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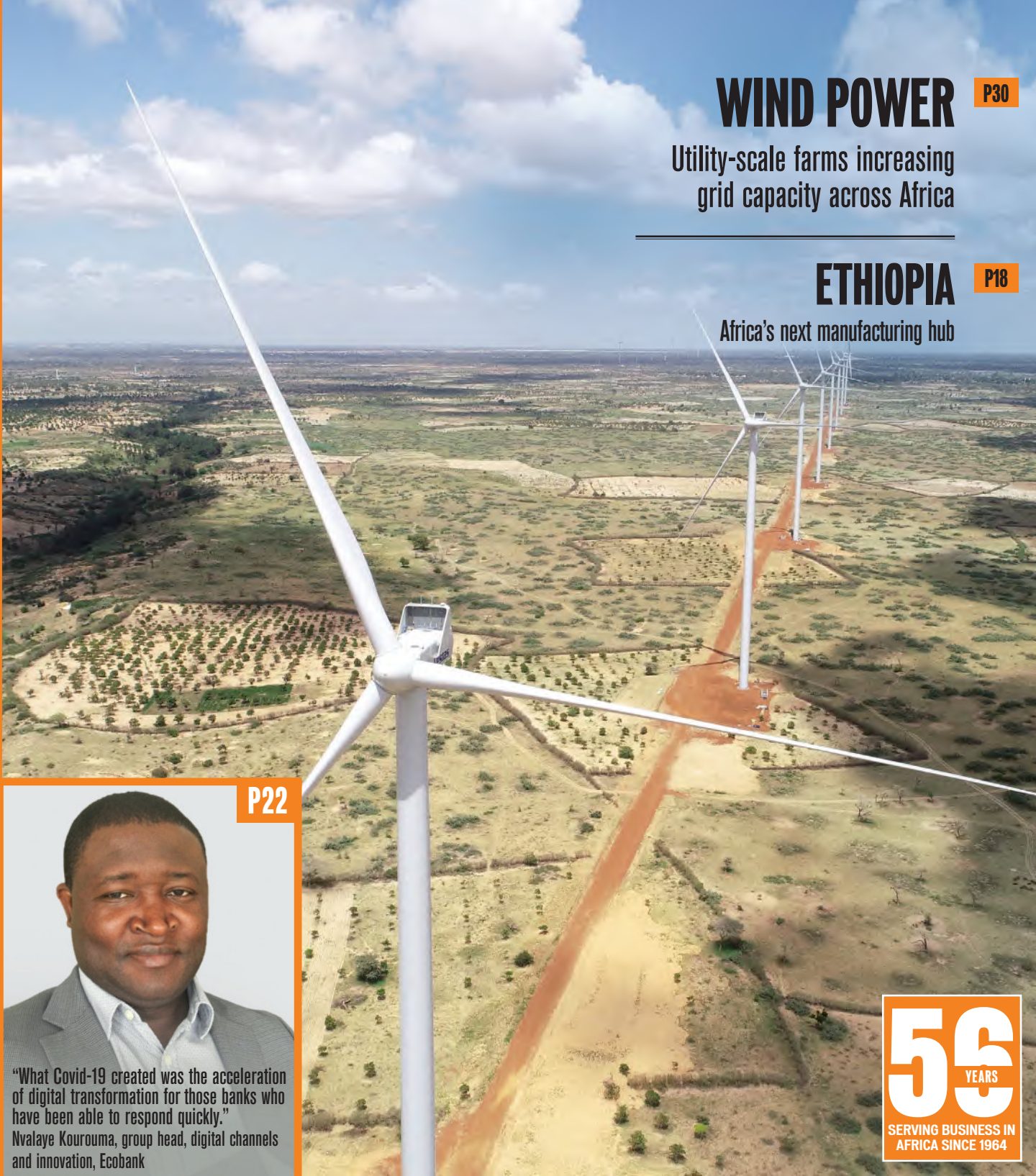
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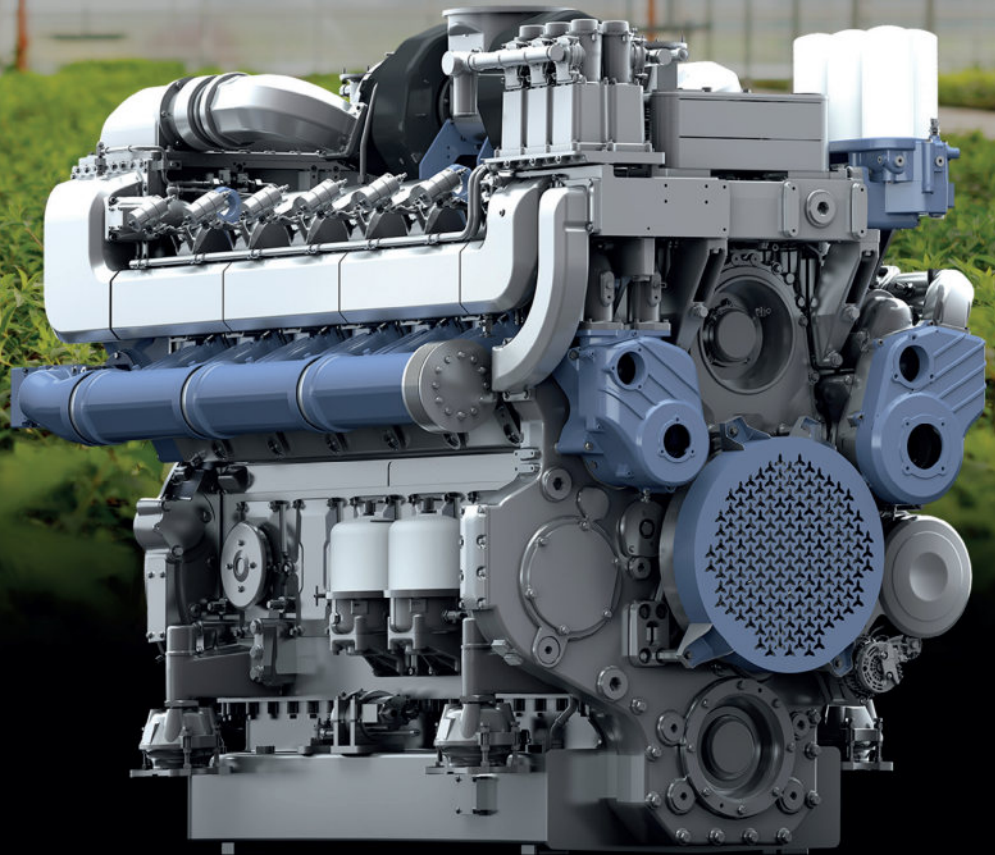
Africa's next manufacturing hub



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“What Covid-19 created was the acceleration of digital transformation for those banks who have been able to respond quickly.”
Nvalaye Kourouma, group head, digital channels and innovation, Ecobank

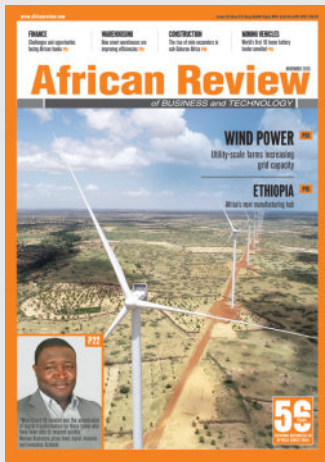




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Cover picture: Parc Éolien Taiba N'Diaye wind farm in Senegal. © Lekela

Cover Inset: Nvalaye Kourouma, group head, digital channels and innovation, Ecobank. © Ecobank

Editor: Samantha Payne
Email: samantha.payne@alaincharles.com

Editorial and Design team: Mariam Ahmad, Prashanth AP, Fyna Ashwath Miriam Brtkova, Praveen CP, Manojkumar K, Nonalynka Nongrum Unique Pattnaik, Abhishek Paul, Rahul Puthenveedu, Deblina Roy Vinita Tiwari and Louise Waters

Managing editor: Georgia Lewis

Contributing editor: Martin Clark

Publisher: Nick Fordham

Sales Manager: Richard Rozelaar
Email: richard.rozelaar@alaincharles.com

Magazine Manager: Serenella Ferraro
Tel: +44 207 834 7676 Fax: +44 207 973 0076
Email: serenella.ferraro@alaincharles.com

India **TANMAY MISHRA**
Tel: +91 98800 75908
Email: tanmay.mishra@alaincharles.com

Nigeria **BOLA OLOWO**
Tel: +234 80 34349299
Email: bola.olowo@alaincharles.com

UAE **MURSHID MUSTAFA**
Tel: +971 4 448 9260 Fax: +971 4 448 9261
Email: murshid.mustafa@alaincharles.com

UK **RICHARD ROZELAAR**
Tel: +44 20 7834 7676 Fax: +44 20 7973 0076
Email: richard.rozelaar@alaincharles.com

USA **MICHAEL TOMASHEFSKY**
Tel: +1 203 226 2882 Fax: +1 203 226 7447
Email: michael.tomashefsky@alaincharles.com

Head Office: Alain Charles Publishing Ltd, University House, 11-13 Lower Grosvenor Place, London SW1W 0EX, United Kingdom
Tel: +44 (0)20 7834 7676, Fax: +44 (0)20 7973 0076

Middle East Regional Office: Alain Charles Middle East FZ-LLC, Office L2-112, Loft Office 2, Entrance B, PO Box 502207, Dubai Media City, UAE,
Tel: +971 4 448 9260, Fax: +971 4 448 9261

Production: Srinidhi Chikkars, Swati Gupta, Nelly Mendes and Arjun S
E-mail: production@alaincharles.com

Chairman: Derek Fordham

Printed by: Buxton Press

Printed in: OCTOBER 2020

ISSN: 0954 6782

SUBSCRIPTIONS:

Rates for one year (11 issues):
Europe €107, Kenya KSh3400, Nigeria N6600, South Africa R460, United Kingdom £77, US\$140

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Editor's Note

Welcome to the November issue. Africa's largest digital energy festival kicked off last month, bringing together the Africa Energy Forum, African Utility Week and POWERGEN Africa under one banner. It has been a hugely successful event, with exciting announcements emerging, such as the world's first long-range wireless transmission project, currently operating in New Zealand. This has massive implications for Africa because this innovative technology, developed by Emrod, will instantly remove barriers to energy access for millions of people. For more, see page 29.

Keeping in line with game-changing developments, our cover story focuses on Lekela's first utility-scale wind farm in Senegal and its contribution to the grid, as well as other wind projects, page 30. Elsewhere in the issue, there are still good construction opportunities in East Africa despite the Covid-19 pandemic. Although Kenya and Ethiopia have experienced weaker construction output, both countries are still on course to achieve positive growth in 2020, unlike other countries, such as South Africa and Nigeria, which are severely affected and are expected to record negative double-digit growth, page 38.

Finally, global mining houses are coming together under a safer, cleaner, mining vehicle initiative to develop new generation mining vehicles by 2040 to make the industry more sustainable, see page 45.

Samantha Payne, Editor

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The country is on the cusp of becoming Africa's manufacturing hub, with its large, affordable labour force. It achieved the highest in a ranking of manufacturing competitiveness for sub-Saharan Africa (SSA), above Nigeria and peers.
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Advanced technologies are improving warehousing functions and management systems. Amid the Covid-19 pandemic, the global market for warehouse management system is growing at a CAGR of 12.8%. For warehouses to be efficient, cloud-based warehouse management solutions are becoming the norm.
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Bobcat launches its new generation R-Series B730 backhoe loader, replacing the company's first generation B700, B730 and B750 models, for sale in the Middle East and Africa (MEA).
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Global mining companies have come together under a safer, cleaner mining vehicle initiative to collaborate and develop new generation mining vehicles by 2040.

Vestas wins contract for Egypt wind project

Egypt's New and Renewable Energy Authority (NREA) has placed a 252MW order with Vestas for the Gulf of Suez 1 wind project in the Gulf of Suez.

Vestas has developed a solution that comprises the supply and installation of 70 V105-3.45 MW wind turbines in 3.6MW power optimised mode and a three-year active output management 4000 (AOM 4000) service agreement, capable of maximising the project's annual energy production, while meeting the local tip-height restriction and national grid code requirements. Vestas will also manage the engineering, procurement and construction (EPC) side of the project, which includes related civil and electrical works and the substation for the connection to the national grid.

"Building on our 40 years of experience and our leadership in the renewable energy sector, we are proud to be back in Egypt and continue our work there to help transform its energy infrastructure into a reliable system of clean power supply," said Muhamed Bou-Zeid, general manager of Vestas Middle East and North Africa (MENA). "Our wide portfolio of solutions and services can help NREA ensure price stability and security of energy supply over time, and in turn, demand less reliance on fossil-fuel based energy sources."

The project's annual production is expected to reach 1,027 GWh of clean energy, and according to NREA save around 560,000 tonnes of CO₂ emissions annually. It will be jointly financed by the European Investment Bank, KfW, Agence Française de Développement and the European Commission.

Vestas was one of the first contributors to the development of Egypt's wind energy infrastructure with the installation of 123 Vestas wind turbines in Hurghada and Zafarana in 2004. Vestas currently has more than 1.5GW of installed or under construction capacity in the Middle East and North Africa region including Jordan, Saudi Arabia, the UAE, Bahrain, Morocco, Senegal, and Cape Verde. With a growing number of renewable energy projects planned or underway and with ambitious renewable energy targets in nearly all countries, the region is now seen to be a significant and promising player in the global energy transition.



Image Credit: Vestas

The Gulf of Suez 1 wind project is expected to be fully operational in 2023.

MFS AFRICA PARTNERS WITH INWI MONEY

MFS Africa, the pan-African cross-border payments leader, has announced a partnership with Moroccan mobile money provider inwi money, bringing smooth and affordable international digital money transfers and payments to Morocco.

The move marks MFS Africa's first significant partnership in North Africa, which is home to approximately 2.9 million migrants, and whose emigrants account for approximately 4.4% of the global migrant population. MFS Africa's digital payments hub can help them make international payments and money transfers in a convenient manner.

Remittances in Morocco represent a significant source of money, with inbound transfers amounting to more than 6% of GDP in the last decade or so.

This new partnership will provide inwi money with access to MFS Africa's interconnected payments platform of over 200 million mobile wallets in Africa.

inwi money's 500,000 clients will be able to easily make use of digital payments beyond their domestic market, receiving money from abroad.

Dare Okoudjo, CEO and founder of MFS Africa, said, "Through our partnership with inwi money, MFS Africa is finally expanding its network in Morocco.

"Morocco plays a key role as a "connector" in Africa, due to its geographical positioning, its economic and cultural influence and its stated willingness to participate in the development of the continent. For several years now, it has welcomed an ever-increasing number of students and workers from other African countries for whom the transfer of money is essential to daily life. The partnership we are launching today with inwi money will simplify the lives of this community as well as the lives of millions of Moroccans who wish to receive money transfers from Moroccans resident abroad."

ALSTOM OPENS NEW SITE IN FEZ

Alstom has opened its new site in Fez, Morocco, to which it has moved all 400 employees from the old site.

To date, Alstom's Fez site has contributed to more than 20 global rail projects, and the new development will increase the productive capacity of electrical cabinets and harnesses for railway applications and electrical wiring, which are installed on Alstom's rolling stock across the world.

"The construction of the new plant is a perfect illustration of our strategy to design and develop localised ecosystems which bring enormous benefits for both the industry and community. We will continue to develop a strong network of local suppliers and improve knowledge of key subsystems while helping our local workforce to sharpen their skills," said Nourddine Rhalimi, president of Alstom Transport Morocco.

Alstom Fez is committed to increasing the pool of local talent and to further engaging and supporting the socio-economic development of the region, the company said in a statement.

► BRIEFS



Image Credit: Turbo J / Flickr

Egypt should produce around 25,000 electric cars annually within a few years.

Egypt to launch electric car

Egypt will launch its first locally assembled electric car in partnership with Chinese Dongfeng Motor Corporation in 2021, according to news reports. 45% of the car will be made with locally produced parts, a proportion which is expected to rise. The project will revive the production lines of the El Nasr Automotive Manufacturing Company, which have been dormant since 2009. Production capacity is expected to reach around 25,000 electric cars annually within a few years.



Image Credit: WanduJet / Flickr

The academy will offer training in areas such as automation.

New training academy for Egypt

Siemens Energy has inaugurated a service centre and training academy in Ain Sokhna, Egypt. The Egyptian German Technical Academy, a state-of-the-art training hub for vocational training, is a strategic alliance between Siemens and the German Agency for International Co-operation. It will offer occupational training to engineers and technicians in all industries and offer them the opportunity to develop their skills in a variety of areas, including workplace safety and automation.

Clarke Energy and INNIO commission second Jenbacher gas engine at Tunisia plant

Clarke Energy and INNIO Jenbacher announce the project completion and commissioning of a second gas engine at the La Centrale Laitière de Mahdia – Vitalait power plant, located in Mahdia, Tunisia.

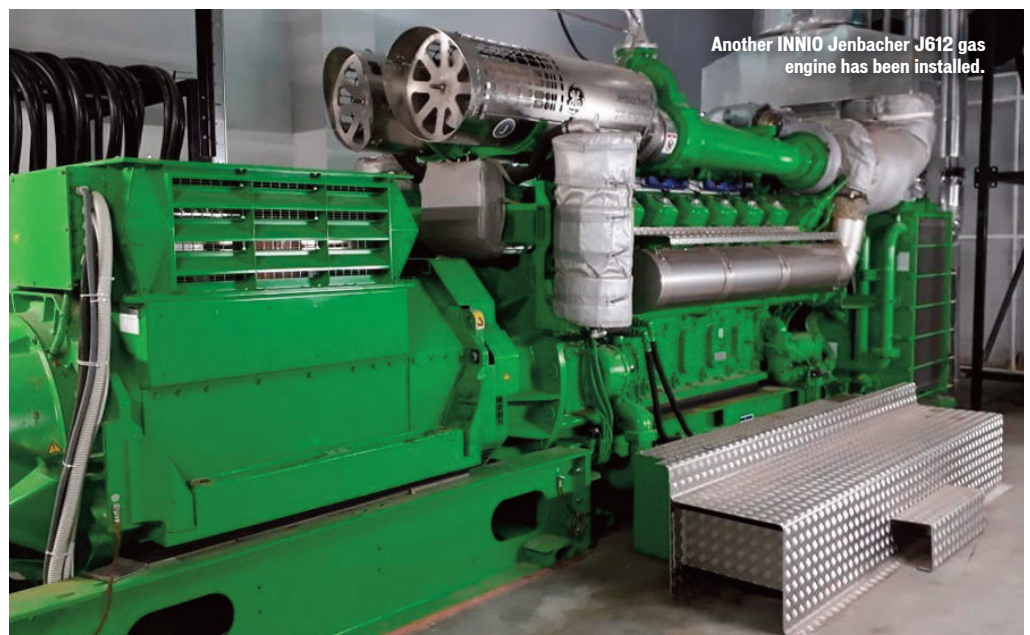
The installation of a second INNIO Jenbacher gas engine at the La Centrale Laitière de Mahdia – Vitalait power plant in Tunisia has now increased the total electrical power at Vitalait's facility to 4MWe.

Having started operations in December 1998, Vitalait currently maintains production capacity of 215 million litres of milk per year at its Mahdia plant. It produces a diverse range of products, including cheese and yogurt. At present, Vitalait has around 35 distributors throughout the Tunisian territory.

Clarke Energy, providing advanced INNIO gas engine technology, operates as a trusted partner to Vitalait for its energy efficiency projects. In 2013, Clarke Energy installed the first INNIO Jenbacher J612 gas engine at the Vitalait plant that provides an electric power output of 2MWe. The facility currently produces 1,100 KWth of hot water and 800 KWth of steam. In 2018, the Clarke Energy Tunisia maintenance team – staffed with highly trained and authorised Tunisian executives and technicians – successfully carried out the preventive semi-overhaul of the engine at 30,000 operating hours.

Seven years after the installation of the first INNIO Jenbacher gas engine, and in light of the plant's growing energy demand, Vitalait decided to boost its electric and thermal self-production by installing an additional INNIO Jenbacher J612 gas engine.

The cogeneration plant currently consists of two INNIO Jenbacher J612 gas engines with a total output of 4 MWe. This cogeneration plant



Another INNIO Jenbacher J612 gas engine has been installed.

Image Credit: Clarke Energy

contributes to the reduction of the energy costs of Vitalait with a monthly gain of more than 166,000TND as well as a reduction of carbon emissions of more than 6,000 tonnes per year.

Hechmi Ali, deputy general manager of Vitalait, said, "Clarke Energy and INNIO Jenbacher are our strategic affiliates for cogeneration. The signing of the second agreement testifies to our satisfaction with the quality of the product and the services provided as part of the first investment. We look forward to our collaboration spanning the next 15 years. Given our extraordinary growth, we will

look to develop further."

Clarke Energy Africa director, Sahbi Amara said, "We are pleased to have reached this level in the relationship with La Centrale Laitière de Mahdia – Vitalait. With its turnkey offer and its services provided under long-term maintenance contracts, Clarke Energy supports its customers throughout the life cycle of installations by guaranteeing availability, reliability and performance. The success of Vitalait's cogeneration installation is proof of the relevance of the cogeneration solution in Tunisia, with a well-defined legal

framework, and that Jenbacher engines associated with Clarke Energy's commitments today represent the best choice on the market."

INNIO Jenbacher general manager META & SA, Christof Harrasser, said, "Our INNIO Jenbacher gas engines provide a power range of 200kW to 10MW, furnishing onsite power, heat and cooling for a variety of commercial, industrial and municipal applications. We are happy to provide our INNIO Jenbacher gas engine technology to support La Centrale Laitière de Mahdia – Vitalait's impressive growth across Tunisia. With the J612's continuous enhancements and extensive operating hours, we are confident that INNIO Jenbacher will continue to be their technology of choice for all their power generation needs." ■

“Clarke Energy and INNIO Jenbacher are our strategic affiliates for cogeneration.”

HECHMI ALI, DEPUTY GENERAL MANAGER OF VITALAIT

Partnerships in mega projects critical to success of AfCFTA

Partnerships in mega projects are critical to the success of the Africa Continental Free Trade Agreement (AfCFTA), according to the South African High Commissioner to Mozambique, Mandisi Mphahla.

He was speaking at the South Africa and Mozambique virtual Trade and Investment seminar, which took place under the theme: 'Developing Afrocentric solutions and forging partnership in response to Covid-19'.

More than 360 business people attended the webinar, which was focused on trade and investment opportunities available in Mozambique and also discussed strategic issues regarding Mozambique's investment plans to stimulate the country's economic growth amid the pandemic.

According to Mphahla, mega industrial and infrastructure projects require collaborative approaches, and have an important dimension with regards to facilitating market access, because they assist in putting in place the necessary integrative infrastructure, which brings the countries together and eases the flow of goods between the countries.

