

LOGISTICS

African air cargo market grows despite global setbacks **P20**

POWER

Highlights from the Digital Energy Festival **P26**

CONSTRUCTION

Multi-million dollar road project transforms Lusaka **P33**

MINING

How Conakry Port in Guinea is being revamped thanks to MB Crusher **P40**

African Review

DECEMBER 2020 / JANUARY 2021

of BUSINESS and TECHNOLOGY

BRIDGING THE REGIONAL DIVIDE **P36**

Kazungula Bridge opens up markets in southern Africa

ECONOMIC FORECAST 2021 **P16**

Which countries are expected to grow robustly?



P26

“Wärtsilä has delivered 72GW of power in 180 countries, of which 7.4GW has been delivered in Africa.”

Wale Yusuff, managing director-Nigeria, Wärtsilä





Protect your energy supply and your business

Reliable power supplies are essential for profitable business. Natural gas is an abundant clean-burning low-carbon fuel. Jenbacher gas engines are renowned for reliable performance. This performance is supported by our network of local service engineers.

For more information on the benefits of gas-fuelled captive power plants go to clarke-energy.com or contact your local sales dept on the numbers below.

- + 9 – 18 months repayment of capital switching from diesel to natural gas
- + For electricity, heating and cooling loads
- + Engineer, procure and construct services available
- + Supported by a network of local service engineers

South Africa – +27 10 590 5531
Nigeria – +234 (0) 8150857711
Tanzania – +255 2222 96419
Tunisia – +216 71 19 00 06
Algeria – +213 21 60 90 77

Botswana – +27 10 590 5531
Cameroon – +237 677 285665
DRC – +33 (0)4 4290 7575
Ghana – +234 08150857711
Ivory Coast – +33 (0)4 4290 7575

Kenya – +255 2222 96419
Morocco – +216 71 19 00 06
Rwanda – +255 2222 96419
Mozambique – +27 10 590 5531



Cover picture: The Kazungula Bridge has finally been completed in Zambia that crosses the Zambezi River and borders Zambia and Botswana.

© Daewoo E&C

Cover inset: Wale Yusuff, managing director-Nigeria, Wärtsilä,

© Wärtsilä

Editor: Samantha Payne

Email: samantha.payne@alaincharles.com

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

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: DECEMBER 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

To subscribe: visit www.africanreview.com/subscribe

For any other enquiry email circulation@alaincharles.com

Alain Charles Publishing
Serving the world of business

Editor's Note

As 2020 comes to a close and the new year begins, the economic forecast for 2021 remains bleak for Africa's largest economies, however, surprisingly stronger in countries with more diversified economies, such as Mauritius and Rwanda. See the full report on pages 16 and 17. Ethiopian Cargo & Logistics Services was crowned 'Best Cargo Airline-Africa' at the Air Cargo News Awards 2020, following its critical role in the delivery of PPE and medical supplies during the Covid-19 pandemic. For more, see page 20.

Our cover story focuses on the exciting completion of the Kazungula Bridge over the Zambezi River, connecting Botswana and Zambia. The milestone project will open up markets in eight African countries, enhancing regional trade and integration, page 36.

Elsewhere in the issue, we look back at some highlights of the virtual Digital Energy Festival, which encompassed major shows such as the Africa Energy Forum and the Power & Electricity World Africa and Water Show Africa events, including an interview with Wale Yusuff, managing director-Nigeria, Wärtsilä, page 26.

Finally, Mercedes-Benz has added a touch of ultimate luxury to its latest new generation S-Class Mercedes, leading the automobile industry with its digital improvements and high-quality driver and passenger experience, page 50.

Samantha Payne, Editor

Contents



P20

16

Economy

A comprehensive report on the 2021 economic outlook for sub-Saharan Africa and the measures and reforms that have to be implemented to stabilise growth and shore up balance sheets. Economist Moin Siddiqi reports.

20

Air cargo

The cargo division of Ethiopian Airlines earned praise for its efforts during the Covid-19 pandemic, delivering much-needed PPE and medicines, and won the Best Cargo Airline-Africa award. It comes at a time when the African air cargo market has weathered the Covid storm far better than many other air cargo carriers across the world.



P26

26

Power

An exclusive interview with Wale Yusuff, managing director-Nigeria, Wärtsilä, at the virtual Africa Energy Forum, plus other industry updates from companies and ministries. There are also highlights from other energy and water show events that made up the virtual Digital Energy Festival in October and November.



P36

36

Construction

A round-up of major construction projects in Africa, including the masterpiece project, the Kazungula Bridge, built in the town of Kazungula in Zambia, that connects to Botswana.



P40

40

Crushing

How MB Crusher is renovating the paving at Conakry Port in Guinea and other projects the major crusher equipment company is working on in Africa.

44

Mining

A look at the genset OEMs that are making a difference to powering mines in Africa and how hybrid solutions, combining both solar and traditional genset technology, are becoming more popular in mining applications.

IVECO & ITALCAR open new facility in Tunisia

IVECO and one of its authorised dealers in Tunisia, ITALCAR, have inaugurated their new 3S premises in M'saken, realised by the sub-dealer Bassem Auto Services.

Due to the health restrictions in place as a result of the Covid-19 crisis, the event was held in the presence of a restricted guest list, with strict application of the official health protocols currently in force. A selection of IVECO models were on display, showcasing the brand's range of commercial vehicles.

The new '3S' premises will provide vehicle sales, service, and spare parts sales, spanning 2,000m² in the north-eastern Tunisian region. A mechanical workshop, bodywork and painting workshop, offices, and a first-floor showroom are also on site.

Managing director of ITALCAR, Kais Krifa, said, "We chose to work with and place our trust in our local partner Bassem Auto Services, in light of the professionalism that the company demonstrates and the proven success that it has already had on the market, above all within the region in the automotive sector. More specifically, we worked together to create a plan for expanding the business, with a view to setting ourselves apart from the competition by offering new tools and an excellent after-sales service."

With the modern premises in M'saken, IVECO, ITALCAR and Bassem Auto Services hope to help their customers get the most out of their vehicles by providing a smooth after-sales service and protect their investment in their vehicles. The partners share the core values of long-term dedication to the environment and their customers, and the goal of exceeding expectations with quality equipment and services.

For more information visit www.iveco.com



Image Credit: Iveco

APICORP REVEAL COVID-19 CHALLENGES FOR MENA

In its new paper, 'Beyond Energy: How MENA economies emerge post-2021', the Arab Petroleum Investments Corporation (APICORP) have analysed the opportunities and challenges that have arisen from Covid-19 in the MENA region.

