mortars, additives and waterproofing products in Mauritius.

These acquisitions will strengthen the group's presence in Africa and accelerate its growth in the region by enriching its range of solutions for light and sustainable construction. Saint-Gobain's expanded industrial footprint in Africa now extends to 12 countries with 29 industrial sites - of which nine new plants were opened over the last two years.

LINNHOFF MAKES PROGRESS IN GHANA

A Linnhoff TSD1500 Mobile Asphalt Plant has achieved remarkable progress on the Grade Separation of the Tema Motorway Interchange, which forms the crossroads of two of Ghana's busiest international corridors. The roundabout at the Interchange had experienced severe traffic congestion and so the 'Project for the Improvement of Ghanaian International Corridors' was therefore implemented.

In February 2018, work on the Tema Motorway Interchange began, transforming the roundabout into an interchange with an underpass, the construction of a 2.1 km three-lane dual carriageway with 730 m underpass on the N1 and improvement of 1.9 km of two-lane dual carriageway on the N2. It also included the paving of five service roads and eight ramps for right-turning traffic, a 190 m-long box-culvert underpass, four disability-friendly pedestrian bridges, traffic signals, street lighting and other safety-critical features.

The Linnhoff TSD1500 MobileMix Asphalt Plant consistently churned out 100-120 tonnes of hot mix asphalt per hour, playing a crucial role in keeping the project on track. Overall, it produced around 52,000 tonnes of hot mix asphalt for the construction of a total of 150,000 sq.m of asphalt works, for use in the base, binder and wearing courses.

The Linnhoff TSD series is ideal for use in remote locations or short-term projects. After the work on Tema Intersection was completed, the plant was moved to the National Trunk Road N8 jobsite.

Teo Siang Leong, general manager of sales, Lintec & Linnhoff Asphalt Pte Ltd., said, "Each of the four main mobile modules of our Linnhoff TSD MobileMix Alphalt Plants comes with built-in chassis, so they are much easier to mobilise as they can all be quickly dismantled and transported as only prime movers are needed."

BRIEFS

Image Credit: Adobe Stock

SANRAL is planning multiple road construction projects in the region.

SANRAL plans new projects

The South African National Roads Agency SOC Limited (SANRAL) has planned multiple road construction projects worth R1.8bn in the Sundays River Local Municipality in the Eastern Cape Province.

"Our operations on the stretch of road which traverses the Sundays River Local Municipality will create more than 900 job opportunities over the next five years," said SANRAL's board chairperson, Themba Mhambi.

Image Credit: Adobe Stock

The extension plans primarily concern the connection of the new port at Nador.

Highway extension programme

Anouar Benazzouz, the general manager of Morocco's National Highway Company (ADM), has said the company is developing a new national extension programme as part of Morocco's plans to modernise its infrastructure network, according to a report in Morocco World News. The extension plans primarily concern the connection of Nador West Med's new port and the creation of a continental highway to alleviate the bottleneck on the Rabat-Casablanca route.

Kohler increases participation on BIM Object portal

Kohler Power Systems has increased its participation on the BIM Object portal, one of the world's leading Building Information Modelling (BIM) platforms, listing more than 100 EMEA products. These include its entire KD diesel generator range for data centre applications. The emphasis is on the larger sizes, as these benefit most from the BIM Object approach. The KD SERIES gensets powered by KOHLER engines and the X-SERIES gensets powered by Mitsubishi, Baudouin and Doosan engines are currently available, with more planned in the next few months. Accessories and options such as silencers, acoustic canopies, fuel systems and exhaust pipes are also shown. These allow users to lay out 3D models of generator installations, and experiment easily with different products and variants.

"The depth and range of product information and onward links available – from detailed technical specifications and drawings to regional availability – allows our customers' architects and engineers to plan, design and construct in a smarter, faster and sustainable manner. It provides better visualisation of the project from start to finish," comments Erwan Cabon, pricing supervisor. "It also provides better control of the equipment being installed on large data centre projects, resulting in cost-savings and shorter project deadlines."

Image Credit: Kohler Power Systems

The company's KD diesel generator range for data centre applications is listed on the platform.

AFDB APPROVES LOANS FOR HORN OF AFRICA ROAD PROJECT

The board of directors of the African Development Bank Group has approved US$217mn in loans to fund a project that will improve road transport services in Kenya's northeastern region. The loans comprise US$75mn from the non-concessional window of the Bank Group and US$142mn from the concessional lending division, known as the African Development Fund. The Kenyan government will contribute US$6.3mn.

The US$223.3mn project covers the 740 km Isiolo-Mandera corridor and will enhance regional integration and trade between Kenya, Somalia, and Ethiopia. Around 867,000 people who reside around the project area are expected to benefit from the initiative.

The road network, including the 142 km El Wak-Rhamu stretch, is one of the four priority corridors identified under the Horn of Africa Initiative, driven by the governments of Kenya, Ethiopia, Somalia, Sudan, Eritrea and Djibouti. The initiative is supported by the African Development Bank, World Bank and European Union.

The road project is expected to contribute to the socio-economic development of communities along the corridor, which are characterised by high poverty levels and prone to insecurity.

According to World Bank estimates, 70% of the residents in the project area live in poverty, with poor access to basic services. This is exacerbated by frequent droughts that pose a threat to livestock - the main source of food and income in the region.

Building a regional trade initiative

Progress continues on the Nacala Corridor, which aims to connect the economies of Southeast Africa. Nawa Mutumweno reports.

Works in progress during the rehabilitation of the Great East Road.

Image Credit: Road Development Agency

The Nacala Corridor, stretching from Lusaka in Zambia, through Malawi and northern Mozambique to the port of Nacala on the Indian Ocean, aims at providing Malawi, Zambia and the interior of Mozambique with an improved transport linkage to the port of Nacala and improve transport services on the corridor. The delivery of the project is expected to improve accessibility of the communities in the zone of influence to markets and social services and contribute to the reduction of poverty.

The Nacala Corridor extends along a railway network that includes the Northern Rail System of Mozambique, the Malawi Railway System, the Mchinji/Chipata Rail section, which connects the corridor to Zambia, and the road system connecting all three countries. From Nacala, the road runs westwards through Nampula and Cuamba to Mandimba at the border with Malawi and continues into Malawi through Mangochi, Liwonde, Lilongwe and Mchinji at the border with Zambia to Lusaka through Chipata.

Strong points of the corridor revolve around a strategic location, with proximity to energy resources, fertile lands, tourism destinations, and a favourable climate.

Donors such as the World Bank Group, Department for International Development (DfID), and donor-financed vehicles like TradeMark East Africa (TMEA) believe that investments to reduce transport costs along the corridor would help encourage greater trade volumes, higher investment around the corridor, greater economic diversity and, therefore, economic transformation with better employment opportunities in the region.

> “Revitalising the Nacala Corridor would be a strategic tool for enhancing the competitiveness of sectors.”
>
> **WORLD BANK**

“Successful corridor development elsewhere has led to improved access to the global market through the main seaport, a virtuous cycle of expanding regional markets, increased regional integration and greater attractiveness to FDI, resulting in job creation, small and medium size enterprise development and more rapid economic growth,” the World Bank has stated.

“Revitalising the Nacala Corridor would be a strategic tool for improving trade connectivity, enhancing the competitiveness of sectors and increasing value-added through private sector development."

Developing the corridor will bring economic benefits in all the three countries, including large potential impacts on poverty; diversification of trade driven by deeper regional integration can drive more inclusive growth. Substantial economic potential also exists for regional trade, especially with regards to agriculture, light manufacturing, forestry and tourism and for private investment in these sectors.