John Rocha, chief director of Trade Invest Africa, a division of the DTIC, said, "The five working groups are on agriculture and agro-processing, natural gas, electricity and power, transport and logistics infrastructure, and trade and investment. We have also agreed to mainstream within these working groups, the financing element and industrialisation component in terms of the regional value chains that can be developed and created," said Rocha.

Some of the topics that were covered by the seminar include the impact of Covid-19 on trade and investment between the two countries, infrastructure projects as catalysts to enhance economic growth and regional integration, the Mozambique Liquid Natural Gas (LNG) project, Mozambique electrification plant, project financing, developing agricultural value chains and linkages to ensure food security, and mobilising private sector resources to deliver industrial and infrastructure projects.



Image Credit: Nicole Kohler/Pharaby

The aim is to develop agro-processing, natural gas, electricity and power, transport and logistics infrastructure and trade and investment.

CLOUD MONITORING SERVICE COMES TO SA

German tech start-up CloudRadar is launching its cloud-based IT-monitoring service in South Africa, ahead of further global expansion, to help ensure IT stability for regional businesses in the face of rapid, pandemic-fuelled digitisation.

The company, which is backed by one of Germany's largest state-funded venture capital initiatives and more than 20 tech investors, has set up a data centre in Johannesburg, to allow for minimal monitoring latency for African businesses.

CloudRadar is a monitoring solution used by entrepreneurs, managers and IT systems administrators to detect and prevent IT network issues in real-time so that they can keep their organisations up and running at all times.

Nicholas Thiede, CloudRadar managing director who is based in Cape Town, said the company has set up a team in South Africa, and its new South African data centre was the company's eighth around the world.

"Given the importance of the African continent for global IT growth, with South Africa being the main driver of that growth, it is important for us to have a strong base in South Africa. We believe in South Africa's economic potential, and we already see a lot of traction from businesses of all sizes in the region that understand the need for IT reliability. The recent months strongly proved that IT infrastructure stability is no longer a nice-to-have. It's integral to all business operations, no matter which industry," he said.

Founder and CEO Thorsten Kramm, an IT infrastructure monitoring expert from Berlin, said the Covid-19 pandemic had shown the crucial role of IT reliability in how organisations were able to react to external challenges, adding that IT systems failures cost the average business up to US\$10,000 for every hour of downtime.

LEKELA'S FOURTH SOUTH AFRICAN WIND FARM STARTS COMMERCIAL OPERATION

Lekela, a renewable energy generation company that delivers utility projects across Africa, has announced that its Perdekraal East Wind Farm in South Africa has successfully completed commercial operations. Construction for the 110MW project began in 2018 and was achieved with a high level of locally manufactured content, including wind turbine towers and two large high voltage transformers.

The project, which will use 48 Siemens SWT-2.3-108 turbines, will power up to 111,000 South African homes. The wind farm will provide approximately 360 GWh of energy each year, eliminating approximately 410,000 tonnes of carbon from traditional power plants.

Chris Antonopoulos, CEO at Lekela, said, "This milestone cements Lekela as one of the leading providers of clean, renewable energy in the country. No other source of energy continues to develop as rapidly as renewables in terms of cost and scale, and it's exciting to see that the Perdekraal East wind farm is now delivering power to South Africa's grid." See our exclusive interview with Lekela on page 30 & 31.

► BRIEFS

Power Metal signs drilling contract



Image Credit: marcin studio/Perals
Phase 1 drilling programme consists of four diamond core drill holes.

Mining group Power Metal Resources has signed a drilling contract with Discovery Drilling Contractors Africa for exploration work at the Molopo Farms Complex project in Botswana. For the initial 2,505m planned, the phase 1 drilling programme consists of four diamond core drill holes. Target hole depths vary from 525m to 710m and will test the first four of several high priority targets identified as prospective for nickel sulphide mineralisation by geophysical survey data.

Expanding remittance services into southern Africa

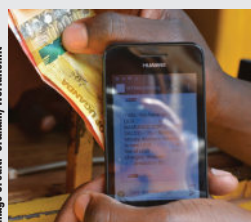


Image Credit: Graham/WorlRemit
The cash pick-up service operates six days a week.

Mukuru and WorldRemit have announced a partnership to expand their cash remittance collaboration to Zambia, South Africa, Mozambique, Malawi and Botswana. Partnership expansion is the latest move by both companies to improve the delivery of financial services to customers by combining their strengths and leveraging their capabilities and resources. The cash pick-up service operates six days a week, with no long queues for customers.

Minerals Council South Africa calls for better competitiveness to attract investment

The Minerals Council South Africa has noted the South African Economic Reconstruction and Recovery Plan presented by President Cyril Ramaphosa on 15 October 2020 to a joint hybrid sitting of parliament. But it pointed out that while the plan does capture a number of the agreed points from the NEDLAC discussions, it does not go far enough on the areas where South Africa needs to improve its global competitiveness, the council said.



Image Credit: Flickr/GovernmentZA

President Cyril Ramaphosa presented the nation's economic recovery plan to the Minerals Council South Africa.

The business inputs in NEDLAC focused on measures to raise investor and business confidence, improve the nation's competitiveness and to raise private sector investment and inclusive growth. Only by increasing the country's competitiveness will the nation be able to unlock its economic potential, and only then will investment (local and foreign) flow.

Minerals Council president Mxolisi Mgojo said, "South Africa is at a precipice. While we have managed to claw back from the precipice before, it has only been through decisive action that recognises that pain comes before gain – across the board – that we can set our nation back on a road to prosperity. That means that hard economic decisions need to be taken, and soon.

"The South African economy was in a crisis before the outbreak of the Covid-19 pandemic, performing well below its potential for the past decade. Covid-19 has further exacerbated the situation, resulting in 2.2 million South Africans losing their livelihoods during the second quarter of 2020, with the country's fiscal deficit ballooning to 15% of GDP and GDP likely to shrink by 9%."

The council continued that while the government plan was a positive contribution to stabilising the economy, appearing to centre on what government can do in a massive infrastructure programme, the plan does not adequately address in detail the issues that drive competitiveness and investment, including foreign investment. The tough choices on structural reforms that would allow greater private sector participation and investment are mostly absent or are mentioned in passing.

MINING INDABA RELEASES COVID-19 IMPACT REPORT

Investing in African Mining Indaba, (Mining Indaba), the world's biggest mining event, taking place in February in Cape Town, has released the results of its latest research project, dedicated to analysing the ongoing impact of the Covid-19 pandemic on the African mining space. It compares the initial impact results of the first report to now, more than seven months since the World Health Organisation declared a global pandemic. This is the second in a series of reports Mining Indaba launched to provide the African mining community with greater clarity on the short-, mid- and long-term effects of the pandemic. It analyses the impact of Covid-19 on African mining businesses, operations and investment decisions, as well as forecasting investment, procurement levels and commodity prices over the next six to 12 months.

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Golden Star completes sale of Bogoso-Prestea gold mine to Global Resources

Golden Star Resources has announced the completion of the sale of its 90% interest in the Bogoso-Prestea Gold Mine in Ghana to Future Global Resources Limited (FGR).

The sale enables Golden Star to accelerate the growth and development of the resource base at the Wassa gold mine, and increase exploration activities in the wider Wassa-HBB project area.

“This transaction is transformational for Golden Star’s balance sheet and allows us to focus fully on further developing Wassa. We are now able to concentrate our financial and technical resources on accelerating the delivery of value from Wassa as it continues to develop into a large-scale, long-life and cash generative underground mine. We now look forward to completing a preliminary economic assessment on the development options for the ore body by the end of the year. In doing so we can subsequently provide the market with greater clarity around the potential path and timing for future growth at the asset,” said Andrew Wray, president and chief executive officer of Golden Star.

“The sale strengthens our balance sheet by providing a cash inflow of US\$30mn by 2023 and removing negative working capital and liabilities from our balance sheet,” he remarked.

“Given the resulting improvement in the financial position of the company, we expect to now be able to accelerate our investment at Wassa and within our existing exploration pipeline and look for other opportunities to further expand our business. Bogoso-Prestea will also benefit from having an owner solely focused on delivering the turnaround of the underground operation and assessing the significant potential of the sulfide resources. As a result, we see this transaction as positive for both FGR and Golden Star, our respective employees, Ghana, the host communities and all of our other stakeholders,” Wray added.

In addition to the initial cash consideration, the staged payments of US\$25mn and contingent payments of US\$20 to US\$40mn, ensure that FGR is able to focus its investment capacity on the business while providing Golden Star with exposure to Bogoso-Prestea’s long-term growth potential.



The sale enables Golden Star to accelerate growth of Wassa gold mine and the wider Wassa-HBB project.

Image Credit: Adobe Stock

IFC AND UNION BANK TO BOOST TRADE FINANCE IN NIGERIA

The International Finance Corporation (IFC), a member of the World Bank Group, has announced a US\$40mn finance guarantee facility to Nigeria’s Union Bank to boost access to finance for local business, enable increased international trade for Nigeria and help protect the country’s economy from the impact of Covid-19.

The facility, will help Union Bank establish working partnerships with nearly 300 major banks within IFC’s Global Trade Finance Programme (GTFP) network, thereby broadening access to finance and reducing cash collateral requirements for Nigerian businesses, enabling the continued flow of trade credit into the market.

The GTFP will offer confirming banks partial or full guarantees covering payment risk on Union Bank’s trade-related transactions. These guarantees are transaction-specific and may be demonstrated by a variety of underlying instruments including letters of credit, trade-related promissory notes, guarantees, bonds, and advance payment guarantees.

“Keeping trade moving is essential to growth and job creation, especially during the challenging economic times we are living through today. We welcome Union Bank to IFC’s Global Trade Finance Programme and value a partnership that will make a positive impact on Nigeria’s economy,” said Eme Essien Lore, IFC’s country manager for Nigeria.

“This is a significant achievement as we continue to expand our trade financing offerings to our corporate customers. Even in these peculiar times, we remain focused on contributing to economic growth by developing tailored solutions that help our customers to harness teeming opportunities that still exist in the Nigerian market,” commented Emeka Emuwa, chief executive officer of Union Bank.

CROWN AGENTS BANK PARTNERS WITH VODACASH

Crown Agents Bank has signed a partnership with VodaCash SA, to facilitate international mobile payments in the Democratic Republic of Congo (DRC), through the M-Pesa brand.

Crown Agents Bank will now be able to deliver local payments to approximately two-thirds of the mobile money users across the DRC, saving organisations and recipients considerable cost in time, money and the risk of having to transfer significant amounts of cash over large distances.

“Being able to provide payments to mobile wallets in the DRC is an important step towards financial inclusivity. Along with our FX capabilities across the continent, we are building out a suite of payment services that allow us to reach those who previously were unable to access financial services. We are seeing an increased demand from international development organisations making payments to mobile wallets in the wake of the Covid-19 pandemic,” said Steve Marshall, chief commercial officer at Crown Agents Bank.

BRIEFS

Ghana, Nigeria consider joint business council



The council seeks to provide an enabling business environment.

Ghana and Nigeria are proposing a joint business council to govern matters of trade and investment between the two countries.

It is a result of recent high-level exchanges over the closure of Nigerian owned businesses alleged to have breached Ghana’s domestic investment laws. The proposal was disclosed when the speaker of the House of Representatives of Nigeria, Femi Gbajabiamila called on President Nana Addo Dankwa Akufo-Addo at the presidential palace.

Equatorial Guinea and Rosgeo commence geological mapping project



The programme marks the re-entry of Rosgeo into Equatorial Guinea.

Equatorial Guinea is set to boost energy transition activities, with a geological mapping project in collaboration with Russia’s Rosgeo. JSC Zarubezhgeologia and JSC Yuzhmoregeologia, subsidiaries of Rosgeo, will perform the initial phase of seismic acquisition in the transit zone and state geological mapping in Rio Muni. The memorandum of understanding was signed during the Russia-Africa Summit in 2019 between Rosgeo and the Ministry of Mines and Hydrocarbons.

SUDANESE TRACTOR COMPANY LIMITED (SUTRAC)

Sudanese Tractor Company Limited (SUTRAC) is Sudan's sole authorized Caterpillar dealer- the world's leading manufacturer of heavy machinery and electric power generation- delivering unrivalled service since 1952.

SUTRAC sells, rents and provides parts and service for equipment and engines to customers in various industries, including Mining, Construction, Infrastructure, Agriculture, Power Generation, Material handling, Aggregates and Quarry.

HISTORY

SUTRAC is the flagship company of Sudan's largest and most diversified conglomerate, DAL Group. Established in 1952 by Mr. Daoud Abdelatif with the aim of serving and adding value to the Sudanese market. Its success was the foundation on which DAL Group was built.

Over the years, the company has grown, thanks to a genuine commitment, to earn customer loyalty.

POWER SYSTEMS

Any size or shape, in any regulatory environment, when you need power, Caterpillar is equal to the challenge. Our generators are used in a variety of applications.

DIESEL GENERATORS

CAT Diesel Generator Sets come in a range of options to match your power needs. Coupled with Sutracs' unbeatable knowledge, expertise and service, we can offer you a world class power solution, whatever the application or operating conditions. If you need a diesel generator of power potential, you'll have peace of mind knowing our diesel-fueled generator sets are built to world-class standards, for high efficiency, low fuel consumption and global emissions compliance.

TURN-KEY PROJECTS

SUTRAC and Caterpillar provide complete power solution to the customers.

Our experts can provide consultation all the

way through your project, determining the best Caterpillar Solution for your load profile and plant/system needs:

1. Design and supply of containerized/modular.
2. Power Solutions/Generating Sets.
3. Fuel Storage and Delivery Systems.
4. Project Management of supply, installation and hand-over of your Caterpillar solution, handled by an experienced customer focused team.
5. Technical and operating training of customer engineers at site or at our Certified DAL Academy.
6. CSA (Customer Support Agreements), support packages from simple preventive maintenance programs to full operation and maintenance of power generating plant, including fuel management options.

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Sudan is the third largest country in Africa with very rich natural resources from Oil, Gold, water and vast agricultural lands. Though, the economy in Sudan is still struggling and facing lots of challenges since the secession of South Sudan in 2011 and the effect of US economic sanctions since 1997 which later were partially lifted in October 2017. Yet still Sudan has huge opportunities for foreign investors especially in the mining/agriculture sectors.

As for the Energy, there is increasing energy demand in the country due to the increasing population, mining operations, infrastructure projects and the growing public investments into commercial construction sectors, the main sources of grid power are Hydropower and Thermal generation but I think Sudan is still an energy deficient country which is now importing power from Ethiopia to meet its energy requirement. The demand for Diesel generators is high and increasing in Sudan and it's often used as a prime source of power especially in remote locations where there is no access to the grid for electricity supply.

We in Sutracs have greatly participated in the development projects of Sudan with broad services from Supplying, Installation and Turn-key project. We are always committed to putting our clients first, providing exceptional service to meet customer's needs and expectations.

One of the opportunities that I see that we still need to work on or promote in Sudan is the use of the One-line platforms. Unfortunately, we are still far from the Digitalization and online purchasing due to many reasons, which hindered adoption and the implementation of these technologies.



Sami Mubarak Mohamed
Head of Power Systems Department.



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Kenyan and Tanzanian trade fares well despite Covid-19 pandemic, says firm

East African trade was already in decline before the Covid-19 pandemic, warned Tedd George, founder and chief narrative officer at Kleos Advisory.

In a presentation to kickstart GTR East Africa 2020 on 1 October, he highlighted that trade had dropped by 13% to US\$44bn in 2019 due to weaker global demand.

The impact of Covid-19 on East African economies has varied greatly, with Kenya and Tanzania's trade down by only 2% and 6% respectively, while Burundi, Rwanda and Uganda have fared worse, suffering a massive slump, especially Rwanda and Uganda whose exports have declined by more than a third.

George said, "Part of the reason Kenya appears to have done better is that we have seen a real drop in imports and re-exports.

This reflects flattening demand across the region, but set against this, we've also seen exports actually going up for the first half of the year. It's possible that, as estimated from the EIU, that we might actually see a rise in Kenyan trade overall for the year."

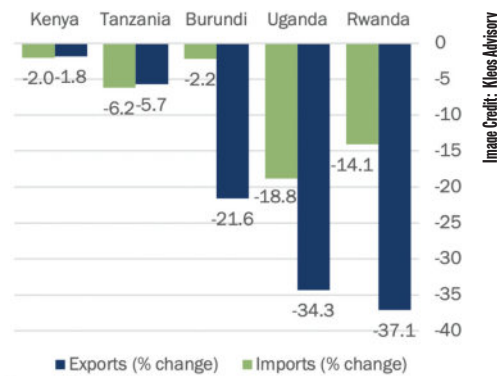
But the reality is that the coronavirus crisis has hugely impacted local demand and inter-regional trade.

He said, "Most of us working in East Africa are involved in inter-regional trade. It [Covid-19] has really impacted those flows across those countries and has had a huge impact on businesses as well."

China and the EU remain the dominant trade partners with the EAC region. China has continued to grow its share of East Africa's bilateral trade to more than 140% over the last 10 years to an estimated US\$9.2bn while in EU it has been "broadly flat".

George continued, "Intra-African trade remains the single most important point of the EAC trade. But it is losing ground to China. This partly reflects the fact that a lot of the imports are electronics, capital and consumer goods coming from China. From what we've seen at the beginning of this year with the drop in intra-regional flows, it's possible that we might see China becoming the key trade partner for East Africa by the end of the year."

Forecast % change in exports & Imports for EAC countries in 2020



Source: EIU (2020).

Bilateral trade was declining before the Covid-19 global crisis happened this year.

ZANZIBAR'S URBAN RESIDENTS GET IMPROVED WATER AND SANITATION ACCESS

The Zanzibar Urban Water Supply and Sanitation Project, implemented between 2012 and 2018 in Tanzania, has provided water and sanitation services to around 287,000 people, according to a report (by the African Development Bank).

Financed by a US\$19mn loan, the project was rolled out in Saateni and Welezo, two urban areas in the Zanzibar archipelago.

The report noted that 71% of the people in the Saateni and Welezo regions now benefit from water supply services, 12 elementary schools have gained access to improved sanitation facilities, and 5,000 primary school students have been taught about hygiene and sanitation.

"Similarly, 76% of the 30 targeted non-functional boreholes have been rehabilitated and new submersible pumps have been installed, six new wells have been drilled and new submersible pumps have been installed. A total of 56,782 cu/m per day of water is produced, representing 154% of the targeted production quantity of 36,755 cu/m per day," according to the project completion report.

The rehabilitation and extension of more than 68km of water supply and distribution mains, the installation of more than 15 water meters, the acquisition of nearly 4,000 household water meters, and the rehabilitation and construction of about 454 sanitation and hygiene facilities in elementary schools are adapted to children and people with disabilities.

Thirty school sanitation and hygiene centres were created. Nine training sessions were held for 117 teachers, 72% of whom were women. "The project has made remarkable progress and has ultimately improved the lives of the targeted beneficiaries," the report said.

CLYDE & CO ADVISES ON MOGADISHU PORT PROJECT

Global law firm Clyde & Co has advised the Federal Government of Somalia on its 14-year concession agreement with Turkish contractor Albayrak Group for the rehabilitation and operation of the Port of Mogadishu.

Clyde & Co acted as sole legal adviser to the government on all aspects of the matter, including drafting and negotiating the major transaction documents, as well as providing strategic advice on due diligence and regulatory approvals. The mandate was underpinned by the African Legal Support Facility.

As an initiative to develop and modernise the port, the agreement has covered several aspects. These include the continuation of the port's exclusive terminal operations and marine services by Albayrak under a revised revenue share arrangement, as well as a rehabilitation and investment programme to safeguard the port assets and respond to increasing trade flows.

► BRIEFS



Image Credit: Adobe Stock

The project will develop economic interconnectivity.

Uganda plans to construct roads linking eastern DR Congo

The cabinet of Uganda has approved a plan to construct roads to link Uganda with the Eastern Democratic Republic of Congo (DRC). As reported by Chimp Reports, the 223km road network focuses on boosting the bilateral trade activities while addressing the country's strategic security. According to the report, the project will be contributing to achieve improved mobility and ease of business.

DFC backs US\$1.55mn for Ethiopia power project



Image Credit: Adobe Stock

This will be the country's first independent power project.

The US International Development Finance Corporation (DFC) has committed US\$1.55mn in technical development for the Tulu Moyo Geothermal Power Plant Project in Ethiopia. DFC's grant will enable project development and accelerate the schedule to design the 50MW geothermal power plant. When completed, the project will be the country's first independent power project and one of the largest geothermal power plants in Ethiopia.

Siemens Energy to supply gas turbines for Mozambique's onshore LNG project

Siemens Energy will supply emissions-reducing power generation equipment and boil-off gas (BOG) compressors for the Mozambique LNG Project in the Cabo Delgado province on Africa's East Coast.

The project, led by TOTAL E&P Mozambique Area 1, includes the development of

offshore gas fields in Mozambique's Area 1 and a liquefaction plant with a capacity in excess of 12 million tonnes per year.

As part of the contract, Siemens Energy will supply six SGT-800 industrial gas turbines that will be used for low-emissions onsite power generation.

With more than eight million total fleet operating hours, and more than 400 units sold, the SGT-800 turbine is ideally suited for power generation, particularly in LNG applications, where reliability and efficiency are critical. The 54MW turbine rating selected for this project has a gross efficiency of 39%. It is equipped with a robust, dry low-emission (DLE) combustion system that enables world-class emission performance over a wide load range.

"Mozambique LNG is the country's first onshore LNG development project and will play a major role in meeting the increasing demand for energy in the Asia-Pacific, Middle East, and Indian sub-continent markets," said Thorbjørn Fors, executive vice-president for Siemens Energy Industrial Applications.

Siemens Energy will also supply four centrifugal compressors for BOG service.

A main feature of these compressors is the inlet guide vane system that allows for optimisation of power consumption according to changes in operational parameters such as inlet temperature and outlet pressure.

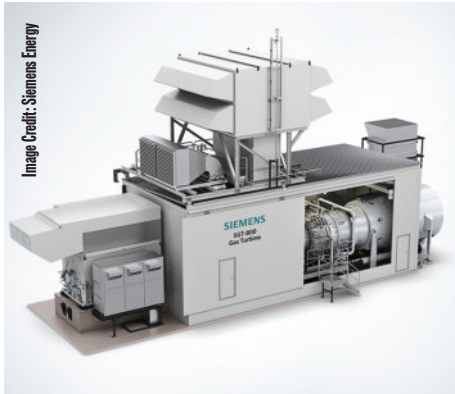


Image Credit: Siemens Energy

The turbines will be used for low-emissions onsite power generation.

IMPROVE ACCESS TO WATER AND SANITATION IN KENYA

Agence Française de Développement (AFD), European Investment Bank (EIB), the European Union (EU) and Kenya have joined forces to improve access to water and sanitation in Kisumu, Kenya.