The paper discusses the multifaceted impact of the pandemic on the health, economic, and financial status of the region, concluding that all three aspects contributed to the widening of income and productivity gaps between and within countries.

Noting that only a few countries possess the driving forces of strong and stable governance, policy credibility and sound financial management. The absence or lack of management of stimulus packages launched by governments have played into productive debt and hindered sustainable recovery.

Countries with large financial reserves have been able to inject liquidity in their economies and banking systems; many funneled resources to specific industry sectors and small and medium enterprises (SMEs). Countries with lesser reserves are facing risk of exhaustion.

GCC-based banks have proven to be resilient and well positioned for recovery, mostly due to a combined US\$2.3tn total in assets at the end of last year. Banks with the highest exposure to the most affected sectors such as aviation and tourism are at higher risk of non-performing loans.

Dr. Ahmed Ali Attiga, CEO of APICORP, commented, "Countries must act swiftly to take advantage of the opportunities that lie ahead. Economic reform and liberalisation could boost foreign and local private investment... the degree of success in MENA countries' investments in infrastructure and digitalisation... will also be a key determinant for success in a post-COVID-19 world."

EGYPT PETROLEUM SHOW ON TRACK NEXT YEAR

The 2021 Egypt Petroleum Show (EGYPS) will be hosted at the Egypt International Exhibition Center and will host more than 35,000 attendees.

The show will be split into 16 international pavilions, allowing visitors to grasp a worldwide scope on the 2021/22 fiscal year. With foreign investments in Egypt's public oil sector set to reach US\$2.2bn during this fiscal year, and production of crude, condensates and butane reaching 34.65 million tonnes, Egypt aims to achieve self-sufficiency during the 2022/23 fiscal year, and hope to use the exhibition to showcase their future. Three hundred speakers, 500 exhibiting companies and 80 conference sessions will attend the show between May 31 and June 2, 2021. EGYPS will also present their Global Finance & Investment Awards, Global HSE Excellence in Energy Awards and Global Equality in Energy Awards at the event.

For more on the 2021 EGYPS visit www.egyptshow.com

► BRIEFS

Azelio and Jet Energy sign solar MOU

Image Credit: Azelio



Azelio will expand their storage facilities across Africa.

Azelio has signed a MoU with Morocco-based Jet Energy to develop energy storage projects in francophone Africa.

The two businesses are now striving to develop more renewable energy projects in Morocco in particular. Using Azelio's energy storage and solar installations, the projects targets output of 50kWe in 2021 to 15MWe in 2025, while Jet Energy hope to expand its presence in the region and establish itself as one of Azelio's main regional providers.

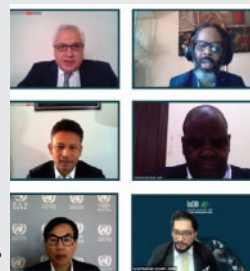


Image Credit: IsDB

The webinar was attended by 500 participants from 113 countries.

Covid-19 outlook webinar

A webinar, hosted by the Islamic Development Bank Group (IsDB) in partnership with the UN, was joined by over 500 participants from 113 countries. The webinar focused on post-pandemic recovery and the findings of the UN's World Investment Report, published earlier this year. Egypt and Turkey were given US\$270mn of an investment pledge from IsDB following the webinar to rejuvenate investment and trade. For more information visit www.isdb.org

World Bank approves funding for Morocco's urban transport sector

The World Bank board of executive directors approved US\$150mn in additional financing for Morocco's Urban Transport Programme. The programme, which started in 2015, works to strengthen the country's capacity to offer quality service in public transport. It also supports local infrastructure for transport and investments.

The main purpose of the additional financing is to adapt the programme to address new priorities of mobility, such as those related to the impact of Covid-19, and to scale it up. The programme's focus will be on getting a dedicated, central structure working to oversee the public transport sector, and on prioritising local investments to boost the sector's performance.

Jesko Hentschel, World Bank director for Maghreb, commented, "The covid pandemic has highlighted that investing in safe, affordable and efficient public transport is more important today than ever to foster economic and social inclusion, and to help mitigate climate change. With this additional financing, we aim to support the Moroccan authorities in maintaining their momentum for reform, and to develop enough affordable transport for the country's urban population. The demand for urban mobility and reliable public transport is increasing in Morocco."

The programme has already delivered tangible results, notably through the Urban Transport Fund's role in financing investment priorities, and by improving the planning, performance, and inter-municipal coordination of urban transport. The investments supported by the programme have already benefitted 40,000 daily users of urban transport in terms of improved level of service. The objective is to increase the total number of beneficiaries to 130,000 urban inhabitants per day once the programme is completed.

The new tranche of funding will streamline governance by improving mechanisms for oversight. Greater focus will be given to advising local urban transport authorities in prioritising sustainable services to meet local demand. Transport corridors, most in the form of Bus Rapid Transit, will be developed to improve citizen access to economic opportunities and social services.

"The programme aims to instill a new dynamic by mainstreaming standards of efficiency across urban transport institutions to increase the sector's performance – this will include targeted investment. The anticipated results will be to strengthen national and local capacity to plan, implement, and monitor urban transport, and to improve its level of service," said Nabil Samir, World Bank transport specialist and task team leader.

The program is being implemented by the Ministry of Interior and, at the local level, by municipalities. With its closing date extended to June 2024, it builds on the government's National Strategy for Urban Mobility, which was prepared with the support of the World Bank. The bank has also mobilised technical assistance to advise on policies to develop affordable transport in Morocco.



The funding from the World Bank will address new priorities of mobility in Morocco, such as those related to Covid-19.

CHINA-MIDDLE EAST AND NORTH AFRICA INTERNATIONAL TRADE DIGITAL EXPO LAUNCHED

Hosted by China Council for the Promotion of International Trade (CCPIT) and organised by China Chamber of International Commerce (CCOIC), the China-Middle East & North Africa (Morocco) International Trade Digital Expo took place from 19 to 28 November. The digital expo was held online with GTW-VE, an online exhibition platform designed and developed by the MIE Group and welcomed more than 10,000 professional clients from the Middle East and North Africa, seeking business partners and trade opportunities.

At the expo, attendees were encouraged to explore new marketing approaches, establish contacts with clients and potential trade partners, meet industrial leaders and experts from around the world and share their valuable insights at meetings.

To alleviate the economic impact of Covid-19 and assist enterprises to maintain and develop their business in Middle East and North Africa, the CCPIT held the online digital exhibition to meet the trade demand of China and countries of the Middle East and North Africa, and advance the economic and trade relations between them.