Private and public involvement

It is heartening that substantial private and public investments have been made along the corridor to improve the operation, although significant gaps remain. These encompass poor border management, underdeveloped mechanised handling infrastructure at the port, and lack of logistics infrastructure. US$3.2bn worth of investment has flowed into rail infrastructure that helped rehabilitate most of the Nacala railway line. Under the auspices of the WBG, the EU, EIB, AfDB and JICA, a further US$16bn has been invested in the primary road transport infrastructure along the corridor from Nacala to Lusaka. Over US$600mn in public investments has also been mobilised for rehabilitating Nacala port.

The Zambian section, completed in 2019, involved the reconfiguration, restructuring and rehabilitation of the Great East Road, a 360 km road with five bridges running through Zambia to the Malawian border. It was co-financed by the European Union (EU), through the European Development Fund (EDF) and the European Investment Bank (EIB), African Development Bank (AfDB) and the French Agency for Development (AFD).

"The rehabilitation of the Great East Road Project was embarked upon because of the huge economic and social benefits that it is delivering to the people," former Zambian President Edgar Lungu said at the commissioning of the rehabilitated road in 2019.

"This is a project that has changed lives and it has been designed as a unique undertaking of improved competitiveness of doing business in the communities along and beyond the road by reducing transit time for cargo and people, reducing vehicle operation costs, improving road safety for travellers and goods, decongestion and reduction in the transit traffic and improving service delivery in commerce and trade."

Phase IV

AFD has also financed a supplementary loan to cover the funding gap of the project's Phase IV. This will go towards rehabilitation of a 75 km road between Liwonde and Mangochi in Malawi as well as establishment of One Stop-Border-Posts (OSBP) between Malawi and Mozambique and between Malawi and Zambia. In Malawi, the Roads Authority has been responsible for the implementation of the project while the Roads Development Agency is responsible in Zambia. The two agencies have successfully implemented similar road projects in the past and were chosen to execute the project in these two countries due to this experience.

When project proposal was submitted it was noted that due to the lack of contractors in the two countries, most of the contractors would be procured from outside the country – the China State Construction Engineering Corporation won the bid to implement the OSBP at Mwami. However, both governments have put policies in place to promote growth of SMEs in the construction industry and would promote subcontracting of works to local contractors.

"The main component of the project on the Zambian side is the construction of a One Stop Border Post (OSBP) at Mwami. It has however been noted that there is significant budget shortfall to cover all the activities to construct the OSBP mainly arising from a design review that resulted in a higher cost than was originally anticipated. Further, the Road Development Agency has proposed to the AfDB the need to incorporate the construction of two permanent weighbridges to be located at Mwami and Katete in order to ensure sustainability of the investment on the Great East Road," AFD disclosed.

The viability of the Nacala Corridor hinges on attracting sufficient volumes of cargo from the three respective countries. Further, the potential of the corridor requires investments in border infrastructure, in ICT hardware and in key logistics and connectivity assets such as storage and consolidation facilities, anchored on policy and procedural reforms and capacity building. ■

> "The rehabilitation of the Great East Road Project was embarked upon because of the huge economic and social benefits that it is delivering to the people."
>
> **EDGAR LUNGU, FORMER PRESIDENT OF ZAMBIA**

LiuGong move it up a gear

At LiuGong's European Dealer Conference, more than 100 LiuGong dealer partners from across Europe met in Zaragoza to share LiuGong's exciting plans for 2022.

More than 100 LiuGong dealer partners from across Europe met in Zaragoza, one of Spain's most historic cities and the location for SMOPYC exhibition, to share LiuGong's exciting plans for 2022.

Under the theme, 'Moving Up A Gear' LiuGong demonstrated how their accelerated approach to creating even greater value for their customers and dealer partners will continue at a pace in 2022.

Hakan Ilhan, vice-president, LiuGong Europe, remarked, "With new product launches right across our range, from the all-new F-Series excavators to our new Dressta TD-15M series-2 dozer, it was great to be able to switch off our web-based calls and touch, feel and experience these amazing machines in person."

Image Credit: LiuGong

LiuGong & DIR at SMOPYC.

The 2021 Dealer Conference was supported by DIR, Spain's exclusive dealer for LiuGong, which has enjoyed rapid expansion since its establishment in 2019.

"LiuGong provided us the perfect business opportunity," explained DIR's CEO David Iglesias. "They have excellent products, built, tested, and supported in Europe, but they also have a long-term mindset focusing on building relationship and trust. Over the last 4 years, they have really helped us to establish LiuGong as a potential future leader in the Spanish market."

LiuGong's Dealer Conference was scheduled to coincide with SMOPYC, Spain's leading construction equipment exhibition, where LiuGong and DIR showcased their latest F-Series excavators, the all-new 915FCR, 922F and 926F. These new models join the existing line-up of F-Series excavators launched last year which include the 9018F, the 9027F and the 95-ton 995F.

F-Series excavators

Designed by LiuGong's UK based, Red Dot Award winning design team, the F-Series enhance the company's reputation for tough excavators with the extended maintenance intervals enjoyed by the range. They benefit from spacious, modern, high-visibility cabs with the highest levels of comfort and ergonomics. Visibility and safety are enhanced with the inclusion of 360-degree cameras. Ground level maintenance makes daily checks and servicing faster, safer, and easier, and they come with Stage V compliant engines and full electro-hydraulic systems.

> "Our continued growth in Europe will be the result of close co-operation with dealer partners with proven aftersales infrastructure."
>
> HOWARD DALE, CHAIRMAN OF LIUGONG EUROPE

A diverse product portfolio

Aside from the new F-Series excavators range, LiuGong have been moving up a gear across their product portfolio, particularly with their wheel loader product line and Dressta crawler dozers. Notable highlights from the SMOPYC exhibition were the new Stage V 890H wheel loader and the new TD-15M series-2 crawler dozer. The TD-15M benefits from a new high visibility cab design, increased power output with improved operator control thanks to electrohydraulic joysticks and easy maintenance designed in. Pushing 173 kW (232 hp) and with a drawbar pull of 472 kN, the TD-15M is perfect for roads and highways, landfill sites, forestry and general construction.

Chairman of LiuGong Europe, Howard Dale, said, "Our continued growth in Europe will be the result of close co-operation with dealer partners with proven aftersales infrastructure, supported by our industrial capability in Poland and our world-class parts distribution centre. Our proximity to our customers will significantly reduce shipping costs and provide faster delivery on a majority of our genuine LiuGong parts."

With exciting products in the pipeline, continued investment in people and network infrastructure and a consistent focus on delivering a leading brand and customer experience, LiuGong's dealer partners who visited the SMOPYC exhibition shared LiuGong's optimism for 2022. ■

In its latest country strategy, the AfDB will continue to support the expansion of transport infrastructure.

Image Credit: Adobe Stock

Senegal bolsters US investment ties for new infrastructure build

Local construction firms are set to benefit from renewed US commitment to infrastructure in Senegal. Martin Clark reports.

Senegal is to boost links with US firms in a US$1bn investment drive that will strengthen key infrastructure across the West African state. It follows the recent visit of US Secretary of State Antony Blinken to Dakar and the signing of four outline agreements involving American companies planning work in the country.