On the sidelines of the visit to France, the President of the Republic of Kenya, Uhuru Kenyatta, signed agreements for the Lake Victoria Water and Sanitation Project (LVWATSAN), which aims to improve access to water and sanitation in Kisumu.

The agreements will implement the LVWATSAN, which is financed with a US\$23.57mn concessional loan from AFD, a US\$41.24mn concessional loan from the European Investment Bank (EIB), and a US\$5.89mn grant from the European Union. The government of Kenya will provide counterpart financing amounting to US\$11.78mn. The project will expand the water and sanitation distribution network in Kisumu, including informal settlements, and expand water supply to Ahero and Maseno.



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www.ecomondo.com

4-5

POWER & ELECTRICITY WORLD AFRICA

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

24-26

DIGITAL AFRICAN UTILITY WEEK AND POWERGEN AFRICA

https://www.african-utility-week.com/digital

24-27

BAUMA CHINA

Shanghai, China
https://www.bauma-china.com/en/

DECEMBER

10

RENEWABLE NORTH AFRICA 2020

Virtual
www.moroccorenewable.org

FEBRUARY

1-4

AFRICAN MINING INDABA

Cape Town, South Africa
www.miningindaba.com

1-5

AFRICA OIL WEEK

Cape Town, South Africa
www.africa-oilweek.com

24-26

POWERING AFRICA

Washington, D.C.
www.poweringafrica-summit.com

MARCH

8-9

MOZAMBIQUE GAS & POWER

Pemba, Mozambique
www.africaoilandpower.com/event/mozambique-gas-power-2021

17-18

6TH ARE ENERGY ACCESS INVESTMENT FORUM 2020

Lusaka, Zambia
https://eaif2020.b2match.io/

24-26

6TH MINEXPO AFRICA

Dar-es-Salaam, Tanzania
www.expogr.com/minexpotanzania

APRIL

19-24

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paris-en.intermatconstruction.com

Spotlight on southern Africa's water resources at WISA 2020

The WISA Biennial Conference and Exhibition, South Africa will be held online from 7-11 December 2020, bringing together water sector professionals and other stakeholders from across the country and beyond.

The event will promote the #allhandsondeck social media hashtag, focusing on issues surrounding increased water demand in southern Africa. This is compounded by a rapidly urbanising population, changing lifestyles and economic growth. The "allhandsondeck" approach is needed by the region to address the water crisis caused by insufficient water infrastructure maintenance and investment, recurrent droughts and floods driven by climatic variation, inequities in access to services, deteriorating raw water quality and a lack of skilled water practitioners.

"Urbanisation is both an opportunity for economic growth and a threat to liveability, and we find that an uncertain future underpins the planning of our cities and the management of our ecosystems. With increasing numbers of people living in metropolitan areas, water, energy and materials need to be carefully used, reused and renewed," said Dr Lester Goldman, CEO of WISA.

"Water is an integral part of all sectors, and it is time to stop looking at it in isolation. We hope that by expanding the 2020 conference to include a broader range of governmental departments we will be able to ensure that water is valued, conserved and protected across all sectors," Goldman added.

Continuing this, Dr Shafick Adams, chair of the organising committee, said, "This year's conference is expected to be bigger and better than ever before – even during these difficult times."

WISA 2020 will focus on increasing water supply; managing the resource for a capable ecology; monitoring effective water and sanitation services and infrastructure; governing and regulating the water sector; improving raw water quality and management; developing skills and technology innovations and disruptors.

Additionally, the conference is expected to consider the broader impacts



Image credit: WISA

of water on society and the environment. It will feature knowledge sharing sessions and networking opportunities, as well as several conference tracks to ensure that there is something for everyone.

The event will open with a keynote by Daniele Silke, director of the Political Futures Consultancy. Silke will speak on 'South Africa and The World: Navigating the Post-Covid Future'.

Some of the topics that will be discussed include: energy recovery taking the pressure off municipal water supply networks; leveraging on technological innovation and fusion to foster effective water resource monitoring in South Africa; challenges facing schools to provide effective water services and promoting water conservation; unlocking investment opportunities in water sector for economic growth, drought resilience and improved environmental health; keeping up with the ever increasing resource demand; growing momentum for social franchising partnerships; using litres per capita per day as a performance indicator to assess water use efficiency; securing water security in South Africa; and community driven water services for multiple uses as alternative service delivery model.

“ I’m really a believer in the equality of languages and I believe that every language, even if spoken by five people, has a right to be. The challenge we have is how people from one language community can have conversations with members of another language community. Monolingualism is the carbon monoxide of culture and multilingualism is the oxygen of culture.”



Image credit: Niccolò Caranti/Wikimedia Commons

NGŪGĨ WA THIONG’O
Kenyan author

“ In just five years, Paystack has done what many companies could not achieve in decades. Their tech-first approach, values, and ambition greatly align with our own. This acquisition will give Paystack resources to develop new products, support more businesses and consolidate the hyper-fragmented African payments market. We can’t wait to see what they will build next, and how their growth can turbocharge the African tech ecosystem.”

MATT HENDERSON
Stripe’s business lead in EMEA, following their acquisition of Paystack

“ We are pleased to have restarted mining operations at Boungou which marks a significant milestone in the integration process. The newly acquired assets are now well embedded into our West African operating model which is centered on an agile and streamlined management approach, based on empowered decision-making at the mine level with shared regional support functions. In addition to the significant procurement, supply chain, and G&A savings, we are also seeing the benefits of softer synergies that arise from being the largest gold producer in Burkina Faso, such as a further strengthening of our partnership with the government and an enhanced ability to manage risks across the business.”

SÉBASTIEN DE MONTESSUS
President and CEO of Endeavour Mining

“ This report has become even more relevant for us to read in the context of the pandemic, and particularly meaningful given that the lion’s share of African migration remains within the continent. It reminds us how migration is integrated into every aspect of our societies and economies; it reinforces the critical need to include migrants into our responses to the pandemic, and other multifaceted crises, and in all our public policies; and it forces us to look beyond the problems of today, and consider where the challenges, and solutions, of tomorrow might be found.”

ANTÓNIO VITORINO
IOM director general, speaking on the major issues covered by the Africa Migration Report

“ In line with this year’s Tech in Ghana theme, ‘The Power of Collaboration – Impact, Investment & Sustainability’, the industry has a lot to discuss. Crises, such as Covid-19, highlight the importance of collaborating for long-term success, particularly in regards to digital infrastructure and accessibility. Founders within the tech ecosystem, government and non-governmental agencies, investors and corporates can effectively pull together with their unique, cross-functional perspectives to solve rapidly changing, complex problems within the sector. In addition to Covid-19, we’ll be exploring tech’s role in Ghana’s upcoming election; the African Continental Free Trade Area (to which the country will play host secretariat), and, of course, developments in key sectors such as fintech, agritech, digital commerce and more.”



Image credit: AB2020

AKOSUA ANNOBIL
Founder of AB2020 and Tech in Ghana



Image Credit: Adobe Stock

African banks - finding balance between post-pandemic challenges and opportunities

In a post-pandemic environment, African banks will have to navigate not only an economy in recession, but one where there will be many disruptors to existing business models and a rapid acceleration of existing trends such as digitalisation, cybercrime and the importance of environmental, social and governance (ESG) factors.

Challenges

Baker McKenzie's latest report, *'Finding Balance: The Post-Covid Landscape for Financial Institutions'*, states that at the beginning of the Covid-19 crisis, financial institutions faced two main challenges – prudential and operational. The prudential challenge refers to a sudden drop in the value of financial assets, or loss of liquidity, whether domestically or elsewhere in the world. Much of the initial falls on financial markets have since been somewhat reversed, but asset valuations in the worst affected parts of the economy are significantly down, and liquidity remains a major concern. The operational challenge refers to the failure of systems and controls that underpin the financial system in the face of operational risk, reflecting inadequate resilience. By and large, with the reforms enacted since 2008, most global financial institutions have managed the operational issues quite well.

However, the report outlines how a longer and more protracted recession has implications for financial institutions, as it does for other sectors of the economy. At a high level, while organisations currently remain well capitalised, the position could deteriorate. Banks will face increasing levels of non-performing loans, with corporates drawing down pre-existing credit lines.

Rising debt

The report notes that in recent years, a global investment surge has driven a rising debt burden, which combined with ongoing economic disruption, has created the conditions for rising debt defaults. The lockdowns imposed by many governments to tackle the public health emergency, the consequent disruption to supply chains and the reduction in demand for those corporates whose business models are most impacted by social distancing, will almost certainly trigger defaults and bring their viability into question. A further unknown concerns the path of interest rates in the future, currently at historic lows. All this means that there will likely be significant credit losses for commercial banks that must agree to either restructure debt or write off much of their exposure.

Wildu du Plessis, partner and head of banking & finance at Baker McKenzie in Johannesburg says that

African banks are, on the whole, in good health at this stage, with adequate funds set aside to ease them through difficult times.

“While the big banks have been affected by the pandemic, they still have liquidity and strong capital levels and should not need to raise capital as a result of the impact of Covid-19. However, pandemic relief programmes will soon need to be paid back, and it remains to be seen how this debt will be managed in the current economic environment.”

Regulation and supervision

The report also outlines the trend towards increasing regulation and supervision of financial institutions. Regulations requiring organisations to act in their clients' best interests over and above strict contractual obligations – paying close attention to their regulators' expectations – have received added impetus in light of the flexibility and forbearance shown towards

customers in the opening stages of the lockdown. Du Plessis notes that financial services regulatory frameworks in Africa have improved substantially in recent years, which has aided regulators in their response to the Covid-19 crisis. Over the past decade, African regulators have been improving financial sector stability through the adoption of regulations that, for example, promote competition, improve access to credit information, support tighter lending and more stringent capital ratio requirements, encourage financial innovation and ensure the improved monitoring and governance of financial institutions. Challenges, such as limited enforcement power and the lack of independence of regulators in some countries, still exist. “There have also been developments in policy reforms around improving financial inclusion in Africa. The United Nations Economic Commission for Africa issued a report in 2019 – *'Financial Regulation for Inclusive Growth in Africa'*, which showcased three countries in Africa – Kenya, Morocco, South Africa – as countries with financial institutions and markets that have grown substantially in recent years. The report said all three showed increased financial inclusion and a rapid expansion of bank accounts, especially through mobile banking,” notes Du Plessis.

“**Pandemic relief programmes will soon need to be paid back, and it remains to be seen how this debt will be managed in the current economic environment.**”

WILDU DU PLESSIS, PARTNER AND HEAD OF BANKING AND FINANCE AT BAKER MCKENZIE

Cybersecurity

Less happily, with so many in the financial sector working remotely, the report points to an enhanced risk of cybercrime – especially for banks transferring processes to contingency environments running on outdated security systems. For many financial institutions, a cyber attack is the highest operational risk they face as they hold so much sensitive (financial) data of great interest to hackers, and securing this information is business critical. Darryl Bernstein, partner and head of Dispute Resolution at Baker McKenzie in Johannesburg, says that post-pandemic, financial services organisations will be focusing on improving their resilience and increasing their digital due diligence as a result of the increased risk of cyber attacks and data breaches. He said, “Numerous countries in Africa do not yet have specific

legislation around cybersecurity and in countries where regulations exist, there can be challenges around enforcement. Data privacy laws, which govern, amongst other things, data security and breaches, are present in less than half of African countries. Regionally, the Southern African Development Community and the Economic Community of West African States have data protection policies in place, and the continent is also covered by the African Union’s Convention of the African Union on Cybersecurity and Personal Data (2014). However, as of January 2020, only seven countries had ratified the convention. With the rapid growth in the digital economy, it is likely that these increasing cybersecurity concerns will receive more attention from policy makers.”

Digitalisation

The report also points to the positive

role of technology in transforming the financial services sector, opening it up to competition, introducing new services and disrupting incumbent business models. The immediate impact of Covid-19 is expected to boost existing trends, for example, digitalisation and the remote delivery of financial services. Janet MacKenzie, partner and head of technology, media & telecommunications at Baker McKenzie in Johannesburg, notes that well before Covid-19, banks had turned to technology to reduce costs, improve processes, grow customers and enhance innovation.

“The demand for digital financial offerings grew dramatically during the first six months of the pandemic, and African banks have been implementing a range of digital systems, including artificial intelligence and advanced analytics, to speed up banking services

including loan applications, credit scoring and safeguarding against fraud. Further, the African Continental Free Trade Area agreement, which will implement its first deal in 2021, has motivated banks to improve and implement digital trade finance platforms to support a big increase in African trade deals. “In terms of crypto-based financial solutions, there is already an abundance of local mobile and e-payment platforms easing the transfer of money across the continent. Some governments have taken a positive stance, seeking to understand how best to regulate such solutions, while others have adopted a wait and see approach. Countries in Africa that have seen a rapid growth in cryptocurrency use and are beginning to contemplate or adopt regulations in this regard, include Kenya, South Africa, Nigeria and Ghana,” she adds. ■

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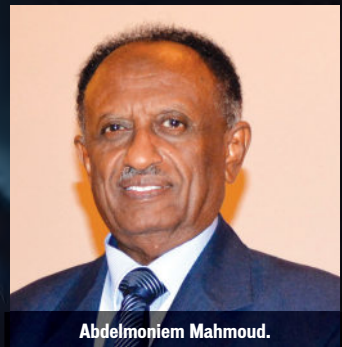
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Harnessing digital technology to drive African trade

Intra-African Trade Fair ambassador Abdelmoniem Mahmoud discusses the importance of leveraging the benefits of digitalisation to expand the continent's intra- and extra-trade opportunities.



Image Credit: Africainbank



Abdelmoniem Mahmoud.

Africa must capitalise on the array of digital technologies that are integrating all areas of organisations and their business processes, altering payment systems, optimising storage and the delivery of goods and services.

Technologies are transforming value chains, delivering skills development, introducing efficiencies and lowering production costs, assisting diversification into value-added products, changing the dynamics of commodity dependence, expanding trade and increasing export competitiveness. When implemented, the African Continental Free Trade Area (AfCFTA) will, in tandem with other favourable economic and demographic factors, turbocharge intra-African trade, despite Africa facing many demanding challenges.

Technology is beneficially impacting manufacturing and productivity. Digital technologies are driving diversification,

integration into production networks, movement into more sophisticated products and increasing Africa's market access and participation in global value chains. Megh Industries, for example, in Kenya has invested in modern technologies and moved from the manufacturing of automotive equipment and parts to full transport seating, van conversions and lightweight modular bullet proofing, making it more sophisticated and value-added in nature. The use of market-related data for product design and development is helping firms to enter new sectors.

Parts of Africa's agricultural sector embrace AgTech, but it needs wider take-up and further

advancement. Africa has 60% of the world's uncultivated arable land, yet it is still a net importer of food. Despite over 60% of sub-Saharan Africa's population being smallholder farmers, only 23% of the region's GDP comes from agriculture, reflecting the preponderance of subsistence level farming.

Digitalisation is delivering opportunities, but African countries face challenging obstacles, necessitating catch-up. Their level of digitalisation is lower compared to more developed countries and, where it exists, it is having a lesser impact on GDP per capita growth.

Digital transformation is a general-purpose technology that

continually evolves, branches out and increases productivity and efficiency, regardless of industry or sector. It will increase the capacity, range and delivery of trade, lower the cost-to-serve and hasten the speed-to-market while digitally connecting customers, wherever they are. It accelerates diversification, revolutionises payments, expands market access and trade and investment opportunities. Digital technologies will be playing an increasing role in the expansion of trade, so we must ensure that Africa is at the forefront. To do this it is vital that Africa prioritises its transition towards a digital economy, as it is an enabler for the continent to expand intra- and extra-African trade and take advantage of the economies of scale proffered by the AfCFTA.

More than 10,000 buyers, sellers and conference delegates are expected to attend the second Intra-African Trade Fair in Kigali from 6 to 12 September 2021. ■

“ Digitalisation is delivering opportunities, but African countries face challenging obstacles, necessitating catch-up.”

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SOUTH AFRICA TOPS ABSA-OMFIF AFRICA FINANCIAL MARKETS INDEX



Green finance is gaining momentum.

Image Credit: Mettaran Kancharatrat/Phalay

The pandemic has made the underlying structure and resilience of African financial markets a more important matter for domestic and international investors, as the continent grapples with returning to sustainable growth, according to the

Absa Africa Financial Markets Index. In its fourth year, the index, which is produced by OMFIF, has expanded to 23 countries, up from 17 in the inaugural publication.

South Africa again tops the index by a wide margin, thanks to its deep capital and foreign exchange markets. Mauritius secures the runner-up position for the second year in a row, partly because of its alignment with internationally recognised legal frameworks. Nigeria, Botswana and Namibia round off the top five. Nigeria has relatively liquid markets, while Namibia and Botswana enjoy a high concentration of domestic assets from pension funds.

ATO DASHBOARD TO BOOST AFCFTA IMPLEMENTATION



Image Credit: Hella Nijssen/Phalay

The online portal will allow users to compare trade opportunities in Africa.

The African Trade Observatory (ATO) – a mechanism being implemented by the International Trade Centre (ITC) to help the new African Continental Free Trade Area (AfCFTA) function when it goes live in 2021 – has begun testing the online dashboard to give real-time trade statistics to African users.

Such information will include intra-continental trade flows (traded values, traded quantities, the use of tariff preferences, taxes and fees paid at the border), and information on market conditions (such as taxes applicable at the border and regulatory requirements). The transfer of raw data from providers to the ATO team will be automated where possible to make the collection of quantitative information sustainable.


The portal will be divided into three modules to allow users to compare trade opportunities in Africa; explore market access conditions of African partners and monitor the implementation process and achievements of the AfCFTA and the Boosting Intra African Trade Action Plan.

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Ethiopia remains a major world exporter of coffee and other commodities.

Ethiopia looks to expand manufacturing prowess

Industrialisation ambitions and infrastructure rollout are set to drive export trade. Martin Clark reports.

Image Credit: Unsplash

Ethiopia's economy has been Africa's star performer in recent years.

Real GDP growth has averaged over 9% over the past few years, although that has been hit by the coronavirus pandemic of 2020, the effects of which have been felt throughout the continent.

Indeed, the country has been the fastest growing economy in the world in recent times, according to analysts Tellimer, but, it adds, that growth will be hard to sustain post-Covid.

A key driver in that time has been the construction of the flagship Grand Ethiopian Renaissance Dam project, which is set to be the largest hydro-electric plant in Africa, with China a key partner.

Whilst it has brought with it massive investment and jobs, and the prospect of abundant cheap electricity for the entire region, it has also fuelled tensions with Egypt and Sudan to the north, who fear the dam's vast reservoir will disrupt water supplies further upstream.

Ethiopia's growth model is inspired by China's own experience with state-led industrialisation, and is articulated in a series of five-year Growth and Transformation Plans (GTP), with GTP II just concluding.

Export hub

Potentially, the country could be on the cusp of becoming Africa's manufacturing hub, with its large and cheap labour force, and a rapidly-growing youthful population of 112 million – the continent's second largest, behind only Nigeria.

While development gathers pace, the agricultural sector still dominates, employing more than 70% of the workforce – Ethiopia

remains a major world exporter of coffee and other commodities.

To fulfil its long-term industrial potential, however, the government in Addis Ababa may need to tweak its business environment.

The country still lags on major indicators of competitiveness, high tariffs, infrastructural constraints, and limits on human and economic freedom, notes Tellimer in a recent update.

Nonetheless, it still scores the highest in a ranking of manufacturing competitiveness for sub-Saharan Africa (SSA), above Nigeria and all other peer states.

"Widening the analysis beyond SSA, Ethiopia scores far behind China and India but is on a par with Indonesia and Pakistan as a 'scaled and cheap' manufacturer," notes the Tellimer research.

"While Ethiopia may struggle to wrestle global manufacturing market share from Asian competitors, industrialisation in SSA is more likely to be driven by the ability to serve domestic and regional markets."

Ethiopia is well-positioned from this angle, and could potentially leverage regional success into a more globally competitive position down the road, it adds.

Industrial parks

China, again, is assisting in efforts to drive this industrial expansion.

Ethiopian Prime Minister Abiy Ahmed in October inaugurated a new US\$60mn Chinese-built industrial park, some 550km north of Addis Ababa, built by the China Civil Engineering Construction Corporation.

The Bahir Dar Industrial Park is one of 13 such centres to have been commissioned as part of the nation's drive to boost economic development, including nurturing textile and garments exports.

"Textile exports from Bahir Dar Industrial Park will earn Ethiopia much-needed foreign currency, in addition to contributing to the overall economic development of the country," said Amhara regional president, Temesgen Tiruneh, at the opening ceremony.

Infrastructure developments are also advancing more traditional industries, including the transport of highly-prized agricultural items.

The first Ethiopian avocados were shipped for export by train this year under the so-called National Cool Logistics Network project, with the refrigerated containers bound for the European market.

The first 24-tonne consignment, from farms in the Koga area, south of Bahir Dar, was carried on a 750km train journey to the port at Djibouti for onward shipping to Europe.

At an inauguration ceremony at Modjo Dry Port, Ethiopia's Transport

Minister Dagmawit Moges said the opening of the cool logistics corridor highlighted the government's commitment to improving the nation's logistics infrastructure in support of higher-value fruit and vegetable exports.

Commodity-based industry

Like agriculture, Ethiopia is likewise trying to boost investment in other commodities-based industries, such as mining, with gold production by artisanal miners enjoying a sharp rise in the past year.

Official gold shipments for July and August reached 700kg (or 24,700 ounces), more than four times the level from the period a year earlier.

Gold production and exports have risen, in part, after a crackdown on smuggling, which has encouraged more established mining firms, such as Australia's Megado Gold to explore for the precious metal.

Megado now holds five gold exploration permits covering 511 sq km (plus a further one under application) in southern and western Ethiopia in the vicinity of the country's only modern gold mines, Lega Dembi and Sakaro, and what is expected to be its next gold mine, at the Tulu Kapi deposit.

The company's successful exploitation of these permits could further unlock not only Ethiopia's mining potential, but also continue its route to industrial development.

Despite challenging prevailing market conditions, Megado is currently preparing an initial public offering on the stock market where it plans to present its case to investors.

Bit by bit, Ethiopia's growth story is getting out to the world. ■

“Textile exports from Bahir Dar Industrial Park will earn Ethiopia much-needed foreign currency.”

TEMESGEN TIRUNEH, AMHARA REGIONAL PRESIDENT

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Tanzania's economic resilience post-Covid-19

More than six months after the first case of coronavirus was reported, Tanzania sees a few economic advancements, with the hope of recovery by 2021. Vinita Tiwari reports.

The government needs to bring in more policy reforms to brace against a second wave.



Image Credit: Foyzhat Shabanov/Adobe Stock

With a population close to 60 million, Tanzania has the second largest economy after Kenya. It had a GDP growth of 6.9% in 2019, which is expected to drop further by 2.5% in 2020 due to the challenges posed by Covid-19, according to the World Bank.