More than 1,000 Chinese enterprises showcased their products and services at the Expo, including building materials and hardwares, office supplies, furnitures and households, gift items, consumer electronics, home appliances, textile and clothing, agriculture and food, as well as medical care products and equipments.

The ten-day event included five B2B matchmakings, where officials, industry leaders, businessmen, key-players, experts and innovators were given the chance to interact and share their insights about the market, trade and investment opportunities.

BRIEFS

Turbine installation begins at West Bakr wind farm



The project will increase Egypt's wind power capacity by 18%.

Siemens Gamesa Renewable Energy SA have delivered the first of 96 SG 2.6-114 wind turbines to be installed at the farm located 30km north-west of the town of Ras el Ghareb in the Gulf of the Suez.

The 250MW project is expected to increase Egypt's wind power capacity by 18% and will power more than 350,000 homes. It is financed by Lekela, which strives to deliver clean energy across Africa, and will cost a total of US\$252mn.

Indra reinforces air traffic surveillance in Tunisia



Indra has worked with the OACA for twelve uninterrupted years.

The Tunisian Civil Aviation and Airports Authority (OACA) has commissioned Indra to set up a new radar network in Tunisia to support its air traffic surveillance in the region.

The secondary radar is located in Akouda and will help the OACA reinforce the already dense network of eight primary and secondary radars, and several ADS-B systems provided by Indra, that make up the surveillance of this country of 163,600 sq km.

Akuo, Groupe Filatex launch mobile solar units in Madagascar

Groupe Filatex, leading renewable energy company in Madagascar, in collaboration with the independent global renewable energy power producer and developer, Akuo, has announced the launch of its fully operational Solar GEM mobile and portable solar units in the port city of Tulear in Madagascar.

The project is being delivered by Akuo and Groupe Filatex's energy division, 'Enelec', and will complement the Malagasy government's ambitious plans to extend energy access to 70% of the population by 2030 and encourage the development of innovative high-tech renewable energy solutions. This project has received long-term funding from the non-profit organisation Atmosfair, which aims to contribute to the development of renewable energy worldwide.

The plant is made of 44 Solar GEM, a containerised 'plug and play' solution comprising 200 photovoltaic (PV) solar panels each, with a total capacity of 2.9MWp.

In Madagascar, only 15% of the population has access to electricity, which, according to the World Bank, is one of the lowest rates in the world.

Hasnaine Yavarhousen, CEO of Groupe Filatex, said, "At Groupe Filatex one of our principal goals is to transition from fossil energy production to renewable energy in Madagascar, and across in Africa, and to develop innovative ways of increasing energy access to rural communities. The world has suffered from the effects of the global pandemic this year, and no country more so than Madagascar due to its poor rate of reliable energy access, which is vital for the healthcare sector. Our innovative solar units are helping us to close the energy gap with a portable, mobile, and green solution. Our pilot project will add 2.9MW of energy to the nation energy grid and, if all goes well, we plan to roll out further such units in the months to come."

Before the end of 2020, Enelec will have completed the construction of solar energy plants at four sites across Madagascar totalling 50MW. By 2022, Enelec will have completed an additional 280MW of renewable energy projects: 170MW in Madagascar and 110MW in Africa and Europe, including Guinea, Ghana, Côte d'Ivoire and Albania.



Groupe Filatex aims to continue investing in special economic industrial free zones in Madagascar.

SA JOINS GLOBAL WOMEN'S ENTREPRENEURSHIP DAY 2020 CELEBRATIONS

Women's Entrepreneurship Day (WED) is a global initiative celebrated at the United Nations and in 144 countries including 65 universities and colleges.

Commemorated annually on 19 November, WED ignites women leaders, innovators, and entrepreneurs to consider developing their own businesses, drive economic expansion, and advance communities worldwide. The movement also educates the world on the importance of why it is pivotal to empower women in business globally. The movement is spearheaded by the Women's Entrepreneurship Day Organisation (WEDO), founded by social entrepreneur and humanitarian Wendy Diamond.

"When women are elevated financially, communities and countries prosper. We believe this blueprint could alleviate and eradicate poverty," said WEDO Founder Wendy Diamond.

This year the UN's #WEDO2020 Summit took place virtually on 19 November, opening an opportunity for all those interested in making a positive impact on women in business around the world to join the inspiring and collective of WEDO Change Makers to empower, celebrate and support women in business. The agenda also included a focus on helping women to navigate the difficult economic climate. The event was live-streamed on @WomensEntrepreneurship Facebook page.

The third annual Bio Summit, the headline event in South Africa, was also held virtually this year on 20 November 2020. The event themed: Evolving, the only way to thrive, boasted an all-star line-up of corporate and entrepreneur speakers from Africa and Europe sharing their pivot strategies to thrive through this global Covid-19 pandemic.

The format included keynote speeches, masterclasses, fireside chats, matchmaking and an awards ceremony.

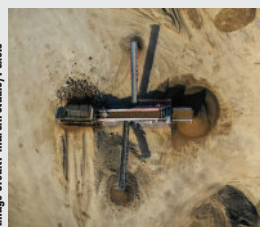
GALILEO RESOURCES ACQUIRES AFRICIBUM

Exploration and development mining company Galileo has announced the completion of the acquisition of 100% of Africibum and its interests in the North East Kalahari Copper Belt project in Botswana.

Colin Bird, executive chairman and CEO of Galileo, said, "I am very pleased that we have completed the acquisition of Africibum whose licences lie in an area of high prospectivity in the Kalahari Copper Belt. The licence area is 15km from the Boseto Copper Project and generally on trend with other known discoveries in the area. With drill holes assaying >1% Cu, the project has advanced beyond the conceptual stage, and it will be tested for an extension of the open strike on one licence."

"The acquisition completes the company's Kalahari Copper Belt portfolio and we look forward to exploration in our expanded footprint in the belt, which is part of the Northwest Botswana Rift which the USGS in 2015 reported as the world's most prospective area for yet-to-be discovered sediment hosted copper deposits."

Botswana Diamonds commences drilling



The programme has commenced on four target areas.

Botswana Diamonds has announced that drilling has commenced on its Thorny River and Marsfontein project areas in South Africa. The multi-hole drilling programme has commenced on four target areas identified as high interest in the recent detailed ground geophysics survey. These target areas include a potential kimberlite "blow" of up to 0.25Ha in extent, and other expansions in the widths (or "swells") of the dyke system of up to 10m (as opposed to the average 1m).

Mozambique-Malawi railway rehabilitation begins



The railway work is due to be completed in September, 2021.