Three of these companies are proposing partnerships with Ageroute in order to improve the nation's transport infrastructure. US engineering giant Bechtel Corporation is designing a toll road to help connect Dakar to Saint-Louis with support from the International Development Finance Corporation (IDFC), which is a part of the US government. Separately, Cubic Transportation Systems plans to install 375 traffic lights in the Senegalese capital, as well as traffic monitoring technology in order to reduce congestion and to improve driving conditions around Dakar, which will in turn reduce carbon emissions. In another venture, ABD Group is discussing the construction of a bridge in Ziguinchor.

A fourth initiative covers the telecoms sector, with cell phone giant Motorola aiming to create a digital communications network for public safety in cooperation with the Ministry of Home Affairs in order to improve security coordination throughout Senegal.

Collectively, the potential projects will represent an investment worth US$1bn in critical infrastructure.

Announcing the agreements, Blinken said the ripple effects of each of these projects will be felt throughout Senegal. "Better infrastructure can create jobs, can connect more people to cities, can improve public safety, and can increase resilience against climate change," he told a press briefing in Dakar.

It builds on existing links between the two sides with around 50 American companies already doing business in Senegal. The national flag carrier Air Senegal also started new direct flights between Dakar and New York several months ago.

US funding was also behind the construction of the Lekela wind farm, now the largest of its kind in West Africa capable of producing as much as 160 megawatts of electricity, boosting grid capacity by 15%. The project attracted financing IDFC as well as USAID through the Power Africa initiative.

> "Collectively, the potential projects will represent an investment worth US$1bn in critical infrastructure."

Project roster

Nonetheless, US firms will have to square up to strong competition from other international players, notably China, which has similarly targeted major projects in the West African state.

This is set to be an ongoing theme, with infrastructure financing a key priority for the African Development Bank (AfDB) in recent years – it was also a notable feature of its new country strategy for Senegal released earlier this year.

AfDB support has enabled the implementation of major construction projects such as the Blaise Diagne International Airport, the Gambia Bridge, and the Toll Highway, which increased the number of air passengers by 2.7 million, compared to 1.9 million in 2014, and significantly reduced crossing times at the Gambia River.

In its latest country strategy, through to 2025, AfDB will continue to support the expansion of transport infrastructure, including roads and railways, as well as power, to further boost regional integration.

Specifically, it hopes to see an increase in paved roads in 'good' or 'average' condition from 82% in 2019 to 85% by 2025 through, among other things, the construction of 500 km of rehabilitated roads and 100 km of new roads.

Other bank interventions, such as the Rosso Bridge, the Farim-Tanaff Road and the Dakar-Bamako Railway, will help to strengthen regional integration and boost trade with local partners, notably Gambia, Mauritania and Mali.

The construction of the Rosso Bridge will reduce the time needed to cross the Senegal River to two minutes and will, according to the AfDB's paper, contribute, together with the Dakar-Bamako railway and the construction of the Farim-Tanaff road, to improving overall logistics performance.

The establishment of the African Continental Free Trade Area (AfCFTA) is seen as a key driver in the push to further regional integration and guide future infrastructure planning.

Other opportunities going forward include the Youth Olympic Games, which are scheduled to be held in Senegal in 2026, and will require more roads and hotel infrastructure. ■

Hauling industry forward

The articulated haulers and innovations driving safe and efficient projects in Africa.

ROKBAK TARGET ECONOMY AND PERFORMANCE

Image Credit: Rokbak

The 38 tonne RA40 is powered by a Scania DC13 engine.

Rokbak, formerly Terex Trucks, have released the RA30 and RA40 articulated haulers designed to meet the demands of the most extreme conditions while delivering cost-effective performance and high productivity.

The 28 tonne RA30 is powered by a Scania DC9 enginge and offers a heaped capacity of 17.5 m^3. Its long life transmission fluid increases the length of time between oil maintenance intervals to 4,000 hours and it is equipped with a variety of features to ensure safe and easy operation with maximum comfort.

Powered by a Scania DC13 engine, the 38 tonne RA40 is the biggest articulated hauler manufactured by Rokbak and boasts a heaped capacity of 23.0 m^3. The Allison HD4560 transmission boasts high-performance oil and up to 6,000 hours between service intervals. The RA40 is also designed with safety and comfort in mind while delivering strong performance.

Both machines are linked to Rokbak's Haul Track telematics system (in certain markets) which allows the customer to have complete visibility and control of the hauler.

DOOSAN LAUNCHES ADT PAIR IN MEA

Image Credit: Doosan

The DA45 features a new cab with an improved layout for the display.

Doosan Construction Equipment has launched the DA30 and DA45 articulated dump trucks for markets in the Middle East and Africa.

In 2018, the previous version of the DA30 ADT was upgraded with a range of features including a new cab, a new self-levelling front suspension and a new tandem bogie system. The new DA45 also boasts a new cab as well as a semi-levelling front suspension that adjusts itself independently depending on the operating conditions. The cabs on the ADTs have been fitted with comfortable hand grips and foot rests and an improved layout for the display which is easier to use even for tired eyes.

As well as these changes, the new models offer many more features including a new design for the front fame and bonnet components; a new positioning of the diesel and tank; a real-time payload measuring system with a light indication for excavator operators; and the relocation of the greasing system with transmission filters installed nearby, both of which are protected to ensure excess oil/grease droplets are collected and can be easily removed.

The DA30 has a payload of 28 tonne, while that of the DA45 is 41 tonne. Both of the machines deliver excellent performance on difficult terrains and new additions such as external handrails show that they have been designed with safety in mind.

SIX VOLVO ARTICULATED HAULER SAFETY UPDATES

From the A25G to the A60H, Volvo articulated haulers are renowned for their durability, stability and fast cycle times on tough terrain. Volvo has implemented several updates for even greater safety on site:

1. Cruise control

With the press of a button, operators can maintain a steady speed of 10 km/hr. This semi-automation decreases operator fatigue and enables them to pay greater attention to safety.

2. Downhill speed control

Volvo articulated haulers now automatically maintain their speed when the operator releases the accelerator, brake pedal or retarder pedal. This prevents uncontrolled acceleration downhill and reduces the effort required from the operator, helping them to stay safe.

Image Credit: Volvo

Volvo's A30G features several upgrades for greater safety on site.

3. ATC terrain memory

The automatic traction control (ATC) function stores the GPS coordinates of slippery terrain and automatically engages before the locations are reached. This ensures the machine is better prepared before a slippage is detected. If some slippery locations in close proximity are detected, the terrain memory system ensures the ATC stays engaged for greater control, safety and efficiency.

4. Differential locks at start

The contronics now contain a new selectable differential lock option to engage the longitudinal differential locks from standstill when going from load and dump brake mode to drive. This ensures traction in rough loading zones for greater control and safety on site.

5. Hill assist

This new feature, activated by pressing the brake pedal when stopping on a hill, holds the machine on steeper slopes.

6. Dump support system

Finally, a new angle sensor for side inclination on the trailer unit enables the operator to see the trailer's side tilt and set a visible alarm level for safer unloading.

Blend Plants recycles 100% milled asphalt for cold asphalt production

Blend mobile plants are renowned for their versatility and multitasking and are designed to meet the needs of the construction sector in an eco-friendly way by preparing concrete using recycled materials or producing cold asphalt using recycled milled asphalt.

Site management, the number of machines to be used, the number of means of transport and material logistics are just some of the challenges to be faced in roadworks. Blend Plants' E-series range offer solutions suitable for various jobs in the road sector.

One plant, many productions

Thanks to their structure, Blend plants are able to produce concrete, cementitious mixture and cold asphalt. Mixing and laying take place with precision, allowing for leaner and quicker work, limiting the number of vehicles used and therefore increasing site safety.