The Africa Centre for Disease Control and Prevention states that the official number of coronavirus cases in Tanzania at present is 509, with 21 deaths and 178 recoveries, but the real figure is unknown.

The World Bank's recent Tanzania economic update states that tourism contributed to one percentage point to the total GDP growth in 2019, comprising 26% of total exports; which has declined hugely despite the reopening of the country's borders in June. Leading tourism operators have forecasted a revenue contraction of at least 80% this year.

Higher gold price

Although latest economic predictions claim that exports will

decline by 10%, and imports by 1.5%, the World Bank said Tanzania will benefit from lower oil prices and higher gold prices and "will alleviate the deterioration of Tanzania's external position arising from lower exports".

With a lower oil price, it will reduce pressure on the exchange rate and cost of production, thus boosting the country's growth and productivity, the Bank of Tanzania added in its update in June.

As for gold, in the twelve months ending March 2020, the value of gold exports rose by 22%, from a low of US\$1,301 an ounce in March 2019 to US\$1,592 – a level not seen since March 2013.

Barrick's Tanzania subsidiary Twiga Minerals resumed exports of gold concentrate earlier in May this year, after receiving clearance from the government.

"In terms of its framework agreement with the government, the shipping of some 1,600 containers of concentrate stockpiled from

Bulyanhulu and Buzwagi resumed in April and the first US\$100mn received from the sale has gone to the government," Barrick said in a statement, according to Reuters.

In other positive developments, Tanzania and Uganda reportedly signed an agreement in September for the construction of a crude oil pipeline running from the Ugandan oilfields to the Tanzanian port of Tanga. According to the two governments, the pipeline is estimated to cost US\$3.5bn and 80% of the pipeline will run through Tanzania, said Hassan Abassi, a Tanzania government spokesman.

Overcoming trade difficulties

A report by the United Nations Conference on Trade and Development said the pandemic made it difficult to facilitate trade between the neighbouring countries of East Africa, Burundi, Kenya, Rwanda, Tanzania and Uganda, but this has since been rectified by

training 130 National Trade Facilitation Committees (NTFCs) from these countries. NTFCs received online training for nine weeks, which helped them facilitate the movement of goods amid the pandemic between these countries and strengthen the regional value chains throughout East Africa.

This follows the East African Community's (EAC) effort to transform the region into a single market that allows free movement of goods, people, services, labour and capital, and create a single investment area, which was hindered due to the coronavirus pandemic and the associated curfews, lockdowns and border tests.

However, a recent report published in Kenyan publication, *The Star*, conveyed the misery of the truck drivers that have been stranded on the country borders between Kenya and Uganda and Kenya and Tanzania. The Kenya Transporters Association (KTA) said about 3,700 truck drivers had been

stranded at the Malaba and Busia border points for more than two weeks for lack of Covid-19 testing. Truck drivers complained that the slow clearing processes worsened because of the measures put in place to manage the spread of Covid-19. The Kenya-Tanzania border at Namanga was also affected by the Covid-19 control measures, the traders said.

The Kenya International Freight Forwarders Warehousing Association (KIFWA) said the border delays which began in April were incurring demurrage charges of US\$35 per container per day. Kenya Ports Authority (KPA) which had extended the free storage period for 90 days from May 18 to August 18, extended it by another 90 days, so that transit import containers enjoy 14 days of free storage at the port and the Inland Container Depot-Nairobi (ICDN), from the normal nine.

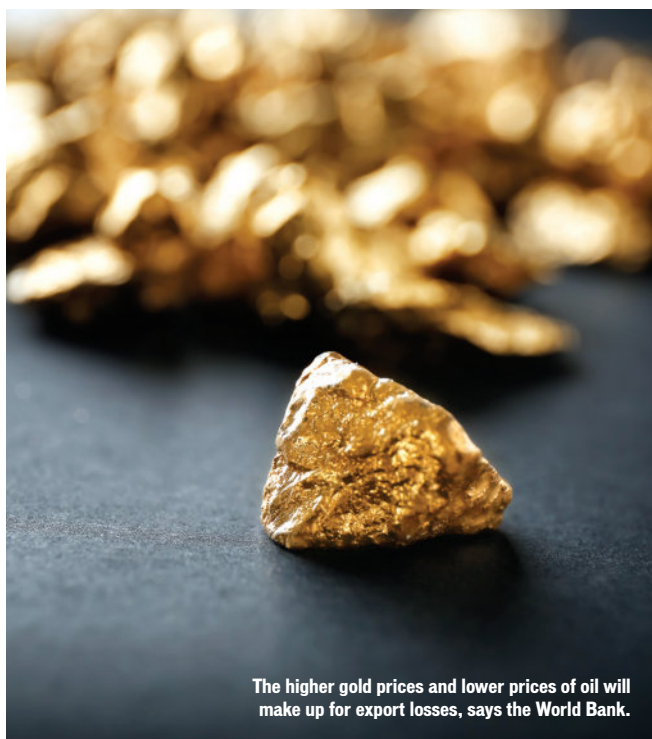
Supporting SMEs in East Africa

Small-and medium-size enterprises (SMEs) and infrastructure projects in East Africa have received a financial boost after the OPEC Fund for International Development signed a US\$20mn loan to the East African Development Bank (EADB) in September.

This is the third loan the OPEC Fund has provided to EADB in support of SMEs. In 2001, the organisation approved US\$10mn, followed by a further US\$15mn in 2013.


EADB is an important regional development institution for delivering major development objectives across the East Africa region. It enjoys a high level of commitment from member states Kenya, Uganda, Tanzania and Rwanda, as well as a diverse shareholder base that includes multilateral and bilateral development institutions and international financial institutions.


“We’re pleased to support private sector development in East Africa, which goes to the core of our mandate,” said OPEC Fund director-general Dr Abdulhamid Alkhalifa. “We’ve partnered with EADB since 2001 and we appreciate the opportunity to strengthen our relationship. SMEs are critical to achieving progress toward SDG 8 on decent work and economic growth. Efficient infrastructure, as part of SDG 9, improves access to social services, reduces business and production costs, supports trade, and will provide East Africa with a more competitive business environment.” ■



The higher gold prices and lower prices of oil will make up for export losses, says the World Bank.

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Fintechs vs banks: What's the future?

What impact are fintech platforms having on traditional financial services in Africa? A panel of experts within the industry debates the challenges and opportunities for fintechs and banks alike. Samantha Payne reports.

Due to Covid-19, the extraordinary shift in customer behaviour from using traditional banks to digital financial services has been extraordinary, but only thanks to those African banks that have been able to adapt quickly in these uncertain times, said Nvalaye Kourouma, group head, digital channels and innovation, Ecobank.

“Every bank understands that the traditional bricks-and-mortar model is not sustainable. That’s very clear and every bank that you see across the continent is trying to go through this digital transformation. But the speed of transformation was much slower than expected,” he told fellow panelists during a webinar entitled: *‘Leapfrogging solutions: the digitalisation of Africa’s financial services’*, held by Invest Africa.

“What Covid-19 created was the acceleration of digital transformation for those banks who have been able to respond quickly. The regulators started acting vigorously and created an environment to banks to lead in areas like the flexibility of payment. This started the right environment for banks to start innovating.”

But he urged that banks need to do more to provide a better customer experience.

“Cultural transformation needs to happen where we see ourselves much closer to the customer in providing them a better customer experience, using all the digital technologies that we have.”

Demonstration effect

Hence, the integral role fintechs can play to show banks how to improve their customer banking experience. Instead of disruption, Titi Odunfa Adeoye, founder and managing director of Sankore Investments,



Fintechs can enable banks and vice versa.

Image Credit: Adobe Stock

said fintechs have shown banks what can be done.

“Five years ago, there was much talk around this aspect of disruption. Are these new fintechs going to put banks out of business? This hasn’t happened. The total fintech industry in Nigeria contributes less than 1% of the retail banks’ revenues,” she continued. “One would argue that this is a relatively small amount of impact. Why is that? The fact is that it’s been driven by a global trend of interest in fintech by investors and increased allocation to venture capital.”

However she questions whether the funding has gone towards what Africa really needs.

“Payments and lending solutions are built in Nigeria. The more interesting and relevant subsectors of fintech have not been addressed

yet, such as regtech, tools and data. SMEs have started to pick up but we haven’t got where to we really need.”

According to Adeoye, half a billion dollars has flown into the fintech space over the last three years and the impact on the market has been significant in terms of capacity and use and reliability of the technology.

“In markets like Nigeria, trust is a very big problem and so fintech has shown what is possible. Imagine if the incumbent banks were to partner and take on the capacity of the fintechs and apply it to the increased trust in these platforms – that would then take us to the future and shape the next five years.”

Wayne Hennessy-Barrett, co-founder and CEO of 4G Capital, which operates in 90 locations across Kenya and Uganda, agrees that the technology is allowing us to

progress to heights not seen before, especially through the smart use of verified client data, providing responsible access to credit to people most in need.

However he points out there is not enough investment in the fintech industry to take it to next level.

“The financing gap in sub-Saharan Africa remains at US\$331bn, according to the IFC. In Kenya, the financing gap is estimated to be US\$19bn, the amount of micro-SME credit needed to move from an informal to formal existence. The impact is happening but it is not enough, and the size of the problem is getting bigger as population growth continues.”

He continued, “There’s a growing sense of urgency to see fintechs and banks and other players within the ecosystem; payments, regtech, verified ownership and more confidence in value chains and distribution, coming together so that we can actually have an exponential accelerated effect to catch up with the problem – and that’s where the opportunity lies. That’s why the entrepreneurs are very excited and optimistic to meet this problem and address it.” ■

“Payments and lending solutions are built in Nigeria. The more relevant subsectors of fintech haven’t been addressed yet.”

TITI ODUNFA ADEOYE, FOUNDER AND MANAGING DIRECTOR OF SANKORE INVESTMENTS

Four lift truck trends to watch

As materials handling requirements, technologies and economic conditions evolve across Africa, certain trends are driving lift truck choices across the region.

1. Affordable solutions

“To meet growing market demand for affordably priced solutions that get the job done, the Hyster® UT series was launched in 2020, including IC and electric lift trucks, plus warehouse equipment,” said James Newman, area business director, Middle East and Africa for Hyster. “These new options give businesses more ways to select the right truck for their budget and their needs.”

When matched with the right application and operating volume, businesses will find the Hyster® UT series trucks straightforward, durable, reliable, and uncomplicated to maintain. They are particularly well suited to lower intensity applications and complement the existing range of Hyster® FT and XT lift trucks.

2. Zero emissions forklifts

“Many businesses want to switch from IC trucks to electric forklifts,” he said. “Although IC trucks are still right for many, others need to meet emissions legislation, or may want to minimise contaminants in their operation.”

A range of Hyster® electric lift truck options, such as the highly manoeuvrable and energy efficient Hyster® JXN and JXNT series are available, for lifts up to 5.5 tonnes. Affordable three- and four-wheel electric lift trucks are also available from the Hyster® UT series and the company offers a complete range of electric trucks for the warehouse, from pallet and stacker trucks to reach trucks and VNA.

3. Advanced lift truck technology

As businesses seek technologically advanced solutions, lithium-ion batteries are an option for many



Hyster-J1.5-3.5UT electric lift truck.

types of Hyster® equipment. Hyster also recently launched the J7.0-9.0 XNL series to provide a zero emissions lift truck, powered by a lithium ion battery for lifts up to nine tonnes, and there are many ongoing developments for the larger lift trucks and Hyster® container handlers.

“We also see demand for Hyster® robotic lift trucks as applications seek affordable automation to drive

efficiency for repetitive handling tasks,” Newman said. “These trucks make it possible to automate activities such as moving pallets or towing trailers and can offer a good return in the right applications.”

4. Industry-specific solutions

“Our aim is to provide solutions across the full spectrum of market needs, so we have a range of specialist options for particular

requirements,” he said. “A great example is our raised cab option, popular for beverage industry customers.”

The raised cabin provides an extra 350mm or 450mm height to the driver on Hyster® electric lift trucks, or an additional 500mm on Fortens® IC forklifts. With more visibility over a full load, which may be up to 1.8m high, operators can comfortably drive forwards over greater distances, reducing driver fatigue and supporting productivity.

“With the support of our network of local dealers across the region, we cater to all of these lift truck trends and much more, meeting the needs of applications from South Africa and Nigeria, to Ivory Coast and Kenya,” he added. ■

“We cater to all of these lift truck trends and much more, meeting the needs of applications from South Africa and Nigeria, to Ivory Coast and Kenya.”

JAMES NEWMAN, AREA BUSINESS DIRECTOR, MIDDLE EAST AND AFRICA, HYSTER

For more information, contact your Hyster® dealer or visit www.hyster.com

Smart warehouses: the heart of a new supply chain

Efficient warehouses improve functions and management systems with a reduced workforce. Recently, Africa has seen advancements in this area that have shown significant growth prospects and logistics solutions.

Ongoing advancements in the warehousing business, even during the Covid-19 crisis, are producing advanced technologies to improve warehousing functions and management systems. Effective warehouse management systems are seeing developing acceptance, helping producers fulfil their needs for getting higher throughput.

Amid the Covid-19 crisis, the global market for warehouse management systems is estimated at US\$1.8bn in 2020 and is projected to reach US\$4.3bn by 2027, growing at a CAGR of 12.8% over the period, stated a ResearchAndMarkets report. Meanwhile, according to Data Bridge Market Research analysis, the Africa and the Middle East warehouse management system market is expected to gain market growth from 2020-2027 at a CAGR of 14.6% to reach US\$695mn.

The primary aim of warehouses is to be efficient and optimise the oversight and control of labour and space. This is the reason why a growing adoption is seen for cloud-based warehouse management solutions as they are easy to update and are consumer-friendly.

African warehousing players

Africa is drawing in more investments from major players in the warehousing business, especially in the technologically progressed storage and retrieval system. In recent months, the container logistics company Maersk progressed its warehouse fleet operations in Africa. In September 2020, Maersk launched its second dedicated warehouse in South Africa, trading under the name of Precool Cold Storage. The cold store is a part of its existing warehousing and distribution site in



Maersk's cold store in Hammarsdale is striving for a minimal carbon footprint.

Image Credit: Maersk

Hammarsdale, in Kwa-Zulu Natal, and is expected to be operational early January 2021. The facility is equipped with a large capacity of Sterri chambers, for fruit requiring specialised cooling.

“Our mission is to be the preferred cold storage provider for temperature-controlled solutions throughout the perishable industry, providing flexibility to customers,” said Manny Dos Anjos, CEO of Precool Cold Storage.

In August 2020, Maersk launched a warehouse and distribution facility in Abidjan, Ivory Coast, to address the needs of customers and significant trade growth within this market through its premium solutions. The multi-purpose facility

is located outside the city around the industrial zone and is equipped to support various industries from retail, fast moving consumer goods and technology.

Additionally, the UK-based CEVA Logistics has launched a three-part expansion plan for the African market, through which it aims to become a continent-wide market player. The company has acquired a controlling shareholding in AMI Worldwide, a third-party logistics provider with an extensive network in East and Southern Africa.

“Businesses across the African continent enjoy significant growth prospects and logistics solutions are crucial to materialising these opportunities, by ensuring supply

chains work well and trade flows run smoothly. In so doing, we aim to become a leading, continent-wide market player. From December 2020, CEVA Logistics will become the single brand representing all our activities in Africa,” according to Mathieu Friedberg, CEO at the UK-based CEVA Logistics.

Last year, global logistics company Agility announced the development of a pan-African network of international standard warehouse parks to do business easier with less risk and attract new multinational companies to invest in Mozambique.

Deanne De Vries, senior vice-president for Agility Africa, said, “For investors looking to position themselves for growth in one of the continent’s biggest future economies, Mozambique provides a strategic long-term growth opportunity with exceptional opportunities in hubs from Maputo to Pemba, Tete, Nampula and more.” ■

“E-commerce can require four times more warehousing in markets than traditional logistics pathways.”

DEANNE DE VRIES, SENIOR VICE PRESIDENT
FOR AGILITY AFRICA

By Deblina Roy

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Using LNG as a marine fuel could help shipowners comply with the IMO's vision.

The time is now for LNG retrofits

The shipping industry needs to accelerate its transition to the use of LNG as fuel to have any hope of meeting the IMO emissions reduction targets, says Newport Shipping UK LLP.

In April 2018, the IMO's Marine Environment Protection Committee (MEPC 72) adopted resolution MEPC.304 (72) on the reduction of greenhouse gas (GHG) emissions from ships. The IMO has called for the industry to reduce its average carbon intensity by up to 40% by 2030 and by 70% in 2050, compared to 2008.

The IMO's bold vision was rightly applauded by politicians, the press, climate change activists and many industry stakeholders, but unless the industry transitions to low carbon fuels, meeting these targets will be impossible. But because the IMO did not specify how these targets might be met, the resolution left owners with more questions than answers. What alternative fuels make sense? Is there adequate bunkering infrastructure? And more to the point, who pays?

For years, natural gas has been regarded as the marine "fuel of the future". After all, LNG is readily available, relatively affordable and because it has negligible NOx, Particulate Matter (PM) and zero SOx emissions, it will help owners comply with the IMO's vision. But the introduction of other alternative fuels solutions, such as hydrogen, ammonia, bio fuels and battery hybrid systems, caused many owners

to hesitate. Why invest in LNG retrofits if natural gas will be replaced by other fuels that have lower GHG impacts?

Slipping up

Others point to recent studies highlighting the impacts of methane slip, an issue specific to gas-fuelled engine systems. Methane slip can occur during the gas exchange phase of the cycle when unused fuel can get trapped in the combustion chamber and top piston area, allowing some unburned methane gas to escape at the exhaust into the atmosphere. Methane slip not only results in less efficiency (thus higher fuel costs), it may add to the GHG impacts, as methane is a major contributor to global warming.

In a February 2020 press conference in London, DNV GL's Maritime CEO Knut Ørbeck-Nilssen acknowledged that low carbon

biodiesel, hydrogen, ammonia and synthetic fuels are promising, but said that they would take time to develop.

"The pathway to carbon neutral fuels starts with gas," he stated. "It is important to act now and not to wait for the 'perfect' fuel."

As for emissions, Ørbeck-Nilssen pointed out that methane leakage had been drastically reduced in modern engines, and further improvements could be expected. Citing data provided from the engine manufacturer Wärtsilä, he noted that over the last decade, gas engines outperformed engines running marine gas oil (MGO) in terms of GHG emissions.

Engine technologies

Cato Esperø, Wärtsilä's head of Marine Sales (Norway) confirms that the company's engineers have continuously improved the emissions performance of its dual

fuel engines (notably the 46DF, 50DF, 31DF), which allow ships to operate using a broad range of fuels, including heavy fuel oil, MGO, light fuel oil, bio fuel and LNG. The company has also introduced the 31SG, an engine optimised to run on gas alone, and provides customers with the Wärtsilä Methane Number Calculator, a tool to help shipowners and operators calculate methane values in the fuel gas.

"Wärtsilä is a pioneer in the development of sustainable engine systems, including battery hybrid solutions, and is working with other key industry stakeholders to achieve zero-emissions shipping," he says. "Until we succeed, we believe LNG retrofits represent the best, most viable option."

Esperø acknowledges that LNG retrofits are expensive, but is quick to point out that owners willing to make the investment now will be in a better position to migrate to other alternative fuels as they become available. "It is important that owners secure fuel flexibility to fit their operational profile, in the short, mid and long term," he says. "For most owners, a dual fuel/LNG set-up reduces business risk and provides flexibility with regards to availability of new fuels during the transition."

“Shipowners can be counted on to do the right thing once they have exhausted every other option.”

LIANGHUI XIA, MANAGING DIRECTOR OF NEWPORT SHIPPING UK LLP

The cost of sustainability

Yet in a world still in the grip of the pandemic, one can forgive owners for being slow to book retrofits at their favourite yards. After all, LNG conversions are expensive, time consuming and in some shipping segments, LNG tanks can reduce valuable cargo space. Nevertheless, Lianghai Xia, managing director of Newport Shipping UK LLP, argues that further delays will all but ensure the industry will fail to meet IMO targets. “The time to act is now,” he says. “Natural gas may not be perfect, but let us not make perfect the enemy of good.”

Xia acknowledges that more promising fuels are on the horizon, but for the next five to 10 years, LNG as fuel represents the only credible and achievable mid-term solution in cutting emissions. Yet so far, only a small fraction of the world fleet runs

“The question is not ‘should we do this now’, but it is ‘why haven’t we already started?’”

LIANGHUI XIA, MANAGING DIRECTOR OF NEWPORT SHIPPING UK LLP

on natural gas. “Newport Shipping recognises that the number one challenge for owners is cost, so in addition to providing turnkey solutions that include equipment procurement, full-scope design work and on-site project execution, we offer a five to seven-year payment plan without fixed vessel mortgage collateral.”

Collective action required

But that may not be enough. Indeed, Xia notes that if the world is serious about cutting maritime emissions, it will require more than efficient engines, skilled yards and

short-term financing options.

“Right now, many owners willing to make the change simply don’t have the capital to invest in conversions,” he says. “To reach IMO targets will take a collective effort.”

Xia says that governments could offer tax incentive schemes to reward owners and charterers could help subsidise conversions to achieve lower emissions throughout the value chain. Ports could work with logistics providers to improve bunkering access, and energy companies, which would benefit from greater demand, could help by lowering the production and

delivery costs of natural gas.

“If climate change is a shared challenge, then so is the solution,” he says. “Owners should not be forced to bear the costs alone.”

To paraphrase a (likely apocryphal) quote from Sir Winston Churchill, “Shipowners can be counted on to do the right thing once they have exhausted every other option.” With those options now almost exhausted, Xia says that the time to accelerate the industry’s migration to LNG is now. “When it comes to climate change, we cannot afford to wait for a solution to appear – there is no vaccine for global warming,” he says. “The question is not ‘should we do this now?’, it is ‘why haven’t we already started?’” ■

Newport Shipping UK LLP is a global service provider for ship repair and retrofit

Wärtsilä to supply a major LNG/bioLNG production plant for CO2-neutral transport fuels

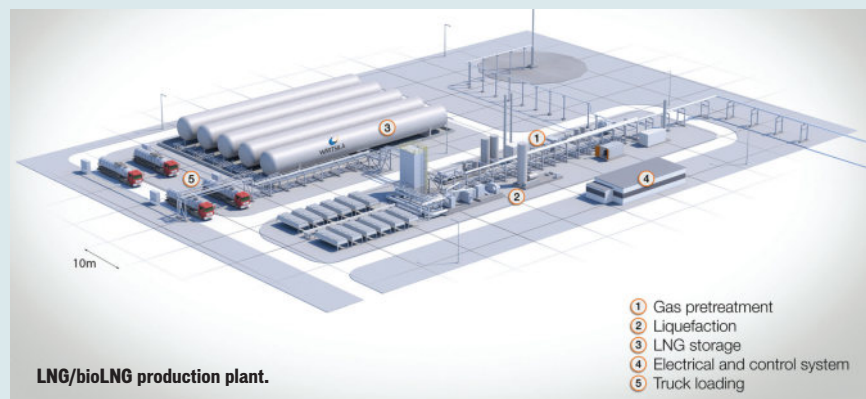
Technology group Wärtsilä has been awarded a major contract to supply and construct a plant for the production of CO2-neutral liquid transport fuels. The plant will liquefy gas from the natural gas grid to produce carbon-neutral LNG.