The rehabilitation of the railway between Mozambique and Malawi has begun. The improvement works are happening at the Dona Ana-Vila Nova da Fronteira railroad spur, in the central province of Tete, in Mozambique, to re-establish the rail connection with Malawi. It follows bilateral talks between both countries. Re-establishing this link will enhance trade between the two countries and allow Malawi greater access to international markets through the Port of Beira.

BRIEFS

Image Credit: martin studio/Perels

Image credit: Martin Winkler/Phaxay

South Africa President Ramaphosa's economic recovery plan: instills little confidence the country's finances will improve in the future

Although the 2020 Medium Term Budget Policy Statement stated its intention to prioritise economic recovery and fiscal consolidation in order to support President Ramaphosa's economic recovery plan, the reality is that while this budget hit some of the right notes, it did little to instill confidence that the country is on the path to economic recovery.

The numbers have remained relatively unchanged since the June emergency budget with total debt at US\$324bn (R4 trillion), the budget deficit at 15.7% or US\$4.9bn (R76.1bn) and gross debt at 81.8% of GDP, going up to 95.3% in 2025. However, given that the government have consistently missed debt estimates, this is massively concerning.

Debt continues to be the biggest risk facing South Africa with the cost of debt servicing the fastest-growing item of spending. By 2023/4 debt servicing costs are expected to rise to US\$22bn (R353.1bn), an increase of 12.9% to 18.3% of expenditure. To deal with the looming debt trap, Minister of Finance Tito Mboweni announced tax increases of US\$324mn (R5bn) in 2021/2022, details of which will be revealed in his February budget. While detail was not expected in this budget, it certainly represents a U-turn from February when he indicated that the country could not tax its way out of the crisis. It now appears that the focus will go back to trying to eek more yield out of an already over-stretched and highly concentrated tax base. As a strategy it is doubtful that this will ultimately prove to be effective given that the concept of the 'Laffer curve' is likely to come into play. The concept of the 'Laffer curve' is the theory that at some point, increasing tax rates actually starts to result in lower yield.

Over the next three years, the government says it plans to cut expenditure by US\$19bn (R306.7bn) and to close the gap between expenditure and income there will be no further recapitalisation of state-owned enterprises.

Eskom is to receive US\$1.4bn (R23bn) but



The finance minister has frequently said that the SA government needs to reign in public expenditure.

there was little detail provided on the plan to stabilise the power utility's growing – and unsustainable – debt. The minister has, however, capitulated on SAA as a result of pressure from his cabinet colleagues and allocated US\$64mn (R10.5bn) to implement the beleaguered airlines business rescue plan as well as US\$42mn (R6.5bn) to settle its guaranteed debt and interest. Minister Mboweni has stated his aversion to bailing the airline out and said the taps would be closed for state enterprises. Unfortunately, this allocation undermines the credibility of everything the treasury is saying providing little evidence or reassurance that it will adhere to other objectives.

Pressure to reign in public spending

The minister has also frequently said that the government needs to reign in public expenditure. The public sector wage bill, for example, accounts for around 40% of total government expenditure. He announced that in order to support fiscal consolidation, public sector wage increases are to be limited to 0.8% over the next three years. While the explicit statement of tackling the public sector wage bill are encouraging, this will clearly be a massively contentious – and politically difficult – issue given the ruling party's alliance with Cosatu. What remains to be seen is whether the unions accept this and whether the government ultimately has the political will to follow through on this. Despite frequent

announcements regarding plans to cut expenditure, the reality is that to date the government's inability to achieve meaningful progress in this area puts its latest expenditure cut objective into question.

The minister also announced that South Africa's fiscal multiplier had declined from R1.6 to less than R1 between 2009 and 2019 as a result of spending skewed towards consumption rather than investment, regulations that impede innovation and productivity, and a high debt burden. The challenge now is that we are the point where debt servicing, public sector wages, and social welfare costs are crowding out investment into economic capacity. Although the minister said the intention of this budget was to prioritise an economy recovery, he made vague references to growth-focused interventions. The reality is that the only long term solution is sustainable and meaningful economic growth.

Similarly, there was no focus on smaller, achievable and easily deliverable projects – the so-called quick wins – but instead only a reference to grand concepts, including the president's vague economic recovery plan. Unfortunately, the government does not have a good track record when it comes to delivering on these grand plans. Disappointingly, it has failed to implement structural reforms which, despite being referenced, remain elusive with the result that there is a continued deterioration in public finances. It would be a mistake to blame the crisis on Covid-19 as South Africa's structural problems were in existence long before the pandemic.

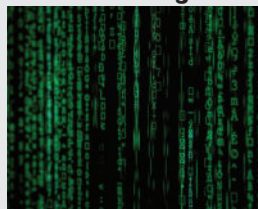
Government's failure to execute previous budgets – and the rolling over on SOE support – does not instil confidence. Question marks persist over its ability to stabilise debt and to stick to its guns with regard to the public sector wage bill. What looks more likely is the higher risk of a sovereign debt crisis.

By Andrew Duvenage, managing director at NFB Private Wealth Management.

BRIEFS

Safomar Aviation signs cybersecurity deal with CCX Technologies

Image Credit: Markus Spiske/Pexels

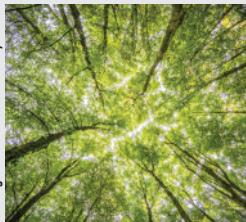


The company will sell the suite of CCX avionics hardware solutions.

South Africa's Safomar Aviation has signed a deal with Canada's CX Technologies to sell onboard cybersecurity solutions into the rapidly growing sub-Saharan Africa market. The company will sell the suite of CCX avionics hardware solutions including AP-150 Secure Avionics Wireless Gateway, AP-250 inline cybersecurity appliance, and other cybersecurity products to a broad spectrum of aircraft operators.

Eni compensates CO2 emissions via forest project

Image Credit: Felix Mittmeier/Pexels



This project is part of Eni's long-term decarbonisation strategy.

Eni has achieved the first carbon credits generation for offsetting GHG emissions equivalent to 1.5 million tonnes of CO₂. The credits have been generated by the REDD+ Luangwa Community Forest Project (LCFP), based in Zambia, and in which Eni has been actively involved for over a year. The development of voluntary projects that support the fight against climate changes, including REDD+ projects, are part of Eni's long-term decarbonisation strategy.

Tata International Africa invests in new John Deere partnership in Ghana

The success and growth in selling and supporting the full line of John Deere Construction Equipment in Ghana, has resulted in the decision to invest in developing a new, full-service, flagship dealership in Takoradi, Ghana, to be officially opened in the first quarter of 2021.