Having two or three hoppers for aggregate storage prevents the need for external suppliers. Blend E-series are used in different types of road works; from the covering of trenches for the laying of pipes and systems, to the creation of the final wear layer in cold lay bituminous conglomerate.

Blend has worked on many projects in Africa. In the city of Kinshasa, Congo, a Blend E050 produced cold asphalt emulsion for the realisation of a road in 2015.

The versatility of the E050 plant makes it possible to simplify and speed up many roadworks, allowing operators to work smoothly in urban settings, reducing the impact on daily traffic and citizens. These are aspects appreciated by machine customers and clients alike.

Cold asphalt production from 100% milled asphalt with Blend A240.

Image Credit: Blend Plants

The Blend A240

Another product designed by Blend is the A240 available with two to five hoppers in order to meet large-scale production needs which requires frequent conglomerate changes or the use of different aggregates.

The Blend A240 can produce cold asphalt from 100% milled asphalt. Mixing takes place continuously with production levels up to 120 m3/h thanks to the mixer with a continuously counter-rotating twin shaft.

Once a load of cold asphalt is ready, it is possible to mix with a cementitious conglomerate or any other mixture.

Electronic management allows customers to set the various recipes in a direct and user-friendly way, making it possible to alternate the production of cold asphalt with cementitious conglomerates with specific Rck without wasting time.

The Blend A240 perfectly meets the needs of this production, which requires on-site plants, to reduce transport costs, but it is also easy to disassemble/reassemble for moving from one site to another. The A240 is a truly mobile plant and can be ready to work in an hour as positioning and installation do not require cranes, ladders or electrical earthing. Additionally, weights and dimensions are within the standards, so no oversized transport is required.

Each plant is built according to the customer's needs. Blend's strength is being able to understand the construction industry's actual issues and to design customised solutions to improve the work and profitability of its customers. ■

Road works with a Blend Seventy.

Image Credit: Blend Plants

CATERPILLAR UNVEILS NEW WHEEL LOADERS SERIES

Caterpillar has unveiled its new 980 and 982 series wheel loaders that aim to deliver premium performance, increase productivity and achieve lower maintenance costs.

Offering performance in the 9 to 11-tonne wheel loader class, the new 980 and 982 medium wheel loaders are up to 10% more productive and achieve lower maintenance costs of up to 12% when compared to the previous 980M, 980L and 982M models.

These new wheel loaders include an expanded technology platform to increase machine performance and improve operating efficiency.

The new loaders feature easy access to the operator's cab thanks to its wide door, stair-like steps and grab rails for additional stability. Taller operators will experience increased legroom inside the new cab, while sound suppression, seals and viscous cab mounts lower noise and vibration levels for a quiet work environment.

Image Credit: Caterpillar

Cat Performance Series buckets balance shape against the machine's linkage for higher fill factors and better material retention.

Remote services technologies on the new Cat medium wheel loaders can save service trips to the job site and ensure the machine operates at peak performance.

Remote Troubleshoot connects the machine to the dealer's service department over the air to quickly diagnose fault codes without an on-machine cable connection.

The new Cat 980 can be equipped with the optional 'Fusion Quick Coupler', which delivers quick bucket changes without leaving the cab.

Operators can also choose from several purpose-built special configurations to optimise loader performance and durability in tough applications, including Industrial and waste, forestry, steel-mill and block-handler.

FLIEGL INTRODUCES CONCRETE FILLING STATION

Fliegl Baukom has introduced its concrete filling station BTS, where customers can help themselves to fresh concrete.

With the BTS, Fliegl Baukom offers the solution for fresh concrete to 'do-it-yourselfers' as well as small professional customers such as gardening and landscaping companies, fence builders, stone setters, civil engineering companies, among others.

A silo contains the cement with three extra large storage bunkers for sand and gravel. Customers in need of concrete can go to the nearest concrete filling station and can choose between 20 different concrete types with varying quality.

Due to its connection to the server, it can be easily and globally controlled by the customer at any time. The machine is also configured via the computer by setting the mixing ratios using a clear user software. The filling quantity of the cement silo is also displayed and the moisture content of gravel and sand can be adjusted.

The system also provides information about the ideal mixing ratio for any given project. After the desired mix is selected, the machine starts the mixing process automatically and the conveyor belts deliver the fresh sand and gravel before the water and cement are added.

The whole process, including loading the concrete onto the customer's vehicle, will take approximately three minutes. The payment can be done by logging in to the terminal using bank cards or customer cards.

Fliegl's BTS at B&O Recycling GbR has been in operation for six months and over 1000 cubic metres of concrete have already been delivered.

Liebherr showcases new weightlifter range

Liebherr has introduced its new weightlifter, the LR 1400 SX in the 400 tonne range. The company said that with the compact transport weight of 46 tonnes, the complete crane can be easily transported between job sites. Platform and railings remain attached to the undercarriage during transportation and only need to be folded down.

With the new LR 1400 SX, Liebherr-Werk Nenzing Gmbh extends its range of crawler cranes to include lifting capacities of up to 400 tonnes. Gerhard Frainer, managing director for sales at Liebherr-Werk Nenzing GmbH, said, "This is a big step for our location. The request for a larger crane came from the market."

Andreas Handel, head of mechanical engineering hydro construction, Depenbrock, said, "For barge operation, the available barge load charts for any configuration and any possible counterweight combination are crucial. The modular counterweight system is very good. If a smaller counterweight is sufficient, the unit can also be used on a correspondingly smaller barge. This makes the use of the LR 1400 SX very flexible."

The company said that the crane designers paid particular attention to the safety concept. The assistance system 'Gradient Travel Aid' helps to negotiate slopes and inclines. It displays the crane's centre of gravity and also features warning systems for the operator before the crane leaves the safe area.

The 'Ground Pressure Visualisation' of the LR 1400 SX calculates the current ground pressure of the crane in real-time and compares it with the specified safety limits of the relevant position. The ground pressure is displayed in the operator's cab and the operator is permanently aware of whether the machine is situated in, or is approaching, a critical area.

Thanks to the track width adjustment, access to narrow spaces is now simplified.

Image Credit: Liebherr

Newmont and Caterpillar form alliance to achieve zero emissions mining

Newmont, one of the world's largest gold mining companies, and Caterpillar, producer of mining equipment and technologies, have announced a stratetgic alliance to deliver a fully connected, automated, zero carbon emitting, end-to-end mining system.

Together, they will collaborate to create a safer, more productive mine, and substantially support Newmont in reaching their 2030 greenhouse gas (GHG) emissions reduction targets of more than 30%, with an ultimate goal of being net zero carbon by 2050.

Building pathways to decarbonisation is essential for the future of mining. Newmont's surface and underground mining fleets are responsible for approximately 40% of the company's carbon emissions. Building a new model for surface and underground mining is critical to delivering on Newmont's emissions reduction targets.

Newmont will also be supporting Caterpillar's validation of evolving features and functionality within the MineStar suite to be deployed across Newmont's surface and underground assets globally. This deployment facilitates centralised production and asset management.

Under the agreement, Newmont plans to provide a preliminary investment of US$100mn as the companies set initial automation and electrification goals for surface and underground mining infrastructures and haulage fleets at several of its mines.

Image Credit: Adobe Stock

The two companies will create a safer, more productive mine.

Caterpillar will develop its first battery electric zero-emissions underground truck to be deployed at one of the sites by 2026. The deployment includes a fleet of up to 10 battery electric underground haul trucks, supported by Caterpillar's advanced electrification and infrastructure system. This includes first-of-a-kind battery electric haulage technology for underground mining in 2024, the introduction of battery autonomous technology in 2025, with full deployment in 2026.