It will have a capacity of approximately 100,000 tons per year and be located in Cologne, Germany. The order with Wärtsilä was placed in September 2020.

Wärtsilä’s vast experience and state-of-the-art technologies developed for the process design, fabrication, and delivery of gas liquefaction plants and mature gas treatment solutions prior to liquefaction, were key factors to secure the contract.

“It is an honour to have been awarded this order for a landmark project. We take this as a clear endorsement of Wärtsilä’s capabilities in this field. The use of LNG as an emissions-reducing fuel in the marine and transportation industries is already well established, and to introduce bioLNG which can be mixed with LNG is the next obvious step in enabling a CO2-neutral transportation fuel. We look forward to continuing on our mission to enable sustainable societies with smart technology,” said Antti Kuokkanen, VP Gas Solutions.

The feedstock for bioLNG is based on biological



waste material, e.g. liquid manure and food waste. The feedstock is fed to an anaerobic digestion reactor that produces biogas, which is then upgraded to biomethane and injected into the natural gas grid. Green gas certificates are issued along with the injected biomethane, which then permits operators at other locations, such as liquefaction plants producing bioLNG, to buy the certificates and utilise the biomethane.

The Wärtsilä scope for this project includes the engineering, civil works, installation, and commissioning of the plant. The plant will include a gas treatment system based on Wärtsilä’s Puregas CA technology, a liquefaction

unit utilising Wärtsilä’s Semi-Dual Brayton technology, storage tanks, truck filling stations, and all necessary safety flare and auxiliary equipment. The plant is expected to be fully operational by autumn 2022.

Gas Solutions is a market leader with innovative systems and lifecycle solutions for the gas value chain. Their main focus areas are handling of gas in seaborne transport (storage, fuel, transfer and BOG management), gas to power, liquefaction and biogas solutions. They help customers on the journey towards a sustainable future through focus on lifecycle, innovation and digitalisation.

GE awarded substation contract in Benin by Millennium Challenge

GE Renewable Energy's Grid Solutions business has been awarded a US\$47mn contract for a substation project in Benin.

The nation's biggest high-voltage substation contract has been awarded through the Millennium Challenge Corporation (MCC) - a United States foreign assistance agency established by the US Congress.

This is a critical grid project as only one-third of Benin's population has access to electricity, and total per-capita consumption is low due to limited access and availability. At the same time, rapidly growing demand for power, inadequate maintenance, and insufficient investment has stressed Benin's national electrical grid, creating power outages that hurt businesses and hinder social services.

Under the contract, GE will supply four substations, including gas-insulated switchgear (GIS) and seven substation extensions. The scope covers the most important high-voltage substation in the country, Vedoko, and is strategically placed to help strengthen the country's transmission backbone.

GE will also work on upgrading the substations in Maria-Gleta, Berecingou, Djougou, Bohicon, Natitingou and Parakou.

"In recent years in Benin, there has been a lot of attention and investment in the country's energy arena. The distribution of electricity to its citizens is a critical enabler to helping make dreams come true, to supporting their aspirations as they take on the challenges of daily modern life," said Gabriel Degbegni, National coordinator at the Millennium Challenge Corporation (MCC).

This is the second contract GE's Grid Solutions has received through MCC's US\$375mn power sector-focused agreement, or compact, with Benin. The first contract, a turnkey distribution management system project involving telecommunication infrastructure and substation adaptations, was awarded in 2018 and is currently being executed. That project was designed to strengthen the country's grid and manage electricity losses that result during energy transmission, since Benin imports some of its electricity from neighbouring countries. The new substations that GE will install as part of the latest project will be integrated into the distribution management system.



Image Credit: GE

Under the contract with the MCC, GE will supply four substations.

SIEMENS MEETS ALMOST 40% OF TOGO'S DEMAND

Siemens Energy has successfully delivered a SGT-800 gas turbine to the site of Kékéli Efficient Power S.A., as part of their development of the 65MW combined cycle power plant in the Republic of Togo, supporting improved access to reliable and affordable energy in the West African nation.

The turbine was built by Siemens Energy in Finspång, Sweden, and shipped to Togo by sea, to form the core of the combined cycle power plant. Located in Lomé, the 65MW plant will cover almost 40% of the country's demand at completion, whilst creating job opportunities for Togolese citizens.

The turbine delivery follows a competitive bidding process which led to the signing of a MoU in October 2018, between the Republic of Togo, Siemens Energy, Pan-African industrial group Eranove, and EPC partner TSK Group, to successfully develop the country's first gas-fired combined cycle power plant. This Independent Power Producer (IPP) project represents the first time an IPP has been entirely financed by African financial institutions.

During the groundbreaking ceremony that took place last year, the Energy Minister Abla-Bidamon had said, "The construction of this thermal power plant will comply with all environmental norms fighting against greenhouse effects and harmful effects of climate change." He also had stressed how this power plant will contribute to Togo's ambition to achieve 100% electrification by 2030, up from 45% back in 2018. With assistance from Siemens Energy, this ambition is becoming reality.

"We are proud to be following our commitment to the people of Togo to provide affordable and reliable power sources while moving toward a sustainable and financially accessible baseload energy production," said Marcus Nelle, senior VP of sales for Africa at Siemens Energy.

SPACECOM IN E-HEALTH SOLUTIONS FOR CLINICS

Spacecom, operator of the AMOS satellites fleet and Ignite Power, has announced the signing of an agreement to install e-health connectivity solutions in remote clinics, which will provide local medical teams with immediate access to physicians around the world, as well as data analysis using cloud.

Using designed-for-solar medical devices and systems and satellite connectivity, they will be powered by cost-effective off-grid solar systems. With the support of global medical experts, doctors and paramedics in these rural areas will have the opportunity to expand their reach and knowledge to new treatments and procedures. The solution comprises communication through Spacecom's advanced AMOS-17, digital High Throughput Satellite and Ignite's sustainable off-grid solar power solutions and diagnostic systems.

AMOS-17 is designed to meet Africa's fast-growing communication and digital transformation demands, as many remote communities were unable to enjoy these benefits due to lack of reliable power supply.

BRIEFS



Image Credit: Adobe Stock

A rethink of the energy mix is required by both the private and public sectors.

Energy solutions for the future

Solutions need to address the current supply chain disruptions and loss of investment to prevent delays and cancellations of projects being commissioned in Africa, said Joshua Low, managing director at Messe Frankfurt South Africa, which organises Solar Power Africa. Low added that Africa's energy deficit caused by an aging fleet of power plants run by utilities requires both the public and private sectors to rethink the energy mix to meet the demand.

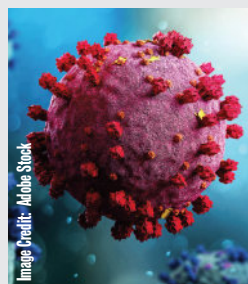


Image Credit: Adobe Stock

Opportunities to come from Covid-19 pandemic.

Universal energy access among Africa's priorities

The African Union Commissioner highlighted that despite the Covid-19 crisis, it provides an opportunity to address challenges in Africa. "Africa is determined to recover better, greener and smarter," said Dr Amani Abou-Zeid, commissioner for infrastructure and energy at 'Nordic-African Business Webcast 2020', also attended by H.E. Ine Marie Eriksen Søreide, Minister of Foreign Affairs of Norway.

World's first long-range wireless transmission project presented at aef

Emrod has developed the world's first commercially viable long-range, high-power, wireless power transmission as an alternative to existing copper line technology. Their technology works by utilising electromagnetic waves to safely and efficiently transmit energy wirelessly over vast distances, and is currently being built in New Zealand.

"Being able to transmit high-power electricity without any cables is game-changing for the continent. It means barriers to energy access are smashed and Africa could be fully electrified within ten years. This is the technology millions of people have been waiting for," said Simon Gosling, managing director, EnergyNet.

The company was founded by serial tech entrepreneur Greg Kushnir, who was determined to find a technology that can reduce power distribution costs, avoid outages and support renewable energy.

"We have an abundance of clean hydro, solar, and wind energy available around the world but there are costly challenges that come with delivering that energy using traditional methods, for example, offshore wind farms or the Cook Strait here in New Zealand requiring underwater cables which are expensive to install and maintain," said Kushnir.

"I wanted to come up with a solution to move all that clean energy around from where it's abundant to where it's needed in a cost-effective, eco-friendly way."

Energy generation and storage methods have progressed tremendously over the last century but energy transmission has remained virtually unchanged since Edison, Siemens, and Westinghouse first introduced electric networks based on copper wires 150 years ago.

By significantly reducing infrastructure costs, Emrod's technology has the capacity to support remote communities such as in Africa and the Pacific Islands by providing access to cheap, sustainable energy to power schools, hospitals and economies.

"The data is compelling. We are talking about a potential 50% increase in sustainable energy uptake, up to 85% reduction in outages and up to 65% reduction in electricity infrastructure costs due to the Emrod solution," said Kushnir.

"Since announcing Emrod's technology we have had a high level of interest from energy distribution and engineering companies from across the globe. We are progressing with some exciting opportunities to improve energy access for remote communities in areas such as India, Africa and Island Nations," said Kushnir.

The company has achieved strong interest from electricity distributors with Powerco, New Zealand's second-largest distributor.

Kushnir added, "The system we are currently building for Powerco will transmit a few kilowatts but we can use the exact same technology to transmit 100 times more power over much longer distances. Wireless systems using Emrod technology can transmit any amount of power current wired solutions transmit."



Image Credit: African Energy Forum

Emrod's wireless system is a cost-effective solution for transmitting power across difficult terrain.

LANDMARK INVESTMENT IN WITKOP SOLAR PARK

Phakwe Group, with the support of African Infrastructure Investment Managers (AIIM), one of Africa's largest infrastructure-focused private equity fund managers, has become the 90% owner of Witkop Solar Park, a 30MW solar PV facility in the Limpopo province.

Project Witkop has been operational since 2015 and is part of the first group of projects to connect to the national grid under the South African Renewable Energy Independent Power Producer Programme. On average, the solar power plant generates 62,000MWh per annum of electricity which is sold into the national grid to Eskom, benefiting over 6,000 households.

The project currently supports 36 full-time operations and maintenance jobs; with women and youth-owned businesses in the local area being preferred for the provision of security services, vegetation management and support technical services.

This deal concludes Phakwe's ninth investment in a renewable energy project.

Thabiso Tenyane, executive chairman at Phakwe Group, said, "We're delighted to be the first to achieve this milestone in South Africa's renewable energy programme and to be working with AIIM once again – their expertise in the clean energy sector and their commitment to enhancing BEE objectives in South Africa, is second to none. With its funding, AIIM has helped position Phakwe Power, a 100% black-owned and managed IPP, as a leading participant in one of the fastest growing and most dynamic sectors in the South African and global economies."

"This marks AIIM's second investment in Phakwe Witkop, and our 29th standalone investment in SA's renewable energy sector. In addition to generating clean, reliable energy, we are tracking indicators as part of our efforts to further social and economic causes in Polokwana," said Lebogang Pholoba, an investment manager at AIIM.

BRIEFS



Image Credit: Adobe Stock

IEA's new report illustrates the region's energy trends.

Accelerating clean energy transitions in North Africa

The IEA has launched its report: 'Clean Energy Transitions in North Africa', identifying pathways and recommendations to accelerate clean energy transitions in five North African countries: Algeria, Egypt, Libya, Morocco and Tunisia.

The report takes stock of the region's current energy trends and illustrates policy-relevant best practices that can help advance decarbonisation of the region's energy systems. IEA and Morocco organised the launch.



Siemens Digital Industries come together to improve industry.

Siemens, GIL Automation paving the way for Industry in Nigeria

Siemens Digital Industries has strengthened its partnership with its automation portfolio in Nigeria with GIL Automation being appointed as a value added reseller, according to reports. "Nigerian customers need a global technology partner with local customer services, local inventory, systems upgrade and field services capabilities to aid their digitalisation strategy and improved plant availability," said Lawal Gbolahan, managing director at GIL Automation.

Making a positive difference with renewables

In an exclusive interview, Chris Antonopoulos, CEO of Lekela, talks to African Review about green policies, milestones reached in 2020 and continued deal-making in the renewables sector.

Perdekraal East Wind Farm in South Africa.



Image Credit: Lekela

African Review: In the wake of the pandemic and the economic implications for countries worldwide, how important do you think it is now for governments to implement green policies as a means to avoid carbon-intensive spending and establish sustainable energy systems as a precondition to a stable long-term recovery?

Chris Antonopoulos: Ensuring there is investment in green technology is more important than ever, and everyone has a role to play, including governments, banks, financiers, and Development Finance Institutions. They must ensure that policies are in place that enable and

encourage the development of renewables across the whole world, so we don't miss this opportunity to ensure that we increase momentum behind the uptake of clean energy.

AR: With the declining costs of renewable technologies as well, would you agree that they are positioned more than ever to become a driver in the economic recovery for many nations around the world, especially in Africa?

CA: We're continuing to see a considerable amount of deal-making in the renewable sector, which has held up remarkably well during Covid-19. Many countries in Africa have abundant

natural resources that are ripe for solar and wind power, yet the continent continues to miss out. We want to see the money being invested in renewables around the rest of the world flow to Africa, because we've seen first-hand how renewable projects can help to create jobs, improve enterprise and, of course, increase the capacity of the grid.

AR: How has Lekela navigated its way through the Covid-19 pandemic this year?

CA: Like every business, dealing with Covid-19 has been a huge challenge this year. However, our priority has always been the health and safety of

our employees, workers and communities, while ensuring the provision of power from our operational projects. The situation in each country we operate in is different, and we've been guided by the restrictions and advice in each location. We're pleased to say that we have been able to keep construction going and have a series of exciting milestones currently taking place at our projects in South Africa, Senegal and Egypt.

We've also pivoted our community support programme, usually focused on education, enterprise and environmental needs, to help support local communities in their fight against Covid-19. This includes a range of activity, from distributing pamphlets and organising a public information radio campaign, as we did for our Perdekraal East and Kangnas projects in South Africa, to setting up sanitation posts in the areas around our Parc Éolien Taiba N'Diaye (PETN) wind farm in Senegal.

AR: How well-positioned is the utility firm to take advantage of future business opportunities in light of the Coronavirus crisis?

CA: The crisis has had a huge effect on almost every industry in every country. However, for Lekela, our approach continues to remain the same. We have always had a long-term approach, looking to turn long-held visions for energy generation into viable, sustainable realities – and Covid-19 has not changed that. Of course, we hope that the increased conversations around a green recovery will in turn lead to more renewable projects in Africa, for the benefit of both the countries where they're located, and the wider industry.

AR: What's your vision for the company moving forwards?

CA: Our vision is simple, to deliver long-term and sustainable benefits for African countries and communities through clean, reliable power. By investing in wind projects, we can make a positive impact not just through the provision of power and the creation of employment opportunities, but also through our community investment programmes. Our projects last for over 20 years, making us long-term residents, and our community plans are carried out throughout the lifecycle of the projects. For example, with our PETN wind farm in Senegal, set to be complete later this year, we have already built an IT centre for the local school and two marketplaces for community members to sell their produce.

We also want to continue to help countries in Africa meet their ambitious renewable energy goals. Our West Bakr Wind farm in Egypt will increase Egypt's wind energy capacity by 18%,



Image Credit: Lekela

Chris Antonopoulos, CEO of Lekela

which will be a crucial part of meeting the government's renewable energy generation target of 20% by 2022.

AR: Do you see wind projects such as the massively successful Taiba N'Diaye wind farm in Senegal being replicated elsewhere on the continent?

CA: There is huge potential for projects like our PETN wind farm in Senegal to be replicated across the continent. The project is the first utility scale wind farm in both Senegal and West Africa, and a



Image Credit: Lekela

A close-up shot of Perdekraal East Wind Farm.

leading example of what can be done by a government showing strong ambitions in this area.

Other governments should look to copy successful projects like PETN with pride. A huge amount of expertise and effort goes into major renewables projects, and there's no reason that tried and tested technology can't be used as a blueprint by other governments looking to promote clean energy.

AR: Are there any wind or solar projects in the pipeline next year or beyond, Lekela is working on?

CA: It's been an incredibly busy year and the final few months will be no different for Lekela. With big milestones still set to take place for our West Bakr wind farm in Egypt, PETN in Senegal, and Kangnas wind farm in South Africa, our focus lies on ensuring everything proceeds as it should. However, we always have opportunities on our radar and hope that as our projects move into operations, we can add others to our development pipeline.

AR: What has been Lekela's stand-out success so far as a business?

CA: I'm incredibly proud of everything Lekela has achieved in the past five years to become one of the leading providers of renewable energy in Africa, so it's difficult to pick just one moment. However, a moment that stands out for me is when construction began on our West Bakr Wind farm last year, which pushed us into having over 1,000MW of clean energy in construction and operation. It was of course a huge milestone for the team in Egypt, but that figure also served as reminder of how far we'd come as a business in less than five years.

AR: Is there anything else you would like to add or update our readers about Lekela's developments?

CA: In September, we announced we had secured a grant from the US Trade and Development Agency to explore battery storage at our PETN wind farm in Senegal. This is a really exciting development as this large-scale storage will help us to maximise the impact of renewables in Senegal, and push Senegal to the forefront of renewable energy usage in modern day grids. The project will be the first grid-scale battery electric storage system in Senegal, and will build on the progress made through our 160MW wind farm, which is also the first of its kind in the country.

Our 140MW Kangnas wind farm in South Africa is also set to come online before the end of the year, and will mean that Lekela reaches the exciting milestone of five projects in operation in South Africa. ■

Meeting electrification needs through solar power

While geothermal and wind power constitute Kenya's main renewable energy sources, solar power is becoming increasingly important in off-grid areas. Mwangi Mumero reports.



The Garissa solar plant is East Africa's largest solar farm.

Image Credit: Rural Electrification & Renewable Energy Corporation

At least 75% of Kenya's population has electricity compared to 63.8% in 2017, representing a 12% increase in the electrification rate, thanks to the government's aggressive rural electrification programme.

Kenya largely depends on renewable energy such as wind, geothermal and solar and hopes to achieve universal access to electricity by 2022. Renewables already make up 93% of the national grid.

A 2018 UNEP report indicated that US\$1.4bn has been invested in Kenya's energy sector; US\$486mn for geothermal, US\$476mn and US\$467mn for wind and solar power development respectively.

Major solar energy projects have already been completed or are underway in various parts of the country.

The most outstanding project to date is the US\$128.5 Garissa Solar Plant in Kenya, which is the largest grid-connected solar power plant in East and Central Africa. Kenya's Rural Electrification Authority (REA), a government agency, which

recently changed its name to Rural Electrification & Renewable Energy Corporation, owns and operates the solar plant in the North East Kenya region near the Somalia border. It is located in a semi-arid part of the country that enjoys 14 hours of sunshine each day, ideally suited for power generation.

The REA, which is mandated to increase access to electricity to rural households, education institutions and trading centres and other consumers across the country, signed a 25-year power purchase agreement (PPA) with Kenya Power (KPLC), for integration into the grid.

Under the contract, KPLC will purchase a kWh of electricity at US\$0.12, which is currently US\$0.07 less than electricity generated from

diesel, the main source of power in Garissa County.

The Garissa power plant, which was funded by the Exim Bank of China, consists of 200,200 solar panels connected to inverters and installed on an area of 85 ha. It is estimated that it provides power to more than 625,000 homes.

"With the completion of the solar plant, Garissa moves away from the unstable thermal energy. The project will boost development in the region and narrow the development gap between Northern Kenya and other parts of the country," said Kenya's President Uhuru Kenyatta during the launch of the project.

Through such bodies as the REA, the government plans to increase

investment in solar power especially in other off-grid areas, such as Wajir, Mandera and Marsabit counties, which are in arid and low populated regions near Kenya's border with Ethiopia and Somalia.

"Renewable energy like solar provides a faster way of electrification to off-grid areas and households that have for years relied on expensive thermal sources," said Simon Gicharu from the Rural Electrification and Renewable Energy Corporation (REREC).

In other developments, Kenyan-based French solar firm Alten Africa is funding the construction of a solar plant in Eldoret, located in Kenya's Rift Valley, and picked renewable energy firm, Voltalia, to build the new photovoltaic plant. It will have a 40MW installed capacity and is expected to produce an estimated total of 123.6GWh/year.

Voltalia will carry out the construction, operation and maintenance services of the project, which is due for completion in 2020. According to Alten Africa, the project is being built on a 100-ha piece of

“ With the completion of the solar plant, Garissa moves away from the unstable thermal energy.”

PRESIDENT UHURU KENYATTA

land and will have more than 161,000 monocrystalline panels set into solar single-axis trackers.

Alten Africa has developed another 50MW solar project in Kopere, Nandi County and has already signed a power purchase deal with Kenya Power. The project was constructed through a senior loan of US\$18.17mn from the African Development Bank (AfDB) and a concessionary facility of US\$11.6mn from the Climate Investment Fund's Scaling-up Renewable Energy Programme (SREP). The project involved the design, installation and operation of the photovoltaic (PV) farm and the construction of a 33/132 kV substation, as well as a 1.8km transmission line. It is expected to produce power enough to supply 600,000 people.

Clean water provision

Meanwhile, a non-governmental organisation GivePower, has built a solar water farm in Kiunga, along the eastern coast of Kenya to supply clean water to more than 3,500 inhabitants in the village who have no access to clean water.

GivePower's Solar Water Farm harvests solar energy using its solar panels. The solar farm is able to produce 50kWh of energy and power two water pumps that run 24 hours a day.

Using the solar power, saline water from the neighbouring Indian Ocean is then safely turned into potable water. Coastal communities

along the East African region suffer from acute clean water shortages, even when surrounded with a huge volume of saline water in the Indian Ocean.

Contaminated water can lead to debilitating waterborne diseases. Research has shown that turning sea water into drinkable water is power consuming and therefore expensive. However, by using solar power, it makes the process cheaper and a viable solution to the provision of clean water to rural communities.

Solar for mining

Meanwhile in Tanzania, German firm Redavia, has launched an eight-container solar farm at Shanta Gold's New Luika mine in the Chunya district of Tanzania.

The project is funded by InfraCo Africa, a member of the Private Infrastructure Development Group, which has committed up to US\$5mn to support the project.