“Our solid reputation of supporting John Deere products sold in Africa has enabled us to make this investment. In addition, we have made successful inroads in winning market share as a new player in the industry, which is extremely encouraging. Our commitment to customer support through our uptime strategy has benefited John Deere owners in Ghana and other countries in which we operate,” said Len Brand, CEO of Tata International Africa.

“Apart from the financial investment in building this new dealership in Tokaradi, we will be creating employment in the area as well. Africa’s manufacturing, mining and quarrying sectors have played a continuous and significant role in the development of Ghana’s economy. We are looking forward to playing a part in the further development of this region’s economy,” added Brand.

The retail credit provider, Captive Retail Finance solution called AFCL in the region, which started operations on the African continent in 2017, in Tanzania, has become the specialist company providing captive financing solutions for customers purchasing vehicles from Tata International Africa.

The company provides a quick and easy application process and flexible payment terms for its customers, in an environment, where access to finance solutions in the vehicle market is restricted and cost of ownership is a source of concern for many individuals and businesses. AFCL branches in Africa include Tanzania, Kenya, Nigeria, Ghana and Zambia, with plans underway to introduce the company in South Africa and Senegal later this year. AFCL’s product offering is available for individuals, first-time buyers and companies looking to purchase commercial, agricultural, construction or passenger vehicles.

“Our policy of deep customer understanding and delivering customer value defines the way we do business, and our resourceful team is willing to go the extra mile to deliver proficient services. Because access to credit is restricted, we support customers in overcoming this obstacle by providing easy application and credit processes with novel, flexible repayment structures,” said Brand.

“Tata Africa has proven that it is recognised as a leading company to be aligned to, not only as a distributor or dealer for OEMs, but also as a premium supplier and dedicated aftermarket support and service to our retail customers in Africa,” concluded Brand.

John Deere is a leading manufacturer of agriculture, construction and forestry equipment with manufacturing facilities worldwide, while Tata has been operating successfully in the continent for more than 40 years, and is present in 12 African countries. It operates in engineering, services, telecommunications, information technology, chemicals and materials.



The new John Deere dealership will be opened in the first quarter of 2021.

Image Credit: Tata International Africa

LAGOS FREE ZONE TO UNLOCK OPPORTUNITIES FOR REAL ESTATE INVESTORS

Lagos Free Zone (LFZ), the first privately owned special economic zone in Nigeria, aims to enhance the ease of doing business in the country. Located in the immediate vicinity of upcoming Lekki Deep Sea Port, the 830-ha LFZ will host more than 100 businesses and 50,000 residents, as well as offer real estate investors and developers appealing prospects.

“We are convinced that Nigeria bears immense growth opportunity and will continue to be a formidable growth engine amongst the emerging market economies. While there are some challenges that are typical of emerging markets, the government has taken steps in the right direction that have resulted in tangible improvement in the ease of doing business in the country over the past five years,” said Tejaswi Avasarala, general manager, strategic marketing, LFZ.

In addition to the industrial manufacturing and port-based logistics cluster at LFZ, there are opportunities in the area of commercial developments such as multi-tiered housing, office spaces, business and leisure hotels as well as healthcare and educational projects which deliver on the LFZ’s objective of enhancing the ease of doing business in Nigeria.

This effort, as Avasarala added, begins by providing business and developers with access to unencroached, secured and developed land in the immediate vicinity of the deepest sea port in Nigeria, expected to start commercial operations by the end of 2022.

Investors at LFZ would also enjoy access to reliable plug-and-play infrastructure such as power, gas, trunk infrastructure, ready-built facilities such as warehouses and standard design factories.

► BRIEFS

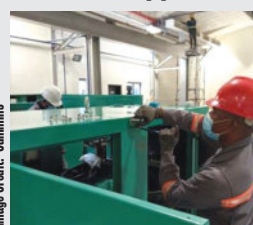
Kwik Delivery and Total Nigeria partner together



The Nigerian Corporate Affairs Commission is regularly innovating its services.

The partnership aims to develop an e-commerce fulfilment and delivery service for Nigerian businesses. This will enable them to use Total service stations as secure pick-up locations of essential documents issued by the Corporate Affairs Commission, which is regularly innovating its services. It has decided to streamline the issuance of its documents to Nigerian businesses, according to Charles Atiomo, general manager, sales and marketing, Total Nigeria.

Cummins appoints new dealers in West Africa



New dealers have been appointed by Cummins in West Africa.

Cummins has appointed new dealers as in-country representatives in the growth area of North and West Africa, according to sales and business development manager, Franck N’Guettia. “The focus is on supporting our customers,” he said. Following the closing down of Ivory Coast and Senegal branches, N’Guettia and his team oversee 15 countries. Ghana, Nigeria and Morocco remain as Cummins distributors, with Ghana serving as the main distribution hub and rebuild centre.



دال للتعدين
DAL MINING

Sudan

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

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



Mining Operations in Sudan

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

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

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



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



Hani Girgis

Sales & Business
Development Manager
DAL Mining



O-CITY reveals initiative to drive contactless payments across bus services in Nairobi

O-CITY, the automated fare collection provider by BPC, announced its pilot initiative designed to reduce the use of cash in response to the Covid-19 pandemic. It was launched in partnership with transport savings and credit specialists, NikoDigi, and Kenyan payments firm, Tracom, to accelerate the deployment of cashless fare collection.

Used by 70% of the population in Kenya, Matatu buses are a dominant transport mode across the country for which passengers traditionally pay in cash. O-CITY's automated fare collection platform leverages the M-Pesa mobile wallet, which is used by 90% of the population in Kenya. Passengers enter a code on their phone and a debit is made on their wallet, which can be instantly seen by drivers to grant access to ride, thereby removing unnecessary tickets and cash payments.

With heavily congested routes in Nairobi, digitising fare collection also serves to remove the friction of exchanging money and time taken for drivers to pick up passengers.

Tokhir Abdulkadyrov, senior vice president of smart city and transport solutions at BPC, said, "A mobile money revolution has been happening in Kenya with the ubiquity and success of M-Pesa. The move away from cash to contactless public transport is an important part of this movement. At O-CITY, we know that innovation does not always require new technologies, but instead new ways of performing a task. By connecting our O-CITY platform to mobile wallet M-Pesa, we're able to build a simple contactless fare solution that is familiar to the customer and likely to encourage adoption. Moreover, it enables us to scale fast to rollout the service at a time when cashless payments have a newfound importance."

An important part of O-CITY's pilot is an educational campaign to get the bus owners and drivers on board to become champions of the service. With teams on the ground at drop off points promoting the benefits of the service, buses and drivers can enrol in as little as 10 minutes. Local marketing on buses also promotes the ability to pay digitally to passengers.