POLYMETALS BEGINS AUGER DRILLING PROGRAMME IN GUINEA

Polymetals Resources, has commenced the auger drilling programme at Alahiné gold project in the gold-rich Siguiri Basin, Guinea. The programme will initially focus on near surface high grade supergene gold deposits and will involve the drilling of several examples of this ore type identified by the company's Phase 2 drilling programme.

The gold content of the near surface lateritic gravels is variable, but high grade values of 1m have been recorded.

The company noted the successful use of auger drilling to identify gold mineralisation, with a recent case study being that of Predictive Discovery who has now delineated a multi-million ounces gold discovery at its Bankan Project, also in the Siguiri Basin.

Alex Hanly, CEO at Polymetals Resources, said, "As previously reported, our Phase 2 drilling programme earlier this year at Alahiné generated significant gold intercepts, providing Polymetals with numerous near surface priorities and broader targets open at depth.

"The planned auger programme is designed to extend the high grade near surface potential defined in Phase 2, in addition to testing undrilled targets that display +100ppb gold in soils within the Alahiné licence."

Hanly added, "The use of relatively cheap auger drilling to vector in on gold mineralisation has been a very successful strategy deployed elsewhere in the Siguiri Basin, in particular by our peer, Predictive Discovery who has now delineated a multi-million ounce deposit which was initially identified by coincident soil anomalies and positive auger results, so we hope to replicate that success."

The company has engaged Sahara Natural Resources to complete the auger programme and the samples are to be analysed at the SGS laboratory in Bamako, Mali. Further preparatory field work and laboratory studies will be carried out to confirm primary gold mineralisation targets within this well-endowed gold exploration licence.

Off channel reservoir mining at the Bomboré Gold Project.

Old faithful

Even in an era of energy transition, diesel gensets remain a dependable friend for Africa's mining operators seeking peace of mind and without-fail power

Diesel generators remain integral to mining activity in Africa where reliable grid-based power is unavailable.

Despite the advance of clean energy systems and hybrid solutions, these gensets remain the workhorse of the industry in areas with erratic energy supply, a common feature of many of the continent's mines.

The development of the new Bomboré Gold Project in Burkina Faso is a good example.

Canadian Orezone Gold Corporation has signed a groundbreaking deal with Genser that will use liquefied natural gas (LNG) as its main fuel, augmented with a staged solar plant.

It will be the first mine in Burkina Faso to use LNG to power its operations.

However, the energy supply at the site will also include four 2.6 megawatts (MW) diesel back-up units — highlighting the peace of mind these traditional genset systems can bring to critical infrastructure operations like mining.

Genser will design, finance and install all power generating equipment and associated infrastructure, including LNG storage and diesel storage terminals, and will be the operator and owner of the facility. The mixed package allows the mining operator to reduce its carbon footprint while still having the back up of dependable diesel power.

Orezone Gold closed its project financing in October and the project remains on track for first gold pour in the third quarter of 2022.

Underpinning energy supply

Other innovative hybrid power plants at some of Africa's remote mine sites have also utilised diesel gensets to underpin energy supply.

They include Resolute Mining's Syama Gold Mine in Mali, where Aggreko has a 16-year contract to build, operate and maintain a large power plant comprising thermal, solar and batteries, which is being rolled out in various stages.

Stage one comprises of three 10MW thermal Wärtsilä Modular Block's and a 10MW battery storage system, that will provide spinning reserve displacement and outbalance sudden jumps in load.

Camp accommodation blocks at the Bomboré Gold Project.

Resolute Mining announced recently that the construction of the bulk fuel storage facility has now been completed, with 4 million litres capacity.

The second stage of the project will consist of the installation of an additional 10MW Wärtsilä Modular Block in 2022, plus the addition of 20MW solar PV power in 2023.

Overall, the hybrid energy system will reduce carbon emissions by approximately 20%, yet still benefit from the security offered by traditional thermal power.

At Nigeria's Segilola Gold Mine, in Osun State, Canadian operator Thor Explorations Limited launched commercial production in October, again using a mix of energy sources underpinned by emergency back up diesel.

During the construction phase, a 400kW/400V and a 200kW/400V diesel generator was deployed at the processing plant and at the work camp.

The permanent main power supply for processing is provided by seven 1.2MW Compressed Natural Gas (CNG) generators, five on duty and two on stand-by. Emergency power is provided by a 640kW/400V 50Hz diesel powered generator. Both diesel and CNG is delivered to the site by road tanker. ■

A rare opportunity

At a virtual webinar, hosted by Invest Africa, a line-up of industry specialists discussed how Africa can unlock its rare earth potential.

Image Credit: Adobe Stock

Rare earth elements are very infrequently found in economic quantities.

George Bennett, CEO of Rainbow Rare Earths, opened the discussion by explaining that rare earths are found on every continent but are considered rare because they very infrequently found in economic quantities. 17 elements make up this group and they are typically found together in mineral deposits. They tend to have very difficult metallurgies and, because of this, can be extremely difficult to extract and separate in profitable quantities.

Central to the energy transition

Simon Gardner-Bond, chief technical officer at Techmet, said, "Rare earths have a wide range of industrial uses and they cannot be replaced by anything else. They are everywhere and, are the primary element for super strong magnets – needed for efficient motors for Electric Vehicles (EVs) and are essential in wind turbines. EV sales growths are increasing and by 2030 it is estimated that 35-40 million units will be sold. If we are going to have a good performance from these EVs we need these rare earth magnets."

Because of this they are considered essential to the green energy transition an incredibly pertinent issue, reinforced by the recent gathering of world leaders at COP26.

In terms of global supply, China has a virtual monopoly (particularly in processing) and controls around 85-90% of rare earth mineral production in the world. Alison McGuigan, vice-president of The Cohen Group, said that as the world's supply is dominated by one source it means it is incredibly vulnerable to disruptions, which was most obviously demonstrated during the pandemic. This, alongside geopolitical instability, has led governments to take policy actions to address this vulnerability and wean themselves off of Chinese reliance. Japan has been the most successful in this endeavour and has diversified its supply going from 82% supply from China in 2010 down to 53% in 2019. There has subsequently been a proliferation of policy announcements from US and allies to start focusing attention on the importance of rare earth minerals and supply chains.

As Alex Jones, global co-chair of energy and natural resources, DLA Piper, pointed out, therein lies the potential for Africa as the huge uplift in the desire for diversity could be exploited and see Africa become a potential exporter of this precious resource.

Bennett commented that there are a number of projects on the continent that his company is looking at and, while they are a few years away still, they could have success in this field. He added however, and was joined by Gardner-Bond, that there remains significant questions over processing and refining (which essentially requires a functioning chemical plant along with skilled personnel to man it), not to mention the radioactive elements that will have to be dealt with.

To seize this opportunity the panellists noted that, from a national side, governments need to understand that obsessing over down stream processing could get in the way of companies coming in to develop these natural resources. Deposits of rare materials are uncommon and often only have only around ten years of production. It is not worth it to build a refinery in that time so it makes more sense in the short term to mine the elements and then send them elsewhere for downstream processes. Potentially, regional refineries across countries could come into play but this would require strong collaborative efforts.

From an industry perspective, Farai Nyabereka, partner at DLA Piper Africa Zimbabwe, noted that engagement with governments is critical in order to get a lay of the land and acquire an appreciation of supply chains and integration into more developed markets.