Redavia is a leader in cost-effective rental solar power solutions for businesses and communities. According to Redavia, the initial one container solar plant deployed in 2014 generated 100,000 kWh of power for Shanta Gold, with fuel savings of 28,000 litres and a CO₂ reduction of 67 tons per year.

Now with eight operational solar containers plant and a capacity of 674 kWp, Shanta Gold is set to generate more than one million kWh per year, saving 219,000 litres of fuel and 660 tons of CO₂ annually.

"The project puts us in a position to

“As Africa's off-grid solution revolution has evolved, many industry insiders have recognised the need to empower a new generation of local enterprises.”

DAN MURPHY, MANAGING DIRECTOR OF VENTUREBUILDER

obtain our energy efficiency, cut cost and meet our CO₂ reduction,” said Toby Bradbury, CEO at Shanta Gold.

On its part, Uganda has completed a US\$25mn Kabulasoke solar power farm that will serve a population of five million in rural areas and facilitate carbon savings of more than 21,000 tons.

The project has been developed by Great Lakes Africa Energy (GLAE), Xsabo Power and Uganda Electricity Transmission Company.

The project has 68,000 solar panels and has the installed capacity to generate 20MW of electricity.

Uganda also has a small solar farm located in Tororo, close to the Kenya Border. Developed by Building Energy, a global independent power producer (IPP), the 10 MWp Tororo solar power plant will generate 16 GWh of renewable energy annually and serve 35,000 people in the region.

Rwanda

Neighbouring Rwanda is already enjoying solar power generation even as more investments get underway. The US\$23.7mn Rwamagana solar plant is the pioneer of such a utility facility in the country. Constructed in 2015 by the Gigawatt Global, an international power firm, the plant contributes 8.5MW to the national grid. enough to supply 15,000 homes with electricity.

The solar photovoltaic project is a brainchild of American-Israel green entrepreneur Yosef Abramowitz, a pioneer of Israel's solar industry.

In recent years, the Rwanda government in partnership with investors has been involved in the development and operations of the 250 kWp Mount Jali solar plant near

Kigali and the 3.3MW Nasho solar power plant.

Start-ups

Start-ups have shown interest in Africa solar enterprises. Late in 2019, VentureBuilder was launched with support from the DOEN Foundation, Facebook, Shell Foundation and USAID.

VentureBuilder has been co-developed by Catalyst Off-Grid Advisors and Open Capital Advisors since 2017, leveraging both companies' decades of experience in building, advising, and financing off-grid solar companies.

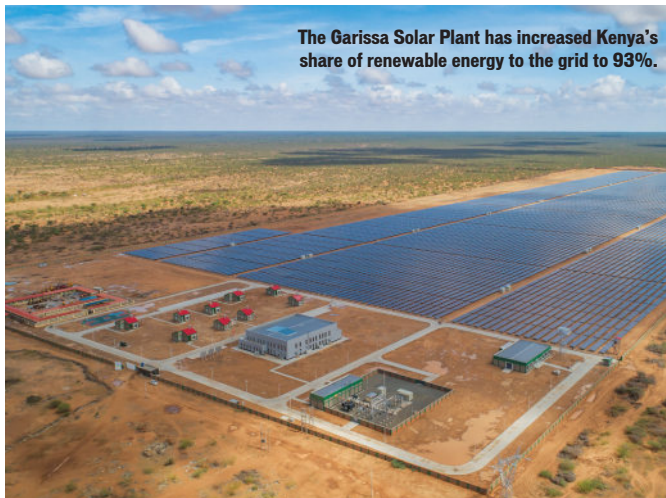
The energy focused start-up aims at scaling Africa-owned and managed off-grid solar enterprises to expand energy sources to underserved populations in Africa, according to a company statement.

VentureBuilder says its launch will enable it to pioneer a new investment model that provides 'patient' early-stage capital to its local partners across Africa, combined with specialised technical expertise that will accelerate each partner's path to scale.

VentureBuilder plans to partner with existing local African distribution enterprises that cater to rural underserved communities.

"As Africa's off-grid solar revolution has evolved, many industry insiders have recognised the need to empower a new generation of local enterprises," said Dan Murphy, managing director of VentureBuilder, adding that his firm will partner with local businesses and provide them with the human and financial resources they need to sustainably and profitably scale their impact. ■

The Garissa Solar Plant has increased Kenya's share of renewable energy to the grid to 93%.



SHARP LAUNCHES 440W MONOCRYSTALLINE SILICON PHOTOVOLTAIC PANEL

Global photovoltaic manufacturer Sharp has announced the addition of a new 440W monocrystalline silicon photovoltaic (PV) panel to its half-cut cell portfolio.

Available now, the NU-JD440 has a module efficiency of 19.9% and uses 144 M6 wafer size half cells. This decreases the balance-of-system costs per watt-peak installed across the whole BOS component range, providing customers with lower levelised costs of electricity (LCOE) and a higher return on investment.

The new module features 9 BB (multi busbar) technology using round ribbons which increases the power gain from each cell and making them less sensitive to microcracks, offering higher module reliability. A low temperature coefficient of $-0.347\%/^{\circ}\text{C}$ for the power output ensures higher performance at high environmental temperature, which becomes increasingly



Image Credit: Sharp

The safety, quality and durability of the panel has been recognised with IEC seals (IEC61215 and IEC61730).

important due to climate change and the resulting rise in temperatures.

In addition, the NU-JD440 module uses 1,670mm cables which enable trouble-free wiring in landscape installations and also allows for leapfrog wiring when installing in portrait, helping to further reduce system costs.

All Sharp half-cell modules have three small junction boxes instead of just one, each fitted

with one bypass diode. These junction boxes are transferring less heat to the cells above and in turn boost the longevity of the panels and the overall performance of the system.

Jens Meyer, manager, product engineering, Sharp Energy Solutions Europe said, “The NU-JD440 reduces the levelised cost of energy across various applications. With our regularly updated product portfolio, our team based in Germany and services offered across Europe, Africa and Middle East, our customers can always count on maximised product and service value.”

The safety, quality and durability of the panel has been recognised with IEC seals (IEC61215 and IEC61730). The modules have been rigorously tested for compliance with international standards and endurance under extreme conditions, passing tests for ammonia, salt mist, sand and PID resistance.

ZEST WEG SUPPLIES CUSTOMISED GEARBOX FOR GREEN FUEL'S PROJECT

Zest WEG is supplying a TGM planetary gearbox with a WEG variable speed drive (VSD) and a WEG medium voltage motor for a mill expansion by Green Fuel, Zimbabwe's leading producer of renewable fuel.

According to Leandro Magro, steam turbines manager at Zest WEG, the equipment is destined for the new sugar cane crushing mill #6 at Green Fuel's ethanol facility at Chisumbanje in south-eastern Zimbabwe. The plant uses the latest technology to produce high-grade anhydrous ethanol, with a high-pressure boiler and a TGM steam turbine generator set increasing energy recovery. This allows the plant to be self-sufficient in its energy needs, and to generate excess electricity.

Green Fuel's ethanol project - awarded National Project status by Zimbabwe's government for its economic contribution - reduces the country's reliance on imported petroleum products. It also produces less greenhouse gas emissions than unleaded petrol, and can be sold significantly cheaper. The company employs more than 3,000 people in its agricultural and industrial operations.

“The engineered gearbox for this project is custom-built by TGM in Brazil, a WEG Group company, and is supplied with a WEG VSD and WEG electric motor as a package,” said Magro. “The components in this solution are designed to deliver the specific torque required to crush the cane to the customer's specifications - reliably and efficiently.”

TRAF0'S DRY TYPE REACTOR SAVES POWER IN SOUTH AFRICAN BANK BACK-UP SYSTEM

Trafo Power Solutions leveraged its expertise and applications knowledge to provide a fit-for-purpose design for a replacement dry-type reactor for a major banking company's back-up power generating system.

Trafo Power Solutions supplied and assisted with the installation of a replacement reactor, providing a fit-for-purpose design that accommodated the limited space and awkward position in which the components had to fit.

“The reactor – or inductor – is a key part of the bank's back-up system that feeds a number of buildings in the central business district of Johannesburg,” said Aaron Rost, contracts and proposals engineer at Trafo Power Solutions. “This vital component serves as a link between the utility power, the back-up generator and the buildings' supply.”

Rost explained that the reactor is important for a number of reasons. Among the most important are reducing the bank's electricity costs, raising the system's efficiency and contributing to the stability of the municipal power grid.

With its vast data centres, the bank must constantly idle its standby generators online, so that the switchover between utility power and standby power is seamless in the event of a power failure. He notes that to make better use of the fuel consumed by this continuous operation, diesel generators can be repurposed to help alleviate the data centre's reactive power requirements.

“While active power refers to that element of the power supply that actually does the work – such as driving motors or powering lights – the reactive power is essentially useless power that is being wasted,” he said. “This reactive power effectively draws more current from a grid than what is really required.”

Rost highlighted that the reactor stops any of this reactive power from being used from the power grid. This reactor also allows only the active power to be supplied from the grid, and in so doing helps create a more efficient system.

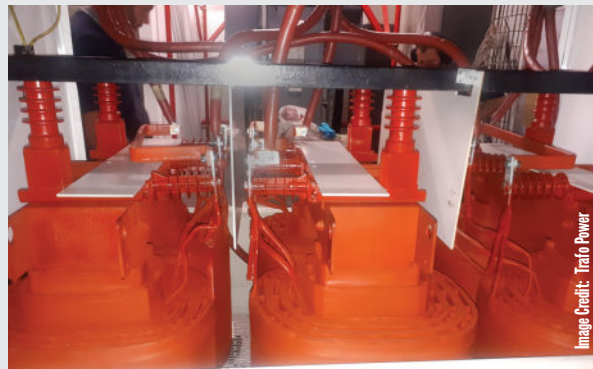


Image Credit: Trafo Power

An internal view of the reactor components mounted within the pre-existing IP21 enclosure.

GHADDAR SUPPLIES 33 JOHN DEERE-POWERED GENERATOR SETS

When the high-profile Winter at Tantora Festival in Saudi Arabia put out a call for a power supplier, power expert Ghaddar Machinery from Lebanon was ready, willing, and able to meet the challenge.

In a record time of three weeks, the company manufactured, delivered, and installed a 19.7 mVA power solution for this annual three-month event at the old town of Al-Ula, Medina, in northwestern Saudi Arabia.

The right solutions, in the right place

The Tantora project included 33 generators with John Deere engines providing a total capacity of 7.0 mVA, powering the colourful mix of concerts, sporting events, art installations, light shows and restaurants.

John Deere is one of the world's leading suppliers of diesel and gas generator sets and solar power. With facilities in Rabigh, Saudi Arabia, Ghaddar was in the perfect position to meet the special needs of the event.

Reliability and power, in the toughest conditions

Ghaddar makes ready-to-run yet highly customisable power solutions ranging between 4



Image Credit: John Deere

The Tantora project included 33 generators with John Deere engines providing a total capacity of 7.0 mVA.

and 4,000 kVA, for demanding and remote applications. Since 2019, its portfolio has included 30 to 320 kVA generator sets powered with John Deere engines, as well as complete John Deere-powered power packs for OEMs.

Mohamad Afif Ghaddar, marketing and business development manager, sees a lot of potential, and need, for John Deere engines in the Middle East. "We choose John Deere because of its extensive, global experience in generator

set applications. By adding John Deere engines to our range, we can now meet any power capacity requirement, no matter how demanding the project or operating conditions. The engines' reliability, simple design and ease of maintenance make them perfectly suited to the hot and dusty environments and for remote applications. And, their impressive load response allows customers to use a smaller and cost-effective package to power their needs."

The critical role of data centre uptime during the pandemic

As the world reels from the impact of the Covid-19 pandemic, there is increased pressure for data centres to be immune to the risks of downtime. The ability to operate, secure and recover systems is critical to the global economy, with load bank testing playing a vital role in any future resilience strategy.

A continuous focus on efficiency and reliability means that preparedness is in the data centre industry's DNA. Most have very robust strategies in place to deal with power blackouts, with generators and Uninterruptible Power Systems (UPS) universally accepted as critical business infrastructure. Yet, when power is mission-critical – supporting business infrastructure and digital communications as well as facilitating the sharing of critical health data – testing back-up power systems can make all the difference to whether they operate effectively when called upon.

Standby generators are known for being robust and reliable, providing back-up power if the standard electricity supply is interrupted. While the risks of downtime vary from site to site, one thing remains constant – interruptions in power supply have the potential to cause operational chaos. Wherever a generator is installed, there is also a need for a load bank – a device used to test, support, or protect a critical back-up power source and ensure that it is



Image Credit: Crestchic

Load bank testing is crucial for data centres to be resilient in times of pressure.

working optimally should an outage occur.

Properly planned and implemented, preventative maintenance strategies can minimise the likelihood of unscheduled breakdowns and outages, effectively negating the potential risk of incredibly costly

commercial, reputational and legal issues.

For more information on Crestchic's load banks, the need for testing of critical power supplies and advice on the various load bank options available, visit www.crestchicloadbanks.com

Okavango River bridge set for completion in 2021 will promote tourism



Image Credit: Adobe Stock

The new bridge will ease the crossing of the river for residents, and will help in expanding tourism.

Construction of the Okavango River bridge at Molembo in northern Botswana is expected to be completed in May 2021, according to press reports.

The project, which is being constructed by Itinera-Cimolai SpA, began in November 2016 and was initially scheduled for completion in July 2019. It has however experienced delays, partly as a result of the Covid-19 pandemic, although it remained operational throughout the lockdown period. Challenges are said to have included finalisation of the alternative design, and sourcing of materials.

The bridge will feature a cable-stayed structure and will be 1.2km long, with a 400m central section. It is expected to facilitate the crossing of the Okavango River for residents, and will also help to expand tourism activities in the Okavango area.

The project also includes the construction of 3km of roads to connect the new bridge to existing road infrastructure, as well as lighting and drainage systems.

The bridge site lies close to Botswana's border with Namibia just to the north, and will help to improve transport connections between the two countries.

MENEGAĪ GEOTHERMAL POWER PLANT COMPLETED

The African Development Bank, financiers of the MenegaĪ Geothermal Power Plant, has announced that the US\$108mn project has completed construction. The facility will connect around 500,000 households to the national grid, 70,000 of which are in rural areas. Kenya's national grid has recently been affected by recent hydropower shortages, a problem the operation of the plant will aim to solve. Beyond its ability to help solve the power shortage crisis, the plant also looks to reduce CO2 emissions by around 600,000 tonnes in the next two years and makes Kenya's production of geothermal energy the greatest on the continent, at 672MW, more than tripling the country's 2014 output of 168MW. Kenya's Vision 2030 plan to move towards renewable energy and increase power capacity to over 5,000MW by 2022 will undoubtedly benefit from the 50 wells targeted by the new facility and the additional 105MW of geothermal energy it will produce.

NEW KENYA HIGHWAY PROJECT TO BE DEVELOPED

The Republic of Kenya, through its Public Private Partnership Unit and the Kenya National Highways Authority (KeNHA), has executed an agreement with Rift Valley Highway, a company owned by VINCI Highways, a leading global developer of transport infrastructure, VINCI Concessions and Meridiam SAS, for the development of the Nairobi-Nakuru-Mau Summit Highway project.

The project, worth around Euro1.3bn, will transform the existing trunk road into a 175km dual two-lane motorway. Through an availability payment-based PPP, Rift Valley Highway will finance, design, widen, upgrade, operate and maintain this road corridor for 30 years. It is the first PPP won by VINCI Concessions in Africa.

The construction works, scheduled to last 42 months, will be carried out by a consortium comprised of VINCI Construction subsidiaries: Sogea-Satom, locally rooted in Kenya and VINCI Construction Terrassement, specialised in large infrastructure projects. VINCI Highways, subsidiary of VINCI Concessions, will capitalise on its technical and operational expertise to implement new traffic management patterns, deploy advanced equipment and maintenance plans, and provide local employees with training programmes.

A strategic project for Kenya's economic development, the highway will improve road safety and reduce travel time on this axis between Kenya's capital city Nairobi, Nakuru and Mau Summit. Crossing along the Rift valley, the highway will also serve as a gateway to tourism development.

The agreement will become effective following the performance of an Environmental and Social Impact Assessment in compliance with the standards of the World Bank. The financial close of the project is expected by the end of 2021.

► BRIEFS

Good outlook for Lafarge Africa

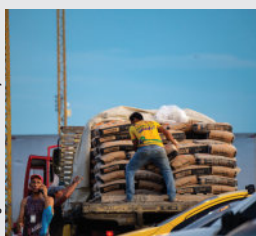


Image Credit: Michael Swan / Flickr

Business is improving for cement manufacturer Lafarge Africa.

Speaking at the Nigeria Stock Exchange, country CEO of Lafarge Africa, Khaled El Dokani commented on the positive outlook for the company. "Our route-to-market strategy has proven to be effective, particularly our expanded distribution network which proved very valuable during the peak of the Covid-19 lockdown. We have steadily expanded our retail footprint in our core markets. The re-launch of our Supaset brand has continued to gain traction with customers."



Image Credit: L&K Bosman / Flickr

The 51km stretch will form part of the Western Rail line.

Railway line for Ghana

The Ghana Railways Development Authority (GRDA) has awarded a US\$419mn contract to India-based Afcons Infrastructure for the construction of a standard gauge railway line in the Ashanti Region, according to a report in Railway Technology. Under the contract, Afcons will build a 51km-long standard gauge railway line from Eduadin to Obuasi, which will form part of the Western Rail line. Afcons Infrastructure is also constructing the Tema-Mpakadan railway line.

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Mixed forecast for Africa's construction growth

Construction firms carry on despite the pandemic, as the growth outlook is reined in for key markets across sub-Saharan Africa. Martin Clark reports.

Africa's robust economic growth of recent years has been hit hard by the coronavirus pandemic, but not all regions are affected equally.

Growth prospects in some of eastern Africa's larger economies have been reduced, but still present good opportunities for construction firms and their suppliers as activity continues.

Kenya and Ethiopia are two notable markets that are both expected to record positive growth in 2020, despite the gloomy backdrop.

The construction sector in Kenya is tipped to grow by 2.5% this year, according to data and analytics group GlobalData, down from an earlier estimate of 3.1%.

It cites disruptions to trade, commerce and tourism, weaker investment and faltering consumption due to heavy job losses and curfews arising from the pandemic.

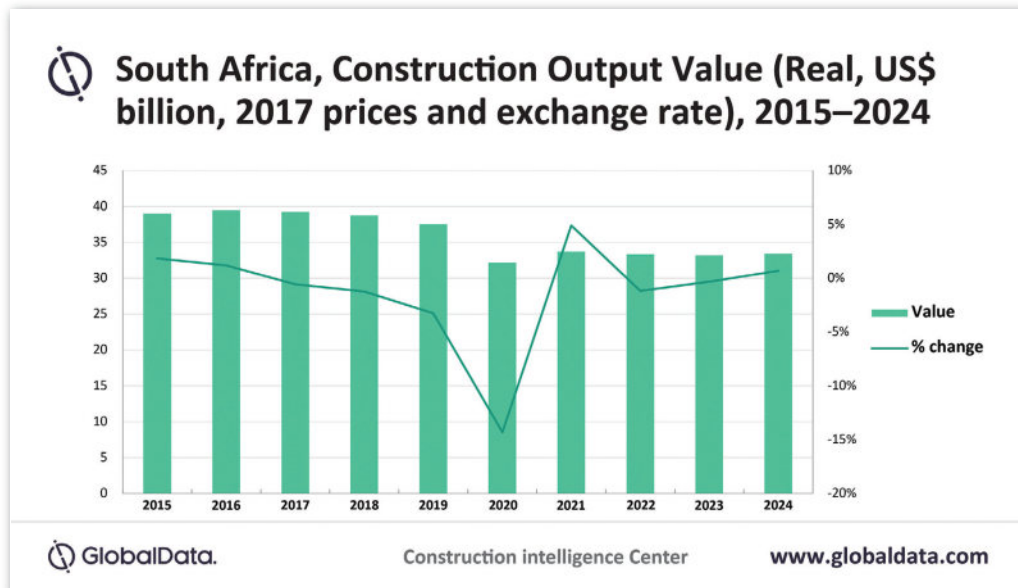
And yet it still marks modest growth, even in a year where contractions are the norm.

Ethiopia fares slightly better with a forecast of 3.1% growth for 2020, down from an earlier estimate of 7.8% in 2020; next year, this is expected to creep up again to 5%.

The weaker growth outlook reflects several factors, according to Yasmine Ghozzi, an economist at GlobalData.

These include the likelihood of a decline in project financing, given concerns surrounding the completion of projects, exacerbated by a sharp rise in Ethiopia's fiscal debt.

Investor sentiment will also be weighed down by political tensions stemming from a number of issues, notably protests in mid-August due to the detention of an opposition leader, a dispute with Egypt and Sudan over plans to fill the Grand Ethiopian Renaissance Dam, and



political tensions in the Tigray region, a key industrial area.

The overall construction output growth forecast for sub-Saharan Africa has been trimmed to -4.9% from a previous forecast of 0.7%.

Sub-Saharan Africa is expected to enter a region-wide deep recession in the latter part of 2020 as a result of the pandemic and policies imposed to contain the spread of the virus.

“The closure of borders adversely affecting trade flows and tourism, the collapse of global demand and the disruption of supply chains have also impacted the sub-Saharan Africa region,” says Ghozzi. “The lingering effects of Covid-19 on

travel, trade and investment, along with governments' limited fiscal space and soaring debt levels, will still be felt in 2021.”

At the same time, construction output is expected to grow by 4.6% overall in 2021, as, once the industry is permitted to operate at normal or near-normal levels, there could be a sharp recovery in activity compared to periods when works were not permitted or were severely restricted.

This will be the case when comparing Q2 2021 output levels with those in Q2 2020 in markets like South Africa and Nigeria, where activities were completely halted

after imposed strict lockdowns.

And it's not hard to find evidence of major projects making headway and attracting funding across all sectors, even in the face of pandemic-related difficulties.

They include mega projects like Mozambique's US\$24bn Area 1 LNG project in the energy sector, in which Afreximbank recently agreed up to US\$400mn in guarantees and direct lending.

In the transport sector, Kenya has signed a US\$1.3bn public private partnership (PPP) deal with for Vinci Concessions for the development of the Nairobi-Nakuru-Mau Summit Highway project that will transform an existing trunk road into a 175-km dual two-lane motorway.

The construction works, scheduled to last 42 months, will be carried out by a consortium of Vinci Construction subsidiaries, Sogea-Satom, locally rooted in Kenya, and Vinci Construction Terrassement, which is specialised in large infrastructure projects. It is the first PPP to be won by VINCI Concessions in Africa. ■

“The lingering effects of Covid-19 on travel, trade and investment, along with governments' limited fiscal space and soaring debt levels will be felt in 2021.”