Image Credit: Nelson Bostock



Contactless payment is seen as a much safer method of payment during the Covid-19 pandemic.

RAXIO SET TO CONSTRUCT ETHIOPIA'S FIRST PRIVATE DATA CENTRE

The Raxio Group (Raxio) has officially secured land at the ICT Park on the outskirts of Addis Ababa. Raxio Ethiopia, a subsidiary of Raxio, a pan-African data centre developer and operator, are on course to commission the country's first private Tier III colocation data centre in Q3 2021.

Situated along one of Ethiopia's principal fibre routes, the facility will offer its customers an optimised environment for their IT equipment in a state-of-the-art, modular facility, fully equipped with the latest in technology, security, AC/DC power compatibility and redundancy. Customers will be able to cross-connect with local and international carriers and other customers in meet-me rooms and large boardrooms with 12 person capacity.

Upon completion, the data centre will be capable of housing around 400 racks and be able to provide 1.5MW of IT power to ensure the equipment within the facility continuously operates at all times.

Robert Mullins, president of Raxio, said, "Raxio Ethiopia will provide a critical and missing part of the nation's digital infrastructure at an exciting and fast-evolving time in the broader telecoms sector in the country. We are pleased to be moving forward with developing Ethiopia's first privately owned data centre and to have collaborated closely with the Ethiopian Investment Commission (EIC), the Industrial Parks Development Corporation (IPDC) and the ICT Park in reaching this important milestone."

Raxio has nearly completed the construction of their data centre in Uganda, which is expected to be launched at the end of 2020, and is also planning to open 10-12 facilities in Mozambique and the Democratic Republic of Congo to meet the increased demand for high quality local storage and data hosting in East and Central Africa.

TECHMET TO INVEST US\$20MN IN MINING SECTOR

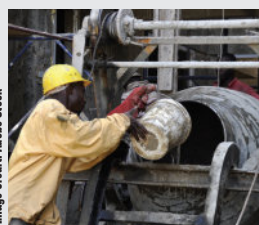
South African businessmen and owner of Tinto, Brian Menell, has announced at a virtual press conference ahead of the Africa Mining Forum 2020, Techmet's investment to expand operations in Rwanda over the next two years.

Tinto, a Rwandan mining company partially owned by UK-based Techmet, is the largest tin and tungsten producer in Rwanda. Its four tin mines in Rutongo produce 100 tonnes per month and in Nyakabingo, it operates a tungsten mine producing 25 tonnes per month.

Welcoming the development, Francis Gatare, chief executive director at Rwanda Mines, Petroleum and Gas Board (RMB), stated, "Techmet's announcement is very welcome news indeed. I am looking forward to them quickly concluding their new agreements with the Rwanda Development Board (RDB), so that we can begin working with them to redevelop Rutongo Mines, Nyakabingo and other new joint initiatives."

► BRIEFS

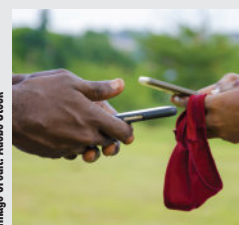
Report on Kenyan Construction Market released



Kenya's construction sector was growing before the pandemic.

The Kenya Construction Market Report has released a report on future growth, following the effects of the Covid-19 pandemic. Before coronavirus shocked the world's economies, Kenya's GDP growth was due to rise by 5.8% in 2020 and 5.6% in 2021. Instead, according to government officials, GDP growth for 2020 declined to 2.6%. In 2017, the construction sector recorded an 8.5% growth and was due to remain at this level until 2024, if it had not been for Covid.

Ericsson granted series of contracts across Africa



Ericsson is building a strong presence in sub-Saharan Africa

Communication and technology provider Ericsson has been awarded modernisation contracts with service providers in Madagascar, Kenya, South Africa and Benin. These contracts follow a series of deals that Ericsson has secured across 2020.

The company has highlighted the growing strength of the African mobile data market with the June edition of the Ericsson Mobility Report predicting sub-Saharan mobile data traffic is set to grow 12-fold by 2025 with LTE subscriptions tripling to reach 270 million.

New agreement signed for the construction of Hobyo port



Image Credit: HFW

Alistair Mackie, partner of HFW who provided legal council during the proceedings, and Abdisabir Nur Shurie with the agreement signed in London.

A new deal to construct the port of Hobyo in Somalia has been reached, according to reports.

It was settled between the state government of Galmudug, represented by the Minister of Ports and Fisheries, Abdisabir Nur Shurie, and a Turkish, British and Somali consortium, called Oriental Terminal.

The agreement includes the funding and operation of the port and although exact cost figures of the port are yet to be revealed, there are reports of the Hobyo project being constructed with US\$90mn raised from local businesses and supplemented by private equity.

According to the minister, survey teams arrived to assess the initial phases of construction in November with the minister suggesting the whole project could be complete within six months.

On his twitter handle, Shurie wrote that he was “thrilled to lay the foundation for the fishing port in Hobyo. Boats of up 20m can dock, significantly scaling up fishing capacity and improving food security for the people of Galmudug and Somalia.”

MAJOR PROJECTS COMMISSIONED

A 132KV electricity transmission line, an 8MW thermal plant and a value processing plant for cereals were launched by President Yoweri Museveni as he visited the city of Arua on the border of the DRC.

The 132kV Kole-Gulu-Nebbi-Arua electricity transmission line will transport electricity from the Karuma, Agago and Nyagak dams to Arua and other parts of the West Nile and northern Uganda while also linking these areas to the national grid.

Alongside this, the president also launched the Electro-Maxx thermal power plant, run by businessman Patrick Biature, complete with eight generators providing 8MW. The projects will help provide a more stable electricity supply to the region allowing for greater industry development in an area, close to DRC and South Sudan markets.

Such is the case with the Joadah Consult value-addition processing factory, which Museveni hoped will be the first of many factories constructed in the region. The facility will be able to process 250,000kg of cereals daily, once fully operational, supplied by more than 30,000 farmers.

President Museveni stated, “I can assure people of the West Nile that with access to the national grid power, big industrial parks are coming here. With the current developed infrastructure, the roads, electricity and more areas being connected to the power grid, there is no doubt about Uganda’s accelerated economic growth.”