While there are certainly many obstacles to be overcome the opportunity of rare earth metals appears to be boundless and, if African countries could harness this they could get a firm grip on a supply chain which will be fundamental to the energy transition over the coming years. As Gardner-Bond remarked, "Never say never. Everything is solvable." ■

Blasting a way through

The mining explosives market is booming despite all the economic uncertainties of the past year amid high demand for commodities. Martin Clark reports.

Commercial explosives have long been used in the mining industry to extract ore and discover new orebodies.

Given the size of its mining industry, South Africa is one of the leading manufacturers and users of commercial explosives.

But these sensitive products are also used across other industries too, from oil and gas to forestry and construction, to assist in the building of new roads and infrastructure or in the laying of pipelines. There are many other applications.

Well-known players in South Africa with an interest in the commercial explosives market include Sasol and AECI.

These big industry heavyweights have both played an integral role in supporting the country's rise to prominence as a global mining power. Their products are similarly used to support mining activity elsewhere across the continent.

Other international renowned players, such as Normet of Finland, are active in a supporting role, building charging products and machinery, or providing expert advice in this critical area.

Locally, another specialist is South Africa's BME, part of the Omnia Group, listed on the Johannesburg Stock Exchange.

BME blasted its way to a South African record at the end of 2020 at a manganese mine in Northern Cape province. Using its proven AXXIS electronic initiation system, it was able to plan and execute a blast of 4,647 detonators.

Just a few months earlier, the company had broken a previous record at the same mine by initiating 3,780 detonators in a single blast.

Mining companies across Africa have used commercial explosives to unearth fresh deposits and break through to areas with new potential.

Image Credit: Adobe Stock

Enaex Africa JV launch

South African industrial giant Sasol launched its explosives division in 1984 and sells and distributes commercial explosives, as well as a wide range of specialised blasting accessories.

Its portfolio includes a diversified range of bulk explosives used in underground mines, opencast mines and quarries. The company also supplies value added services to many of southern Africa's leading mining companies.

Sasol developed the world-leading Expan low-density ammonium nitrate (LDAN) technology for more efficient and cost-effective blasting operations.

It's also a precise and delicate business: the Sasol Blast Calculator, downloadable on the Google or Apple app stores, is an on-the-go tool that can, in real time, calculate any opencast mining blasting requirements.

But the times are changing, and last year Sasol established a new explosives joint venture – Enaex Africa – in a collaboration with Enaex, a subsidiary of the Sigdo Koppers Group.

The goal is to create a world-class explosives business for the African continent.

Founded in 1920 in Chile, Enaex brings to southern Africa a century's experience in the global explosives market with its core business of ammonium nitrate production.

It is also one of the few explosives companies in the world that can produce and offer the entire spectrum of products and solutions to execute the blasting process.

Francisco Baudrand, chief executive of Enaex Africa said the launch marks "a new venture on a new continent" for the Chilean parent company.

"This joint venture is a platform of growth for Enaex not only in southern Africa, but also for us to become the leaders in explosives and blasting services for the mining industry on the African continent."

The first shipment of Ammonium Nitrate Porous Prill (ANPP) – Prillex – arrived from Chile in Walvis Bay, Namibia, in April. The import will serve as a back-up for the Sasol Prill plant, which serves existing customers in South Africa, Lesotho and Namibia.

Enaex is also a leader in related areas such as digitisation, where it has deployed state-of-the-art technology to add value in the blasting process. Enaex Bright is a digital platform designed for blasting optimisation. The company also offers a range of automated and robotic products and services both for underground and opencast mining for the loading of blasting agents and safe execution.

> "Given the size of its mining industry, South Africa is one of the leading manufacturers and users of commercial explosives."

AECI reports strong demand

Certainly the market for mining explosives has proved itself to be robust in the past year or so, even with all the uncertainties triggered by the Covid-19 crisis.

Global demand for commodities has fuelled the need for explosives to unlock new mine deposits.

AECI's mining explosives business unit has enjoyed a positive time during this uncertain period.

In its interim report, for the year ended 30 June 2021, it reported a better year-on-year result reflecting buoyant conditions in the global commodity environment.

It noted that good progress was made in replacing volumes of bulk explosives lost in South Africa's iron ore and platinum surface mining sectors in the prior year. However, offtake from South Africa's coal mining sector was below expectations and challenges in Indonesia resulted in a 9.6% decline in overall bulk explosives volumes.

A 33% increase in initiating systems volumes was due to the resumption of activities in the underground gold and platinum mining sectors.

There was also a solid performance in Zimbabwe and Botswana, the company noted. Likewise, combined volumes in Central Africa and East Africa were 25% higher than in the prior corresponding period and those in West Africa remained robust.

Going forward, the company anticipates that demand for its products will be sustained.

Safety, sustainability and innovation

As well as actual explosives, other specialised industry equipment is needed for the safe and efficient storage, deployment and use of these dangerous mining materials.

Normet, a Finland-based company, is active in this niche, producing a range of equipment to help customers build the safest places underground, both in mining and tunnelling.

It operates in over 50 locations in 33 countries worldwide and has delivered more than 13,000 built-for-purpose underground machines.

South Africa is a key market, with Normet know-how utilised in mines such as Palabora, the nation's only producer of refined copper.

In underground blasting, Normet's Charmec systems are built to improve safety and productivity and contribute to high quality and cost-effective bulk explosive charging. They also offer a consistently high resale value with low lifetime costs.

During the past four decades hundreds of mobile Charmecs have been delivered to hard rock mines and civil tunnelling projects worldwide.

The company has developed its modern emulsion charging concepts in close cooperation with explosives manufacturers as authorities usually regard the units where the explosive is sensitised on the charging unit as explosive factories.

As in other parts of the industry, it continues to innovate and update.

During a recent virtual mining innovation showcase, Normet presented a glimpse into its new machines and equipment and presented a testimonial from Australia where the Normet SmartDrive battery electric explosives charger Charmec MC 605 VE SD in 2021 has been trialled.

Using battery-based charging can make the charging process safer, especially within the explosives context, with no need to plug in to the mine's electric grid. ■

AI to slash fatigue events and downtime

Mantrac has helped the Barrick Gold Mine in north Mara, Tanzania, after it encountered several cases of unplanned downtime from mishaps and fatigue events.

The DSS is designed to keep operators safe, equipment working and productivity up.

Image Credit: Mantrac

The Barrick Gold Mine contacted Mantrac to help resolve a recurring issue on their site. They were witnessing 12 accidents per year, including one where an operator was driving a truck that rolled over and injured him.

Mantrac suggested and implemented state-of-the-art fatigue detection technology via a comprehensive change management programme for the site. A Driver Safety System (DSS) was designed to keep operators safe, equipment working and productivity up.

Learning from technology that has been tried and tested on 5,000 trucks worldwide, Mantrac designed a total safety and productivity solution that engaged 90 operators of 15 trucks over a three-month transition period.

Image Credit: Mantrac

The DSS was executed in a three month period.

Helping to harness every valuable resource

With custom smart bands, operators were able to manage sleep and fatigue. The trucks were also fitted with AI kits that detect microsleep events and alerts the operator with an audio signal and seat vibrations.

A recording of the event is also sent to a team dedicate to managing health and safety on the worksite via SMS. By detecting eyelids closing, eyeball movements, chin orientation and distraction events, this technology from Mantrac caught instances of distracted driving, microsleep, speeding and more.

The management received daily incident reports from Mantrac consultants, in addition to data dashboard access.

> “Mantrac’s DSS helped Barrick achieve 98% reduction in incidents on the mine site.”