YASMINE GHOZZI, ECONOMIST, GLOBAL DATA

Image Credit: Global Data



The E50 is a popular mini-excavator model in Africa.

The rise of mini-excavators in Africa

Nicolas Dumont, district sales manager - Africa for Doosan Bobcat for Europe, the Middle East and Africa (EMEA), provides African Review with some insights into the growing mini-excavator market.

African Review: Which mini-excavator models are doing well in Africa?

Nicolas Dumont: In terms of Bobcat sales, our best sellers are the E50 and E55 in the 5-6 t segment. The E50 and E55 are extremely popular. Looking at their market share in Africa, it is more than double that for EMEA, which is a strong sign of the dealer focus and market acceptance. Even though the volumes are smaller, we also have good shares in the E17 (1-2 t segment) and E35 (3-4 t segment).

The mini-excavator business in Africa is still rather small at the moment, as many companies still

“ South Africa represents half of the mini-excavator demand on the continent.”

NICOLAS DUMONT, DISTRICT SALES MANAGER - AFRICA FOR DOOSAN BOBCAT FOR EUROPE, MIDDLE EAST AND AFRICA

prefer the backhoe loader (BHL). In addition, construction companies are encouraged to use labour to help local communities rather than use machinery like mini-excavators.

AR: Will this preference for BHL change anytime soon in the future?

ND: There is no doubt that the market will sooner or later shift

from BHL to mini-excavator as the market becomes more mature. We see it in South Africa, which today represents half of the mini-excavator demand on the continent. That means it is important for Bobcat to be ready for that shift. So we constantly challenge our dealers to ensure they keep a focus on the mini-excavator opportunities.

AR: Tell us how Bobcat has navigated its way through the Covid-19 crisis?

ND: The Covid-19 crisis has been very tough, as business completely stopped overnight for several months. “Partners for the best and for the worse” has been our philosophy. We have kept in close contact with our dealer network to support them in this challenging time. We have organised webinars and other briefings on dealing with the situation, dealing with topics such as customer support, keeping teams motivated, cash flow management as well as ensuring they are ready for a restart of business without losing opportunities. ■

Bobcat launches the next-gen R-Series B730 backhoe loader for MEA

Introducing a new advanced design for Bobcat backhoe loaders.



Bobcat has launched the new generation R-Series B730 backhoe loader, replacing the company's first generation B700, B730 and B750 models, for sale in the Middle East and Africa (MEA). Available in a choice of different configurations for diverse applications, the new R-Series B730 backhoe loader is ideal for use in construction, utility, rental, roadworks, demolition, excavation, waste, recycling, landscaping, agriculture and other industries.

Gul Nalcaci, product manager for Bobcat backhoe loaders, said, "The R-Series B730 backhoe loader is the result of a great interpretation to meet the needs of our customers and is enriched with numerous new features. The new design is powerful and intuitive, injected with our iconic Bobcat DNA in heavy duty forms adding a huge strength to the product. It now offers a completely flexible solution for any job site with an unbeatable combination of power, drive and control options.

Smartly designed with an all new cab with convenience features that ensure it is a fantastic experience to operate a Bobcat Backhoe Loader."

Successful Bobcat expansion

Bobcat has long been acknowledged as the market leader in skid-steer loaders in MEA. In response to customer requests, the company entered the backhoe loader market four years ago and quickly gained market share throughout the region, with the first generation of Bobcat machines achieving top three positions in many countries in MEA.

Gaby Rhayem, regional director Middle East and Africa at Doosan Bobcat EMEA, said, "Backed by our number one position in loaders and

our fantastic Bobcat dealer network coverage for MEA, our first generation backhoe loader range has been very successful – I can proudly say that every second sold machine in the MEA region in our category is now Bobcat-branded, which is an incredible achievement. We also had a very good first half of 2020, despite the market challenges brought by Covid-19.

"We are dedicated to providing our customers with the performance and innovation they need. Our new generation R-series B730 backhoe loader meets all these goals and will allow us to gain market share and further improve our position throughout the region."

The power to achieve more

The B730 backhoe loader is powered by the best-in-class Perkins 1104C-44T 100 HP engine with a maximum torque of 408 Nm, delivering enough power to the most demanding applications. Along with the hydraulics, the B730 can therefore deliver all the power needed to finish work in a shorter time.

In combination with the manual or optional auto-shift transmission, accelerating from 0 to 40 km/h by smooth gearshifts, the operator benefits from an easy and comfortable drive on the road or at the job site.

The B730 offers premium performance with powerful breakout forces and strong lift capacities. With best-in-class reach and wide working areas at both the front and rear, the B730 reduces the need for repositioning for applications such as digging, trenching and material handling. It can be coupled with Bobcat attachments to carry out these duties with maximum efficiency. ■

“ Every second sold machine in the MEA region in our category is now Bobcat-branded.”

GABY RHAYEM, REGIONAL DIRECTOR MIDDLE EAST AND AFRICA AT DOOSAN BOBCAT EMEA

JCB UNVEILS 55KW 3CX BACKHOE LOADER

JCB has unveiled the 55kW 3CX backhoe loader with EU Stage V compliant engine, with an aim to deliver improved operator comfort and ease of use, increased productivity and performance, combined with reduced total cost of ownership.

With an efficiency boost – a three-litre Stage V engine delivering 10% torque increase and 7% fuel saving – it aims to provide an increased productivity with auto-levelling, auto seat select and auto-2WD.

This latest JCB 3CX takes the backhoe loader into a new decade, with a smart new look that features a revised Command Plus cab. There are four LED beacons integrated into the cab roof as standard, removing the need for magnetic beacons or drilling of the machine. The beacons can be seen from all angles, improving site safety, while there is no requirement for the operator to



have to climb up in the cold and wet to install beacons at the start of the day.

The Command Plus cab features yellow grab handles, for a clear touch point and there are larger mirrors for an improved view behind the machine when manoeuvring around site or when on road. Revised square work lights offer

increased adjustment and the LED option now includes up to 10 lights, providing maximum illumination of the working area.

Increased productivity

The 55kW Stage V 3CX introduces a range of advanced automation features, designed to reduce operator fatigue and boost productivity. This includes Auto Stop, which automatically detects when the machine is no longer in use and shuts down the engine. Auto Stop eliminates engine idling, that reduces fuel consumption. Auto Seat Select is available on machines equipped with servo lever control and automatically recognises which direction the seat is facing, eliminating the need to select functions as the operator changes from front to rear facing positions.

AFRISAM IS WBHO'S CONCRETE PARTNER ON BUS STATION WORKS

Construction leader AfriSam has conducted two large continuous pours as part of its readymix supply to WBHO Roads and Earthworks' contract at Watt Street Bus Rapid Transport (BRT) station in Wynberg, Johannesburg.

The two pours – conducted in February and June this year – comprised over 550m³ each, according to AfriSam's key accounts manager, Randal Chetty. The concrete work on the BRT project included piles, pile-caps and bridge structures including precast concrete beams.

Daniel Kwele, construction manager at WBHO Roads and Earthworks, says the contract involved extensive earthworks to excavate the underground station, and almost 9,000 m³ of readymix for concrete works.

"The southern portion of the main bridge over Pretoria Main Road included the installation of



AfriSam dedicated between 14 to 17 trucks to the job of servicing WBHO's concrete pumps during the large continuous pours of around 550 m³ each.

342 lateral support piles and pile caps to carry about 244 precast concrete beams," says Kwele. "To the north of the bus station, the most notable structures are the twin viaduct bridges, resting on 220 end-bearing piles and over 70 footings."

He notes that the close collaboration with AfriSam, and detailed planning for the continuous pours, helped to foresee and mitigate any challenges. "The pours became a smooth process, thanks to the commitment from AfriSam's senior management," he says.

Kevin Naidoo, operations manager for AfriSam's central plants, notes that in large pours for this kind of application, the window period for pumping and placing the high-spec concrete tends to be limited – due mainly to the high cement content in the mix.

"This meant that we had to have fresh concrete on site all the time, with no queueing of trucks," says Naidoo. "The laboratory at our Jukskei plant – close to the project – also assisted with checking the quality of our 150-slump mix."

TRIO CONE CRUSHERS BOOST CAPACITY

When one of the largest crushing operations in Oman needed to raise its production by 30%, Weir Minerals knew that a Trio TP350 cone crusher was the answer.

It was a demanding application, involving the crushing of hard, coarse-grained gabbro for use as construction aggregate. Gabbro has a high compressive strength of 220 to 230 MPa and an abrasion index of 0.45. The existing crusher was running at 270 to 280 tonnes per hour, with a closed side setting of 38 mm.

"The operators wanted to increase the crushing plant's capacity to over 300 tonnes per hour," said Tiisetso Masekwameng, general manager comminution at Weir Minerals Africa. "This could not be achieved without overloading the existing crusher, leading to machine trip-outs and excessive wear."

Running for 10 hours a day, seven days a week, the operation needed to be efficient. It could not afford excessive downtime caused by unexpected stoppages or frequent maintenance. Masekwameng highlights that the rugged Trio TP range is specially designed for heavy duty crushing, and the Trio TP350 model was ideal for this application.

"After detailed discussions with the plant's general manager to understand their needs, we recommended this model," she says. "With its capacity of 340 to 370 tonnes per hour at the same closed side setting of 38 mm, we were sure it would deliver the right result."

Not only did it achieve the required output, but it also reduced downtime by 50%. Installation was straightforward, requiring only an adaptor motor base to accommodate the larger, 250 kW electric motor. Noting the crusher's ease of maintenance, the customer was also pleased with its consistent performance and reliability.

"Our Trio TP cone crushers feature a steep crushing chamber angle and a large crushing stroke," says Masekwameng. "They operate at an optimum speed to deliver a high-quality product through increased inter-particle comminution."

She adds that these crushers are also designed to allow for maximum mobility without sacrificing versatility or crushing force. The Trio crusher range is compatible with Weir's Synertrex® technology for remote monitoring. Synertrex® is an industry-internet-of-things (IIoT) platform that monitors mining equipment for peak reliability and performance.



The Trio TP 360 cone crusher installed at an operation in Oman.

SIEMON LAUNCHES EDUCATIONAL GUIDES

Siemon, a leading global network infrastructure specialist, has announced a series of new application guides, specifically developed to help customers optimise the design, performance and administration of converged applications in intelligent buildings. Among these newly created educational tools is an audio-visual (AV) guide, a Wi-Fi guide, a security guide and a distributed antenna systems (DAS) guide.

In intelligent buildings, applications including AV, Wi-Fi, lighting, security and building automation systems, are increasingly utilising an IP-based platform which requires correct design, installation and administration for optimal operation of these integrated systems. The guides provide detailed information on key design, media selection and deployment strategies to achieve a robust, scalable and standards-compliant network infrastructure that is prepared to support these systems throughout the building. The guides have been developed for designers, consultants, end users and installers involved in the intelligent buildings sector.

"High-performance cables and connectivity are paramount in building a network that supports converged applications in smart buildings," explained Prem Rodrigues, director for the Middle East, Africa & India/SAARC at Siemon. "When planning the IT infrastructure, network speed and reliability are important as well as superior remote power delivery to a range of connected building systems and devices."

Category 6A shielded and category 7A cabling support the high bandwidth of applications.

Oxford Parks Phase 2: another Concor success

The Oxford Parks Phase 2 project is a testimony to meticulous coordination on the part of Concor Buildings, ensuring the concurrent construction of three different buildings would run smoothly.

Oxford Parks is an architectural focal point along Oxford Road in Rosebank. On completion in November 2020, this site will house five buildings on a master basement structure.

Phase 2 concludes the simultaneous construction of 203 Oxford Road – Life Healthcare’s new 10 000 m² head office, 8 Parks Boulevard – a 4,000 m² multi-tenanted building housing inter alia Metier Private Equity and G+D Currency Technology, and 6 Parks Boulevard – 3 400 m² offices for Arup, Sony Music and Sony Publishing.

The buildings, together with Phase 1, 199 Oxford Road, were designed to complement each other, and their respective footprints fit together in a jigsaw puzzle configuration, proportionately occupying the site to optimise the usage of this prime pedestrian precinct with its generous public environment.

Through bold yet sensitive design of the buildings, together with the hard and soft landscaping of the outdoor piazza area, a natural environment was created ensuring a harmonious blend of business, life and leisure for the end user. Accommodating all parking in basements has shaped a precinct that is pedestrian friendly and offers a safe retail experience.

Martin Muller, Concor Buildings’ contracts manager, explains that all the buildings are constructed to be compliant with Green Star design requirements. 199 Oxford Road in Phase 1 achieved a 5-Star Green Star rating. All specifications on the project are in line with Green Star requirements, and the buildings in Phase 2 are also designed to achieve 5-Star Green Star ratings.



Image Credit: Concor Buildings

Oxford Parks Precinct showing building 1 to building 5.

A comprehensive environmental management plan was adopted that amongst many criteria, specified the installation of waste management systems to maximise recycling from waste generated on the project. Another environmental intervention was the installation of state-of-the-art HVAC systems in all the buildings presenting energy saving, efficiency and sustainability features including air-cooled systems to eliminate water usage.

To optimise energy usage during occupation, different striking façades provide the respective buildings with both aesthetic

interest and added energy benefits.

Muller emphasises Concor Buildings’ commitment to health and safety on site. “Creating a strong safety culture is always a challenge on bigger projects with a large number of subcontractors, but Concor’s pledge to its Stop.Think.Act initiative has seen active involvement becoming a trend on site.

“Visible felt leadership from the entire production and safety team ensures that contractors, subcontractors and tenant contractors execute work safely at all times. This is vital as on average there are 350 workers from 22

different contractors on site, and this will increase as tenants start with their fit-out activities,” he says.

The Covid-19 lockdown added a new level of challenges and anxiety to the construction industry. According to Muller, through early preparation and policy implementation, Concor Buildings ensured it was ready to start again on site once the lockdown restriction relaxation allowed construction to commence on 1 June 2020. Implemented daily scanning points, wash stations, social distancing measures, signage and continual communication led to construction activities restarting after the restrictions were removed.

Risk management became an important part of this project, considering that the lockdown delayed construction by more than two months. Concor Buildings demonstrated its agility value by completing the buildings close to the original completion dates. ■

“Concor’s pledge to its Stop.Think.Act initiative has seen active involvement becoming a trend on site.”

MARTIN MULLER, CONCOR BUILDINGS CONTRACTS MANAGER

CAT'S NEW D9 DOZER LOWERS OWNERSHIP AND OPERATOR COSTS

The new Cat D9 Dozer replaces the D9T model and offers customisable configurations to meet application needs around the world. Built on a legacy of longevity and proven reliability in the field, the new Cat D9 lowers overall costs per unit of material moved by up to 3%. Efficiencies gained through a new torque converter with stator clutch reduce fuel consumption by as much as 5%, and the new dozer reduces maintenance and repair costs by as much as 4%.

The new dozer features the proven Cat C18 engine, which has a range of exhaust aftertreatment solutions available, including configurations to meet US EPA Tier 4 Final/EU Stage V regulations and configurations equivalent to US EPA Tier 2 and Tier 3.

The D9 also features differential steering for a tight turning radius and the ability to maintain



Image Credit: Cat

Cat D9 Dozer pushing dirt.

ground speed while turning – to keep productivity high. The suspended undercarriage delivers more track contact with the ground for less slippage and greater productivity.

The versatile D9 can be equipped with any of a wide range of blades and attachments, enabling it to work efficiently in a variety of applications, including production dozing, site maintenance, fleet support and ripping. Companies engaged in heavy construction, quarry and aggregates, landfill, bulk materials handling and forestry applications have found the D9 Dozer an indispensable tool for delivering the lowest owning and operating costs while maintaining high productivity.

Featuring a frame that absorbs and withstands high-impact shock loads encountered in severe applications, the new D9 offers design improvements that reduce maintenance and repair costs. The newly integrated AutoLube system results in fewer grease points to limit daily maintenance procedures.

More output with Rockster DUPLEX Crusher

Since February 2020, Rockster's R1100D impactor with screen box and return belt has been creating valuable aggregate for CSB Mobile, a reliable specialist in earthworks headquartered in Casablanca, Morocco. The easy handling and good performance of the crusher as well as the possibility of processing various materials were key criteria for the purchase.

Since one of the CEOs of CSB is from Ukraine, he got in touch with Rockster's Russian dealer Maksim Perminov, who offered him a range of possibilities. CSB wanted to put more emphasis on demolition, recycling as well as quarry stone mining and one of the key requirements was a crusher with large inlet opening and a good performance. "I recommended them a track-mounted Rockster R1100D impact crusher because the handling of this hydrostatic driven machines is quite simple and the output is remarkable," says Perminov.

The main benefit of the hydrostatic drive is the constant crushing performance due to the continuous adjustment of the hydrostatic pressure to the power requirements of the crusher. This leads to a noticeably reduced diesel consumption per tonne of production. Additional benefit of having a crusher with hydrostatic drive is reduced wear costs in comparison to a conventional clutch system.

Another reason why CSB Mobile chose this Rockster crusher was the patented DUPLEX-system. The R1100D is DUPLEX-able and can be quickly modified from an impact to a jaw crusher and vice versa. This allows the customer to achieve maximum machine utilisation and rapidly adapt to different job requirements. Besides concrete and asphalt, the CSB Mobile also crushes gravel, sand, and different types of hard rock.

Water reservoir in Mohammedia

Water is a rare and therefore valuable commodity in Morocco. So, one of the first projects for the R1100D impact crusher was to process 10,000 m³ of gravel that comes from a pit under a water storage reservoir in Mohammedia near Casablanca. Gravel is a rather abrasive stone that includes pure iron ore with a high specific gravity weighing up to 2.8kg/m³. The size of the loaded material



Building a water storage reservoir in Mohammedia near Casablanca and crushing the material to 0/40mm with the Rockster impactor R1100D.

Image Credit: Rockster

was up to 1000mm, the final fraction 0-40mm is called "GNF". It usually contains 10-15% soil, but thanks to Rockster's prescreen in combination with the side discharge belt, CSB receives a very high-quality end product that they can sell for about US\$7-9.

JCB'S 19C-1E ELECTRIC DIGGER WINS 2020 MACROBERT AWARD

JCB's ultra-quiet and zero emissions 19C-1E electric digger has won the 2020 MacRobert Award, a prize for innovation that has been presented since 1969 to honour a wide variety of engineering feats, including the CT scanner and Rolls-Royce's Pegasus engine used in the Harrier jump jet.

Lord Bamford, chairman of JCB, said, "To win one of the world's most respected engineering prizes is an outstanding endorsement for JCB's electrification team, who have achieved so much in applying a science which was new to our business. JCB's electric mini excavator will contribute to a zero carbon future and it's a huge honour for our contribution to be recognised in this way."

Professor Sir Richard Friend FEng FRS, chair of the Royal Academy of Engineering MacRobert Award judging panel, said, "JCB's electric digger is a huge engineering achievement. The team has developed all parts of the electric propulsion system to deliver system performance that matches real customer requirements."

The 19C-1E excavator is the world's first volume-produced fully electric digger and with it, JCB has shown it is possible to make powerful construction machinery without an internal combustion engine. Hundreds of the machines have been sold and so far they have saved the equivalent of 15,100kg in CO₂ emissions across 5,616 hours of work. The electric digger has zero exhaust emissions and very low noise levels, making it more suitable to operate inside buildings.

TOMRA solution to maximise diamond recovery and save costs

TOMRA's X-Ray Transmission (XRT) diamond recovery technology is set to maximise diamond recovery while optimising costs.

The technology recognises and separates material based on its specific atomic density. It uses a cutting-edge X-Ray camera with DUOLINE sensor technology to measure spectral absorption information. TOMRA's proprietary high-speed X-Ray processing unit uses the data to produce a detailed "density image" of the material.

The result is a high level of purity in sorting materials, irrespective of size, the degree of moisture or surface pollution present. Marie-Claude Hallé had first-hand experience on this. During her role as marketing operations manager for Canadian diamond exploration and producing company Stornoway Diamonds, she discovered that the technology is really effective in changing the game in terms of rough diamonds recovered around the world. "It allowed producers to access large exceptional quality goods that perhaps in the past would be crushed to pieces," she said.

The challenge of economically mining low-grade alluvial deposits is due to their typically lower grade and the sporadic nature of the deposits. TOMRA's XRT technology enables single-stage or double-stage diamond recovery, offering a drastically lower operating cost and capital investment so that mining marginal deposits becomes economically viable. Another advantage of TOMRA's XRT solution is that it can operate as a dry process, which reduces its environmental impact and operational complexity.

TOMRA XRT machines have proved effective in alluvial operations. One such case is that of the Lulo mine in Angola operated by Lucapa Diamonds, where TOMRA XRT technology is used to process material between 18 and 55 mm in size and allows the recovery of diamonds up to 1,100 carats – and where it has recovered Angola's second-biggest diamond on record in 2017, a 227-carat stone.

"The recovery of the 227-carat diamond using the new XRT circuit justifies our investment in TOMRA's large diamond recovery technology, which has more than paid for itself with the recovery of this one stone alone," said Stephen Wetherall, managing director at Lucapa Diamonds at the time of the recovery. The company focuses on developing and engineering cutting-edge technology designed to withstand harsh mining environments.



The technology recognises and separates material based on its specific atomic density.

SPOTLIGHT ON INDUSTRIAL SANDS, MINING & WASTE RECYCLING AND OTHERS

CDE, manufacturer of wet processing equipment, held a two-day 'Engineering Insights Global Virtual Event' from 14-15 October, featuring more than 70 sessions.

The issues focused on quarried sand and aggregates, industrial sands, mining, C&D waste recycling and waste management sectors, plus environmental policy and the technology for the wet processing plants of the future.

More than 100 industry leaders, including CDE experts, facilitated a series of dynamic, educational and informative presentations and panel discussions. These include maximising recovery through wet and dry processing featuring Kiverco Recycling; the dynamic industrial sands market featuring Dansand A/S; challenges of contamination removal featuring AA Environmental; future of planning and legislation challenges for sand production the UK featuring SAMSA & Sibelco; legislation review for the use of construction, demolition and excavation recycled material featuring The European Commission; water management featuring Lonestar Aggregates and others.

Day one of the event started with a keynote speech by Adrian Hart, associate director – Construction and Infrastructure at BIS Oxford Economics. Hart explored the short and long-term impacts of Covid-19 on construction in Australia and New Zealand.

Day two opened with a keynote address by Marga Hoek, global thought leader on sustainable business and capital, discussing the need to all businesses to adopt global sustainability goals for business.

It concluded with a session discussing the benefits of cyclone technology over traditional sand screws with input from CDE USA customer Wheatcraft Materials. Question and answer sessions connected

METSO OUTOTEC INTRODUCES GOLD ANALYSER

Metso Outotec has launched its next-generation Courier 6G SL onstream analyser for direct measurement of gold, platinum and other valuable metal concentrations from ore feed, concentrate and tailings streams.