Concrete roof tile equipment manufactured by
JESSOP & ASSOCIATES (PTY) LTD



JESSOP & ASSOCIATES is the only manufacturer in the southern hemisphere producing high speed concrete tile extrusion plants



Installed more than 100 concrete roof tile plants in Africa to date



Supplies over 1000 different spare parts from its stores in South Africa



Manufactures extrusion machines capable of multi-profile concrete roof tile production

TEL: +27 16 421 2521

INFO@PROTILE.CO.ZA | WWW.PROTILE.CO.ZA

Upcoming Events Calendar 2021

DECEMBER

7-11

WISA

Virtual
<https://wisa2020.org.za>

9-10

3RD PHOTOVOLT AFRICA 2020

Virtual
<https://photovoltaica.ma>

10

RENEWABLE NORTH AFRICA 2020

Virtual
www.moroccorennewable.org

19

FINANCING OPTIONS FOR THE ELECTRICITY SUPPLY INDUSTRY

Virtual
www.africa-energy.com/events/financing-options-electricity-supply-industry

FEBRUARY

2-3

MINING INDABA VIRTUAL

www.miningindaba.com

16-18

SUSTAINABLE ENERGY FOR ALL

Kigali, Rwanda
www.seforall.org/forum

24-26

7TH POWERING AFRICA SUMMIT 2021

Washington, USA
www.poweringafrica-summit.com

MARCH

8-9

MOZAMBIQUE GAS & POWER

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

17-18

6TH ARE ENERGY ACCESS INVESTMENT FORUM 2020

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

24-25

WEST AFRICA POWER SUMMIT 2021

Dakar, Senegal
www.wafpower.com

24-26

6TH MINEXPO AFRICA

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

APRIL

19-24

INTERMAT

Paris
<https://paris-en.intermatconstruction.com>

Mining Indaba launches new virtual investment programme

INVESTING IN AFRICAN Mining Indaba (Mining Indaba) has announced the launch of its Virtual Investment Programme, taking place 30-31 March 2021. The programme is a new service for mining companies, investors and analysts to raise capital, pitch their companies and originate deals.

"The highly experienced investor relations team will work closely with participants to ensure they are connected with an unrivalled network of elite dealmakers. Our objective is to bring together regular Mining Indaba Investment Programme clients as well as connecting new investors and mining corporates not yet taking part in any other matchmaking platforms," said Kael O'Sullivan, director of Investor Relations (IR) at Mining Indaba.

What participants can expect from the programme:

- The IR experts have in-depth knowledge of the companies and assets as well as each investor's profile to ensure deal origination and corporate access activity is maximised, presenting each participant with a wide range of opportunities.
- The personalised concierge service will build a highly targeted and carefully curated meeting schedule, ensuring each participant is matched with delegates based on their



Image Credit: Adobe Stock

The Virtual Investment Programme is a new service for mining companies and investors.

- specific requirements.
- Full access to the enhanced online meeting platform with an easy-to-use filtering system to request one-on-one meetings directly. Participants can discover and reach out to new contacts accordingly.
- An online mining company directory with up-to-date corporate and marketing information of every participating mining company.
- Plus, exclusive content will be available throughout the programme including the final of the Investment Battlefield and

exclusive roundtables led by analysts on the most pertinent themes.

Registration for the Virtual Investment Programme is now available. The programme is free to attend for investors and analysts, and mining company rates are competitively priced. There are also a limited number of delegate passes available for bankers and brokers.

For more information about the service visit <https://miningindaba.com/Page/virtual-investment-programme>



Online trading becoming more attractive in Africa

The financial knowledge and capabilities in Africa are often misunderstood by many outside the continent. Jay Mawji, managing director from INFINOX Capital, tells us more.

While the International Monetary Fund acknowledges the damaging recession effects of Covid-19 in Africa, the economic outlook for the continent remains optimistic, as the introduction of technologies brings with it accessibility and exposure to economic and personal finance possibilities.

The financial knowledge and capabilities in Africa are often misunderstood by many outside the continent. As future economic growth influences the earning potential of many people, the access to additional disposable income increases and so too does the desire to engage in financial trading possibilities. This means that Africa is quickly becoming an increasingly attractive region for online trading platforms.

This growth is underscored by the influx and access to technologies previously unavailable in many regions across the continent. The torrent of technological accessibility and associated tools offers both convenience and speed to the trading sector – something the conventional physical face-to-face exchange simply could not provide. This is evident in the exponential growth of online traders, with recent figures indicating as many as 15 million global traders, with Africa comprising over 1.3 million finance-savvy individuals across key markets.

Tainted by past malpractice, online trading is often viewed as a blueprint to 'get rich quick', with many flaunting their wealth across social media channels with the aim of duping those not accustomed to the industry. While this is not the case for all trading educators and brokers, it is advised that potential traders only deal with established and reputable trading platforms that



Image Credit: INFINOX Capital

Jay Mawji.

adhere to the strict regulations imposed by national financial regulators.

The perception of online trading is quickly changing. This is attributed to more firms coming into the market and adhering to the financial regulations of the country within which they intend to launch, setting up infrastructure, investing in a region through the establishment of offices and the subsequent creation of jobs, and commitment to operate with their client's best interests at heart.

Trading regulations across Africa are attuned to those in Europe, following similar principles and prudential elements, such as the correct

corporate governance and capital requirements. When brokerages adhere to the regulations in Africa, it indicates their commitment to fair practice, an appreciation for the countries within which they operate, and an understanding of the challenges that traders on the continent face.

While some may cite industry inefficiencies in the African market, those are part of the development process, and once ironed out and further developed, Africa will most certainly be home to several major financial regulators.

Even though regulations may conform to European standards, it is important for brokerages to remember the vast cultural and regional differences in how Africans do business. Each market is unique and has a variety of challenges, and as such, having an on-the-ground presence and local representation in each market is key to learning and adaptation.

On-the-ground representation in Africa provides a personal touch, a sense of trust and a commitment to the business landscape of the region, something that simply cannot be replicated over an online platform. Traders can rest assured knowing there is indeed a face behind the online trading platforms.

For any financial institution, Africa is the place to be, and by bridging the knowledge and accessibility gaps between bankers in major financial hubs and everyday people on their mobile devices, the potential for personal economic empowerment in Africa increases, with the region on the cusp of becoming a future economic powerhouse. ■

For more information visit www.INFINOX.com

“A young population is good, it's great, but it's only great when you find jobs for those young people. Our major challenge now going forward is, how do we find jobs for this restless youth? I am a great believer in Nigeria because the opportunities here are enormous. What we need is a consistency in government policies.”



Image Credit: Dangote Industries Limited

ALIKO DANGOTE
Chairman and CEO of Dangote Group

“Empowering women along the energy value chain in Africa will significantly enhance income generating opportunities for women, reduce poverty, enhance food security as well as promote the social and political status of women. There is strong evidence that women are increasingly participating in energy development and businesses in African countries. However, we need to recognise that much more could be done to enhance the participation and increase the role of women in the energy sectors at all levels. We should also be deliberate on how to use the energy resources to uplift the lives of women.”