With smart wearables for drivers and AI-powered fatigue detection technology, Mantrac’s DSS helped Barrick achieve 98% reduction in incidents on the mine site with 90 operators engaged for training on fatigue detection. The DSS was executed in a three month period. ■

EPIROC SPEEDS UP MINING ELECTRIFICATION

Epiroc, a leading productivity and sustainability partner for the mining and infrastructure industries, is now offering customers conversion kits that seamlessly transform loaders from diesel-powered to battery-electric driven.

Battery conversions are already underway in Canada, with Epiroc's Scooptram ST1030 loader being the first vehicle to undergo the transformation. Evolution Mining, an Australian-based international mining company, earlier this year ordered the conversion of two diesel-powered Scooptram ST1030 machines for use at its gold mine in Red Lake, Ontario, Canada. In addition, it also ordered two new Scooptram ST14 Battery loaders and one Minetruck MT42 Battery to add to the fleet at Red Lake.

Kits to convert the Scooptram ST1030, one of Epiroc's most widely used loaders, are now available to order through most of Epiroc's customer centres worldwide. Conversion kits for other machines will follow, including for the Scooptram ST14 loader.

Image Credit: Epiroc

An Epiroc Scooptram ST1030 loader that has been converted from diesel to battery electric.

"Converting existing diesel machines to battery electric will be a smart and cost-efficient alternative for mining companies that want to electrify their operations," said Helena Hedblom, Epiroc's president and CEO. "It will be an important part as we together continue the drive toward emissions-free operations."

The end result is the same or higher performance level as diesel machines with all the added benefits of battery technology, which includes zero emissions and a healthier underground environment for operators.

Epiroc's service organisation will offer a quick turnaround time for the conversion, which is included in a midlife rebuild and puts machines back on site ready for heightened performance without unnecessary disruptions to production.

Franna Minemaster range released for mining sector

Franna, a global leader in the design and manufacture of pick and carry cranes, has unveiled the Franna Minemaster range, a series of pick and carry cranes with lift capacities ranging from 15t to 40t.

The Franna Minemaster range has been specifically designed to meet the vigorous safety requirements and complex operating environment of the modern day mine site. Each individual crane can be customised to meet local requirements, with an extensive list of mine spec options available for customers to choose from.

Danny Black, general manager at Franna, explained, "Franna has been supplying the global mining industry with robust lifting solutions for over 40 years, working alongside a number of leading contractors such as Rio Tinto, BHP & Glencore.

"In line with our growing export sales, we have developed this range to meet the needs of the markets and industries we serve. Whilst mining has always been at the forefront of the Franna business, many of our international customers are not fully aware of the numerous mine specs that we can offer. As well as helping to educate the marketplace, our Franna Minemaster range provides mining contractors with heavy duty lifting solutions that are tailored to their needs and do not compromise on safety or performance."

Franna cranes have a proven ability of operating safely on the challenging terrains that are commonly associated with mining (for example, poor underfoot conditions). The robust design and superior operating benefits allow them to thrive in both open pit and underground mining conditions.

Each machine from the range comes fully equipped and ready to work in mining applications.

Image Credit: Franna

METSO OUTOTEC COMPLEMENTS ITS FEEDING SOLUTIONS PORTFOLIO

Metso Outotec has launched the Crossover feeder, which is a hybrid feeding solution suitable for a wide range of greenfield and brownfield applications. Thanks to its innovative modular belt-over-apron design, the Metso Outotec Crossover feeder delivers unmatched levels of availability and reliability for bulk material transportation at lower overall costs.

"We are very excited to announce the launch of the Crossover feeder. It was developed to provide a flexible and economical solution in a wide range of applications where belt and apron feeders are not the optimal fit," said Brian Bookamyer, director, bulk materials handling at Metso Outotec.

The Crossover feeder features a reduced height of up to 50% as compared to conventional feeding technology. This lower height requirement provides an opportunity for CapEx savings by decreasing the excavation and civil works required. For retrofit applications, the reduced height profile allows the Crossover feeder economically replace existing feeders, including apron and/or belt feeders by lowering modification costs.

The Crossover feeder complements Metso Outotec's versatile feeding solutions portfolio, which also includes Apron feeders and Belt feeders, enabling Metso Outotec to provide customers with the best feeding solutions to maximise performance and productivity. All Metso Outotec feeding solutions feature optimal design and dependable components to handle any duty in mining. Support through the comprehensive services network enables easy maintainability and minimal downtime.

Protecting the most valuable resource

Christian Schepers, export manager at Hermann Sewerin GmbH, discusses combatting water scarcity, gas leak detection and supporting a skilled workforce in Africa.


Image Credit: Hermann Sewerin GmbH

Sewerin has been established in Africa for more than 20 years.

African Review: When did Sewerin enter the African market and what are some of the challenges posed by the continent?

Christian Schepers: Especially with our French subsidiary, SEWERIN SARL, we have been very well networked in Francophone Africa for more than 20 years and are well established in the market. The first partners are also working with us in Anglophone Africa. Water is one of the most valuable goods, if not THE most valuable good on our planet and especially in Africa we would like to make our contribution to protect it and to ensure a safe supply for all parts of the population.

Most of the African utilities are in public and not in private hands. There are often no financial resources available for investments in the distribution networks. So finally they are depending on donors investing in projects. To get into these projects is a big challenge for us as leak detection usually covers only a small part of the tenders and is not seen as so important. Further the training sessions are scheduled too short so that users are not able to handle the devices successfully in the field to the point that they are not used at all and put into storage.

Additionally, it is important to mention that leak detection can only be done efficiently when the organisational structures are optimised to its need. For example, it does not help any utility to find 1000 leaks when they are not able to repair them because of the lack of spare parts, etc.

Often utilities do not have detailed network plans. This complicates our job and forces us to create different strategies compared to Europe.

AR: How do you ensure that your solutions are deployable in regions often restricted by a lack of a skilled workforce?

CS: We see ourselves as holistic partners and caregivers. For this purpose, we have very well trained partners in Africa who not only market our products, but also offer training and instruct and support customers and users step by step in the application and handling of our devices. These partners ensure the after-sales support which is essential for us. Hermann Sewerin GmbH is highly interested in creating a trustful and sustainable long term business with its customers.

For this reason, Sewerin was and is active in projects with different partners. These projects have got the target to transfer knowledge and our practical experience. One example is our current project together with the GIZ and the AHK in Ghana to support the ATTC training centre in Accra with technical equipment and theoretical training materials. This shall help the philosophy of leak detection of local companies.

AR: How do your solutions help combat water scarcity in Africa?

CS: One factor that goes into water scarcity is that pipeline networks are often not inspected and maintained. Utilities are often unable to verify the real water loss volumes in their supply system. In addition, there are illegal water withdrawals, which are not counted and accounted for. Here, too, we support local companies in detection and analysis.

Intermittent water supply is not unusual in African cities but it is important to mention that it is mostly not caused by the lack of water in those regions. If you have 60% to 70% of losses in your distribution network it is very difficult to treat and provide enough water to the customers. So finally the distribution time is shortened and the pressure in the network is reduced.

It is often not mentioned that the reduction of water losses is also reducing the energy consumption of water utilities. You have to consider that water treatment and transport is mainly done by pumps. These pumps transport firstly the water from the water resource to the treatment plant. From there it is transported to the customers. So finally all the energy that was spent before gets lost with every leak that is not repaired.

AR: How can gas leak detection equipment help the industry to reduce the energy deficit?