The analyser aims to enable accurate real-time elemental analysis measurement, which is critical for establishing efficient process control to improve process stability and maximise recovery. This is set to ensure optimal measurement accuracy and sampling frequency.

"Agnico Eagle Kittilä has used the onstream analyser for flotation control and optimisation since October 2019. Measurement information provided by the Courier 6G SL has enabled more efficient control of the pre-flotation circuit and helped to reduce gold losses," said Lauri Veki, metallurgist, Agnico Eagle Kittilä.

The system is set to ensure optimal measurement accuracy and sampling frequency in the most complex polymetallic flotation circuits.

BRIEFS



The field programme includes an infill drilling programme to upgrade existing resources.

Giyani Metals commences 2020 field drill programme

Giyani Metals Corp has commenced its 2020 feasibility study field programme for K.Hill manganese project in Botswana. The company has appointed a drilling contractor, project management and geological services contractor and their imminent mobilisation. The 2020 Field Programme follows Giyani's recent successful capital raising, which closed on 18 September, 2020.



Microsoft is helping to digitally transform the mining industry.

Microsoft to transform mining in South Africa

Microsoft South Africa is working with partners to help the country's mining industry accelerate its digital transformation. This follows the launch of Microsoft's Mining Core in September, which is the first of its kind in South Africa, making use of Microsoft's extensive partner ecosystem, allowing customers to immerse themselves in emerging technologies to build and create solutions to overcome business challenges.



The LH518 Battery-electric loader.



Image Credit: Sandvik

New generation mining vehicles by 2040

The ICMM's Innovation for Cleaner, Safer Vehicles (ICSV) programme has attracted the world's global mining companies to come together and shape the future of zero-carbon emission surface mining fleets. Samantha Payne reports.

Electric mining fleets in Africa might be closer than we think as global mining houses gear up to developing a new generation of mining vehicles by 2040.

Called the ICMM's Innovation for Cleaner, Safer Vehicles (ICSV) programme, it brings together the world's leading mining companies and best-known truck and mining equipment suppliers "to collaborate in a non-competitive space for accelerated development of a new generation of mining vehicles".

The initiative aims to introduce greenhouse gas emission-free surface mining vehicles by 2040, minimise the operational impact of diesel exhaust by 2025 and use collision avoidance technology by mining companies by 2025.

Anglo American has started building the world's largest hydrogen powered mine truck with Williams Advanced Engineering (WAE), with testing taking place this year at Anglo American's flagship Mogalakwena PGMs mine in South Africa.

The new Fuel Cell Electric Vehicle (FCEV) haul truck will be powered by a hydrogen Fuel Cell Module paired with a WAE scalable high-power modular lithium-ion battery system, which will replace the existing vehicle's diesel engine. It is controlled by a high voltage power distribution unit delivering in excess of 1,000 kWh of energy storage

"We have a longstanding commitment as a leader in

responsible mining, with numerous examples of our progressive business decisions across many decades and we look forward to working with Williams Advanced Engineering to deliver this important step-change technology, a true world first for a vehicle of this size and load capacity," said Julian Soles, Head of Technology Development for Anglo American in a statement earlier this year.

"With their extensive industry experience, we believe Williams can help us to deliver this groundbreaking project, which is part of our plan to create a smart energy mix that moves us closer towards our carbon and energy targets for 2030 and, ultimately, our vision of operating a carbon-neutral mine."

In other announcements, Sandvik presented the world's first 18 tonne battery loader, the LH518B.

The battery-electric loader comes with an exceptional capacity for its size: its design solutions allow the loader to fit in a 4.5 x 4.5m tunnel and carry 18-tonne loads. In addition to an innovative boom and bucket system, the LH518B features independent front and rear drivetrains, allowing high payload capacity while keeping a low overall height.

For superior productivity, the

LH518B is equipped with three 2000 Nm permanent magnet motors. With no torque converter, transmission or engine to rev up, the loader is fast and agile. There are no emission restrictions based on installed power to limit the electric motor selection, which enables the use of the most powerful motors available that are suited for the underground conditions.

The LH518B is equipped with AutoSwap, a patented self-swapping system for the Artisan battery pack. Battery swapping is made fast and easy with minimum amount of manual handling – changing the battery only takes about six minutes, and it can be done in a passing bay or old re-muck bay with no overhead cranes or external infrastructure needed. The battery-powered loader helps to reduce heat and emissions underground, helping mines reach their sustainability targets and reduce ventilation costs. The robust battery pack uses Lithium Iron Phosphate chemistry (LiFePO4) and is purpose-designed for use in underground mining.

A Sandvik spokesman said, "Currently, Sandvik is expanding the BEV loader and truck offering and prepares to enter new market areas, which will happen in phases

and model by model. When the battery loaders and trucks are introduced to new markets, Sandvik will be ready to offer full product support and aftermarket services for its customers." ■

AutoMine Concept

Sandvik Automation at the Innovation in Mining Virtual Event, hosted by Sandvik Mining and Rock Technology on 29 September unveiled their autonomous AutoMine Concept vehicle, based on the latest technologies and equipped with completely new sensing capabilities and artificial intelligence to enhance mining operations. The vehicle perceives its surroundings and environment in 3D and reacts to it in real-time. These technologies provide clear customer advantages by allowing vehicles to adapt and plan their own routes, and to find the most suitable paths even in continuously changing environments. The obstacle detection, collision avoidance and 3D online mapping capabilities improve adaptability and increase flexibility.

"The AutoMine Concept is unique, because it has been designed ground-up for autonomous use. It is the world's first autonomous underground mining machine built for automation," says Riku Pulli, vice president, Automation at Sandvik Mining and Rock Technology.

“ The LH518B battery-electric loader comes with an exceptional capacity for its size.”

Pushing the boundaries in PVC pipe manufacturing

A specialist in applying molecular orientation to pipeline solutions, Molecor is continuing to push the limits with its new PVC-O DN 1000 pipe and the technology for DN 1200.

Founded in 2006, Molecor began its business focusing on Oriented PVC pipes and fittings for pressured water conveyance. But the company's true differentiating factor is its ability to manufacture large diameter PVC-O pipes, offering product ranges not previously available on the market.

TOM® pipes cover nominal diameters from 90 to 1,200mm in 12.5, 16, 20 and 25 bar pressure. Moreover, they are certified in more than 10 countries and are 100% recyclable. These points have also facilitated their expansion world-wide when Molecor offered these products to the market.

Technology evolution

In 2010, Molecor designed the M-OR-P 3163 system. Before this design, some tests were done with the M-OR-P 1640 machine, manufacturing a 500mm diameter pipe. Thereafter, the 630mm diameter in Oriented PVC was born, and still maintains the highest quality – class 500 – without losing its best mechanical and physical properties.

In 2013, the next technological development, the M-OR-P 3180 system, went hand-in-hand with the DN800mm. Molecor extended its product range one more time, making the largest PVC-O pipe in the world to date, with this achievement positioning Molecor as the largest Oriented PVC pipe manufacturer globally.

The M-OR-P 5012 system is now a reality, bringing a new machine for high quality PVC-O pipe manufacture to the market with never before seen diameters. The pipeline market receives the widest range of pipe diameters, up to



Molecor mold DN1000 under operation at its Madrid Factory

Image Credit: Molecor



Molecor TOM PVC-O large diameter pipes on the field.

Image Credit: Molecor

1,200mm.

Molecor has now expanded its offer with a wider choice of

pressurised water solutions. The first DN 1000 pipes are now being manufactured in Madrid, and

beginning next year the DN 1200 are expected to be available. ■

“Molecor has now expanded its offer with a wider choice of pressurised water solutions.”

MOLECOR

Contact details for Sizabantu:
 Eastern Cape – +27 41 486 1043 //
 Exports – +27 10 020 7858 // Free
 State – +27 51 434 2226
 Gauteng – +27 10 072 0130 // KZN –
 +27 31 7929500 // Limpopo - +27 15
 293 1527
 Mpumalanga – +27 13 755 2707/8 //
 North West – +27 18 462 5564
 Western Cape – +27 21 905 9740

GRINDEX DEWATERING PUMPS AIDS STEELPORT PLATINUM MINE

Thanks to the quick reaction of Integrated Pump Technology, it came to the rescue of a platinum mining customer who urgently needed to dewater its decline shaft.

Alfred Kelsey, key account manager at Integrated Pump Technology, explains that the company, as the official Grindex pump distributor for southern Africa, maintains a comprehensive stockholding of dewatering pumps. This, he says, is essential for allowing its extensive distributor network to react quickly to customer needs.

“The strength of our stockholding allowed us to effect a same day delivery of two Grindex Maxi pumps to our distributor in Steelport, Babata Pumps, allowing them to provide an efficient service to their end-customer, a platinum mine in that area.



The Grindex Bravo being hoisted into Integrated Pump Technology's in-house test sump.

The two Grindex Maxi pumps have been installed in the mine's decline shaft to ensure effective dewatering. The pumps are capable of achieving a flow rate of 30l/s at a head of 80m and being of robust construction are well suited to this type of heavy-duty drainage application.

Equipped with a SMART motor protector and

an air valve that enables continuous unattended operation, the Grindex Maxi pumps have found favour in the mining environment as this feature allows the pumps to run dry without operational interruptions.

The hydraulic design facilitates re-adjustment of the impeller-suction-cover-clearance allowing performance to be regained after wear. Kelsey says this is a significant feature for customers assisting in keeping life cycle costs low. Further, reliable operation is, as always, one of the most important considerations when it comes to drainage and dewatering applications, and the Grindex Maxi pump is simple and easy to maintain.

Kelsey says that installation of the pump was done by the end-customer and Babata Pump will provide any support required.

Blasting tech takes mines into the future

Built on innovation since its inception more than three decades ago, global explosives leader BME – a member of the JSE-listed Omnia Group – paves the way for mines to leverage the latest technologies for ever-greater efficiencies and productivity.

“Harnessing technology as quickly as it develops – and applying it to make blasting safer and more productive – is vital to the mining sector's sustainability,” said BME managing director Joe Keenan. “Mines are seeing the value in closer digital monitoring and control of all their systems and operations. Innovation is therefore an industry-wide imperative that is demanding closer collaboration – not only with mines but between technology suppliers themselves.”

Over the years, BME's success has been based on leveraging technology throughout its product range. This includes cold emulsion explosives – which it pioneered in the South African market – to mobile manufacturing and application equipment, digital initiation systems, consumables and cutting-edge software.

Keenan noted that the company's commitment to digital innovation has enhanced its resilience during the Covid-19 lockdown – and ensured that customers have continued to be supplied and supported. This has allowed its customers to continue with their blast planning and execution with minimal disruption. BME's powerful BLASTMAP software has facilitated remote blast planning where necessary, and assistance on this platform could continue to be provided to mines with restricted access.

“Our systems were able to reduce the points of physical contact to reduce infection risks, including a digital solution that replaced the need for truck drivers to exchange paper documents with mine security staff to gain access to site,” Keenan said.



BME blasting guide app.

TRIPLE ACTION SCREENING POWER

Terex Finlay 883+ heavy duty scalping screener is now available with a triple shaft screenbox that is ideal for working in dry and sticky applications including quarry, mining, sand, gravel, construction and demolition debris and recycling applications.



Terex Finlay 883+ heavy duty scalping screener.

The heart of this new model is the new triple shaft screenbox, featuring two “true” full size 4.8 x 1.53m (16' x 5') screening decks.

The model is available with hybrid power technology consisting of on-board electrical motors permitting the flexibility to run the plant from an outside power supply or standard on-board engine.

According to the company's website, the product has the following features:

- Higher G-force and larger stroke of the triple shaft screenbox provides the optimal solution for high productivity in dry and sticky applications.
- Media configurations including bofor bars, finger screens, woven mesh and punch plates are available for a wide range of applications, from fine screening to heavy scalping.
- Media configurations are compatible with both the standard and triple shaft screenboxes.
- The banana profile of the bottom deck maximises the screening of fine materials.

Extracting metals in an environmentally friendly way

DuPont Water Solutions is the global leader in sustainable separation and purification technology, helping customers across industries and countries make real progress in ways that not only improve productivity, efficiency and profitability, but also reduce waste, energy consumption and environmental impact.

Water management is vital in metal-mining operations.



DuPont Water Solutions aid industries and markets, empowering them to operate more effectively, efficiently, and sustainably by making water scarcity challenges more controllable wherever they may arise, which is now more than ever before.

DuPont Water Solutions offers a broad portfolio of ion exchange (IX), reverse osmosis, nanofiltration (RO & NF), ultrafiltration (UF), membrane bioreactor (MBR), membrane aerated biofilm reactor (MABR), degasification, closed circuit reverse osmosis (CCRO) and electrodeionisation (EDI) technologies, with strong positions in major application areas and market segments, including industrial water, waste water reuse, acid mine drainage, municipal, potable water, and specialty process solutions.

Metals are essential raw materials that are used in nearly all of today's consumer and industrial products. Furthermore, mining of these metals is one of the key industries

for economic development globally, and through DuPont Water Solutions innovative technologies could harness the potential of the mining sector to recover/extract/purify metals of economic interest, doing this in an environmentally responsible way, using our technologies to also treat the waste and discharge waters, ultimately protecting the planet.

DuPont Water Solutions has been the market leader in mining for many years, especially with the application and development of ion exchange resin technology for the primary extraction, purification, and separation of metals such as, but not limited to, uranium, copper, nickel, cobalt, precious group metals

and gold, in hydrometallurgical processes. This includes the supply of process water, recycling of waste streams, and reagent recovery using our innovative ultrafiltration, reverse osmosis and nano filtration technologies.

Water management is becoming an increasingly important aspect of metal-mining operations due to the rising use of hydrometallurgy to extract metals. Resins and other technologies that can be used to purify water can also be used to isolate, extract, and purify certain elements; these technologies play key roles in extracting metals in hydrometallurgical processes.

At DuPont, we are developing direct lithium extraction (DLE)

technology, a novel solution to address inadequacies present in commonly employed lithium extraction processes. This is spurred on by the ever-increasing need for high-purity lithium due to the increase in demand for lithium-ion batteries caused by the rapid growth of electric powered vehicles.

DLE does away with the need for large evaporation ponds and is able to return the lithium-depleted brine back underground. It also cuts down the amount of time needed to extract lithium from brine to mere hours. The sorbent materials are selective enough to recover around 90% of lithium in brines and could drastically cut water use, lower capital expenditure, and make lithium extraction more energy efficient. ■

“ DuPont Water Solutions has been the market leader in mining, especially with the development of IX resin technology.”

For more information visit <https://www.dupont.com/water/industries/mining-and-hydrometallurgy.html>

INTELLIGENT WATER BOOSTING SYSTEMS FOR ENERGY SAVINGS

Ensuring the right pressure and volume of water in a modern building calls for a reliable system that is energy-efficient, according to Grundfos external sales representative Nick Pluck.

“Electricity costs are an increasing concern for owners and managers of buildings, and this is from residential and business blocks to hotels and industrial facilities,” says Pluck. “This is where the Grundfos MPC booster systems offer enhanced value.”

Known for their high performance and reliability, the Grundfos Hydro MPC booster systems also offer an advanced, intelligent cascade controller to further improve energy efficiency and ease of operation.

“Over time, the CU 352 smart controller develops its own patterns based on its understanding of a building’s daily requirements,” he explained. “It will register and remember how the water demand changes over the course of a day and ensure the pumps meet that demand without running unnecessarily



Image Credit: Grundfos

Nick Pluck, external sales representative at Grundfos.

when demand is low.”

Equipped with this controller, the Grundfos Control MPC can monitor up to six connected identical pumps, each driven by motors with

variable speed drives (VSDs).

“We incorporate the VSD so that the controller and MPC can change the speed of each individual motor based on the demand requirement,” he said. “A four-pump system, therefore, could have three pumps running at full capacity while the fourth runs at just 60% – saving energy while still meeting demand.”

As the system’s algorithms calculate patterns, it can trim off waste energy consumption when less pumping is required. The controller can alternate the starting sequence of the pumps, resulting in more even running time and less wear and tear across the pumps. This allows more accurate and economical service planning and scheduling.

High-efficiency IE3 motors further enhance the Grundfos Hydro MPC’s energy efficiency while maintaining a constant pressure during changing flow demands. With a user-friendly interface, the systems offer ease of installation and commissioning, along with long-term value for money.



Image Credit: Grundfos

The Grundfos Control MPC can monitor up to six connected identical pumps.

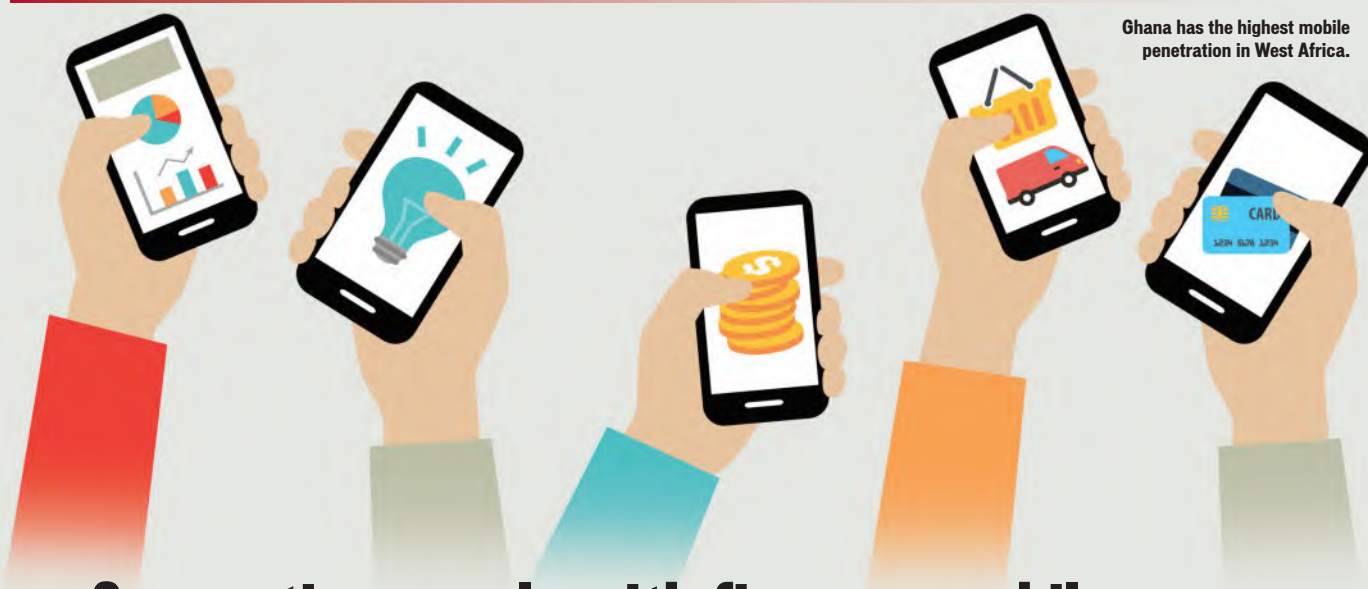


Image Credit: Grundfos

The Grundfos Hydro MPB booster system offers an advanced intelligent cascade controller to improve energy efficiency.

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Ghana has the highest mobile penetration in West Africa.

Image Credit: Adobe Stock

Connecting people with finance: mobile money

People are changing their habits, looking for new ways to handle financial transactions, such as investing in stocks and managing portfolios.

As mobile devices increase in popularity, individuals are embracing digital transformation more rapidly than most enterprises.

People are changing their habits, looking for new ways handling financial transactions, such as investing in stocks and managing portfolios.

However, financial services are not as common in some developing countries. In Ghana, for instance, many are 'unbanked', meaning they do not have any proper bank account and are simply excluded from the financial system.

The Bank of Ghana estimates that seven million people are unbanked, representing 22 per cent of the country's population.

While these people may not have access to appropriate financial services, many of them have access to the internet, with online penetration in Ghana standing at around 64%.

High mobile penetration leads to a new banking model

The country has the highest mobile penetration in West Africa and already outperforms many of its regional peers. By the end of 2019, mobile adoption stood at 55%, higher than the regional average of 44.8%.

This is one of the reasons why

Ghana is leading the drive to expand financial inclusion by leveraging digital solutions. The government has recognised the role that financial inclusion plays in economic development and poverty alleviation.

Measures include renewing regulations under the guidance of the World Bank to allow non-financial enterprise to provide such services.

Ghana Commercial Bank (GCB) took the initiative to implement its strategy in 2018 using Huawei's G-Money solution, in a move to stay ahead in the increasing fierce competition among banks and telecom carriers.

Mobile money is a bank business

The solution is an extension of a successful scheme in China, where mobile payment has become a key driver that brings banks to take a more proactive position in providing new services.

While developing various solutions to fit their customers, these lenders share the same ideology: mobile money services should be a bank business.

This is reflected by GCB. As the country's largest commercial bank, it looked to develop a mobile money platform that could be used for easy cross-platform payments, with a broader range of services – building a

mobile payment ecosystem to give more flexibility to customers.

The lender, which has served for more than six decades and already had 200 branches, was committed to including more agents and merchants in its mobile money network to make it reachable to more people. It upgraded its point of service terminals and ATMs, making them capable of supporting mobile money services.

The updated G-Money mobile money platform was launched in December 2019, which has since helped GCB to expand its mobile services. The bank gained 60,000 new customers in a single month after the launch, representing a 900% growth. By April this year, GCB had more than 700,000 mobile money users.

G-Money facilitates a new service ecosystem

On the technology front, Huawei built G-Money with an open cloud and micro-service architecture, which allows elastic scaling and continuous optimisation of service processes, ultimately laying a solid foundation for the digital transformation of all banking services.

The strategy continues to expand with several initiatives, with the mobile wallet as a pivot. The G-Money platform gives GCB a better competitive edge against network

carriers in Ghana, while facilitating interbank settlements through the Ghana's central bank as it connects to all banks in the country.

The next stage will be a QR code-based mobile payment system, along with smart operations. By using open Application Programming Interfaces (APIs), the platform can support pre-sales and after-sales for local merchants, allowing service providers from different industries to take part in an ecosystem.

Financial inclusiveness as the ultimate goal

Banks can now offer more products and services – ranging from overdrafts and small loans, to insurance and more – to customers via mobile finance. Ultimately, more people will be properly included in the financial system with adequate protections.

Financial inclusiveness is a goal for Huawei, as its mobile money solutions have been commercially deployed in 19 countries, serving over 206 million users – accounting for 22% of registered mobile money accounts in emerging markets. ■

For more information about Huawei's intelligent finance solutions visit <https://bit.ly/2SD2eHb>

Source: Huawei

A LONG WAY TOGETHER



WHEREVER YOU ARE, BKT IS WITH YOU

No matter how challenging your needs, BKT is with you offering an extensive product portfolio for every field such as agriculture, OTR and industrial applications.

BKT provides concrete, reliable and high-quality solutions to your requests and working needs.

Wherever you are, BKT is with you.



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