CS: Our devices are mostly designed to find leaks in natural gas distribution networks. This happens by measuring the methane concentration in the air. These devices can also be used for industrial purposes. A further technological focus is lying on the analytics of biogas. For this application we offer stationary solutions and portable solutions to monitor the production process. Our devices are mostly sold to the Maghreb region. ■

Cleaning rivers, cleaning oceans

Plastic pollution in the ocean remains a serious problem affecting the environment, human health and key African industries such as fishing. Stephen Williams reports.

Shortly before world leaders gathered in Glasgow for COP26, the Ecomondo event in Rimini, Italy showcased how businesses were also tackling global environmental challenges.

A number of African government-sponsored delegations were in attendance. Visitors from South Africa, Nigeria, Rwanda, Ethiopia and Uganda were enthusiastically discovering the very latest technologies – which covered everything from water and sanitation to the off-shore generation of electricity to power the production of hydrogen.

There was much to see over the five-day exhibition, and the focus was very much on how individuals and businesses can reduce their greenhouse gas emissions.

But, interestingly, there was also an exhibitor that dealt with another critical environmental problem – plastic pollution of the oceans.

The Ecomondo exhibitor in question was an Italian company called River Cleaning.

Tackling plastic waste

River Cleaning are conducting the first trial of a revolutionary modular 'barrage' system on the Brenta River, removing debris from the water course before the waste reaches the oceans

Image Credit: River Cleaning

The River Cleaning system removes debris before it reaches the ocean.

It is estimated that a minimum of 14 million tons of plastic ends up in the oceans and 80% of this flows from rivers and waterways.

This is an increasingly serious problem with an 'island' of plastic waste floating in the mid-Pacific the size of Iberia.

It is sobering to think that, according to the UN Environmental Programme (UNEP) this waste island is only the 15% of the plastic matter that floats: another 15% remains in the water column while 70% rests on the seabed.

Various studies have indicated that plastic pollution is a widespread problem that threatens the health of marine species, food safety and quality, human health, coastal tourism as well as contributing to climate change. Fisheries in particular suffer direct economic impact from marine plastic pollution.

By directly impacting fishing and fish stocks, marine plastic pollution has a negative impact on the economy as well as the livelihoods and security of African populations. The UN 2030 Agenda for Sustainable Development (goal 14) calls for action to "conserve and sustainably use the oceans, seas and marine resources and by 2025 prevent and significantly reduce marine pollutions of all kinds, particularly from land-based activities."

Clearly it would be much preferable for plastic waste to not enter rivers in the first place, but accepting the reality that was unlikely to be appreciated any time soon, River Cleaning has developed a solution that is not only simple and effective but relatively affordable.

The solution is a string of circular spinning cups that capture waste. The devices are strung diagonally across the river and move the waste they collect to a pen at the bank where it can be removed from the water and properly recycled.

What makes the River Cleaning system so useful is that river traffic is not affected; boats simply push the modular barrage beneath them, and they refloat after the boat has passed. And being a modular system, they can be strung together for any width of river. They capture around 90% of floating plastic debris.

One of the buzz-phrases of the Ecomondo exhibition was 'circular economy' which, as stated by UNIDO, would move industries in plastic value chains towards more innovative, resource efficient sustainable production.

Initiatives such as the River Cleaning system are clearly a step in that direction. ■

Advertiser's Index

Africa's rapid urbanisation demands smart building solutions

Sanjeevv Bhatia, chairman and CEO of the SB Group, which comprises a selection of continental building and manufacturing companies, on how Africa can utilise smart building technologies to solve urbanisation issues.

Africa is rapidly urbanising. As per, by 2050, it will be home to more than 2.5 billion people- with 55% in urban centres. This has many implications for liveability, energy infrastructure, environment, and safety of African cities. The effects of rapid urbanisation are already manifesting through rising energy costs and increasing regulations, but there are calls for transition strategies that can reconcile urbanisation with sustainability. One of the most prominent among the potential strategies being considered to achieve this are smart building solutions.

Africa's feasibility for smart building solutions

Africa has witnessed a surge in market-driven developments in real estate. Market liberalisation, combined with the strong end-user interest, has incentivised investors to look favourably on the African market. These investors are particularly drawn towards new smart city projects, as urban centres are plagued by socio-economic issues. However, Greenfield developments could deepen inequalities, undermining holistic growth. This dilemma calls for parallel developments, with equal emphasis on new and old buildings. Africa has sizable old building stock, characterised by legacy systems and operations, which are resource-intensive, and hard to optimise.

> "Imminent urbanisation will depend on effective optimisation... that is both cost-effective and easily implementable."
>
> **SANJEEVV BHATIA, CHAIRMAN & CEO OF SB GROUP**

Imminent urbanisation will depend on effective optimisation – Africa's socio-economic challenges require optimisation that is both cost-effective and easily implementable.

The 'Android Approach' to optimising existing buildings in Africa

The open-protocol building systems can be likened to Android OS, which is open source. In the 'Android approach' to buildings, open-protocol controllers are retrofitted to existing BMS/BAS, for vendor-agnostic integration of all assets.

This enables deep-dive analysis, leading to higher efficiencies and performance, optimal energy consumption, and savings – all with existing systems, without cost-intensive hardware replacement. With no vendor lock-ins, owners and operators have the freedom to work with any service provider thereafter, and replace them if they fail to deliver.

'Androidification' allows them to add new systems to infrastructure as and when innovations emerge, to keep pace with developments – which bodes well for Africa's parallel-development proposition.

This 'Android' approach to buildings is the brainchild of Netix Global, a global smart building solutions provider. Using Netix's approach to solutions and implementation, ODS Global – an integrated building management service provider – has worked on BMS and maintenance of Emaar's 44 towers across Downtown Dubai and Dubai Creek Harbour. Netix's retrofit solution enabled ODS Global to avoid replacing the entire system and help Mazaya Holding save 75% of costs. The open-protocol solution played a part in ODS Global bagging a three-year maintenance contract of 24 DAMAC Properties towers, a mandate to upgrade and maintain three Mazaya Towers' buildings, and system integration projects in JAFZA Convention Centre, the BVLGARI Resort in Jumeirah Bay, the Pullman Hotel, and the Emirates Airlines Staff Accommodation in Dubai.

Image Credit: SB Group

A host of building technologies could rise to solve Africa's rapid urbanisation issues.

African markets are ripe for digitalisation

Increased climate consciousness, and consensus on the ability of technology to drive sustainable transition, are energising digitalisation in Africa. This development is particularly pronounced in the real estate industry and its verticals.

The is expected to grow at a CAGR of 11.2% from 2021 to 2026. Forward-thinking developers, owners, and facility managers, are poised to differentiate their building portfolios and tap into investors' new-found interest in Africa.

Such solutions are already being adopted in competitive Middle Eastern markets. The global launch of 'Netix Novus Partner Program' – Netix's global initiative facilitating the 'Android approach' – received an enthusiastic response, with industry stalwarts like Jehad Abu Shamiyeh, CEO of Electro Power Systems, KSA; Vivek Wagh, Business Development Director, SB Group International, Oman, Africa & South East Asia; and Jagdish Rajan, CEO, Garnet Technologies, part of JBK Qatar, joining the programme.

In a largely untapped market like Africa, a "Brownfield revolution" optimising old buildings can enable sustainable transformation and facilitate smart cities. Regional stakeholders will be better positioned to create new value propositions, provide global-standard services, and simultaneously achieve ROI; while enhancing the competitiveness of the entire African real estate sector. In other words, with optimisation of existing infrastructure, the imminent urbanisation can be turned into an opportunity for the continent's real estate led growth. ■