AMANI ABOU-ZEID
Commissioner for infrastructure and energy, African Union Commission

“These facilities will increase agricultural production in the Eastern Province for Rwamagana farmers, in particular. We are really excited about this achievement, and we believe that if used productively, it will contribute to food security.”

FRED MUFULKYE
Governor of Eastern Province on the Rwagana dam project in Rwanda

“Never waste a crisis. One of the potential positive impacts of this crisis [Covid-19 pandemic] is, it's pushing all of us to really focus on priorities and also make sure that we build quality infrastructure that maximises the positive impacts to the economy, and we also build it to withstand natural disasters, pandemics and epidemics going forwards.”



Image Credit: African Development Bank

SOLOMON QUAYNOR
Vice-president of private sector, infrastructure and industrialisation, African Development Bank

“Africa is vast. It's 54 countries, and in those countries, you have 54 different outlooks, 54 kinds of resources, and 54 different ways of managing those resources. Bearing that in mind, Africa remains the key investment destination.”

CHINELO ANOHU
Senior director of Africa Investment Forum

“I think Africa is the most under-penetrated payments market in the world – digital payments have to work. That is a very simple way to unlock the economic potential of the continent. How is it easier for me to buy something from somebody in California, than from somebody in Bamako, Mali?”



Image Credit: Paystack

SHOLA AKINLADE
Co-founder and CEO of Paystack

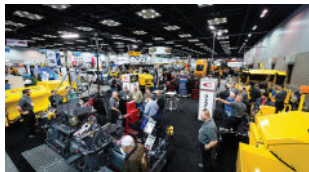
“The investments required to meet Africa's growing demand for sustainable energy based on renewables is far greater than the funds available from public sources. But African governments and their development partners can facilitate the private sector investments necessary to bridge this gap. Together, we can build stable, predictable enabling frameworks and we can offer targeted de-risking instruments. KfW support with funding from the German Federal Ministry for Economic Cooperation and Development to the Regional Liquidity Support Facility demonstrates our commitment to this process, and to the development of a sustainable energy market in Africa.”

THOMAS DUVE
Director at KfW Development Bank

AFRICAN REVIEW / ON THE WEB

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

WORLD OF ASPHALT AND AGG1 ACADEMY & EXPO RESCHEDULED TO 2022



(Image credit: World of Asphalt)

The next in-person World of Asphalt and AGG1 are planned for 29-31 March 2022.

The executive committee of the World of Asphalt Show & Conference and the AGG1 Academy & Expo has announced that the combined in-person shows will not be held in 2021 due to ongoing concerns related to Covid-19.

The next in-person World of Asphalt and AGG1 are planned for 29-31 March, 2022 at the Nashville Music

City Center in Nashville, Tennessee.

Audrey Copeland, president and CEO of the National Asphalt Pavement Association, said, "The health and safety of all participants in the show is our highest priority, and with the status of the pandemic in the USA, we believe the responsible choice is to not hold the show in 2021 and focus our sights on 2022 in Nashville."

The decision was reached after extensive discussion between the leadership from the show co-owners, the National Asphalt Pavement Association (NAPA), Association of Equipment Manufacturers (AEM) and National Stone Sand & Gravel Association (NSSGA) as well as from feedback from exhibitors, attendees and stakeholders.

STANDARD BANK LEADS ROLLOUT OF CONTACTLESS CARDS IN AFRICA



(Image Credit: Standard Bank)

Israel Skosana, head of card issuing, Pan Africa at Standard Bank.

Standard Bank Group, one of Africa's largest financial services organisations, is championing efforts to increase contactless payment across Africa as consumers look for

safer ways to pay after Covid-19.

The displacement of cash is a strategic objective for many governments, banks, payment providers and, merchants. Prior to the pandemic, contactless payments were already emerging and growing within African regions, but Covid-19 has encouraged consumers to embrace the technology.

"The pandemic has created concern among consumers on cash usage with many recognising contactless as a safer, cleaner, and faster way to pay, especially as they seek out ways to quickly get in and out of stores without touching terminals or handing over their card," said Israel Skosana, head of card issuing at Pan Africa, Standard Bank.

CARMIX EVERYWHERE YOU BUILD

READY. MIX. EVERYWHERE. CONCRETE.

CARMIX MOBILE BATCHING PLANTS, BEST PERFORMANCE ON THE TOUGHEST JOBSITES

[f](https://www.facebook.com/carmix.com)
[i](https://www.instagram.com/carmix.com)
[in](https://www.linkedin.com/company/carmix.com)

carmix.com

MetaGalante S.p.A. - T. +39 042165191 - info@carmix.com

Building a more resilient economy for the future

Sub-Saharan Africa was the world's second-fastest growing region until Covid-19 hit this year, turning it into a year of unprecedented change, and destroying a decade of hard-won development gains and sustainable growth. 2021 now brings formidable challenges for national authorities, bilateral and multilateral partners.

The fallout of the global pandemic and the severe downturn in major trading partners pushed the Africa region into its first recession in 25 years. The regional economy contracted by 3% or more in 2020 – no country was spared by the economic headwinds. GDP per capita growth is estimated to contract by nearly 6%, hit by lower household consumption and investment to stem viral transmission. Sharp contractions in industry and services fuelled the downturn from the supply side. Subdued economic activity has cost sub-Saharan Africa (SSA) at least US\$115bn in output losses during 2020, according to multilateral organisations.

The contraction was most severe among metal exporters where real GDP plunged by 6%, partly reflecting a heavier drop in South Africa output. Among oil exporters, after expanding by 1.5% in 2019, real GDP fell by over 4%, due to contractions in Angola and Nigeria. The tourism-reliant island states, namely Mauritius and the Seychelles, experienced a sharp recession as

Table 2: Commodity price forecast in nominal US\$

	2018	2019	2020	2021	2022
Energy					
Coal, Australia, US\$/mt	107.0	77.9	57.2	57.8	58.0
Crude oil, avg. US\$/bbl	68.3	61.4	41.0	44.0	50.0
Natural gas, US, US\$/mn/btu	3.1	2.6	1.9	2.6	2.7
Liquefied natural gas, Japan, US\$/mn/btu	10.7	10.6	8.6	8.6	8.6
Beverages					
Cocoa, US\$/kg	2.29	2.34	2.40	2.44	2.48
Coffee, Arabica, US\$/kg	2.93	2.88	3.35	3.35	3.36
Tea, avg. US\$/kg	2.25	2.56	2.75	2.77	2.80
Sugar, world, US\$/kg	0.28	0.28	0.28	0.29	0.30
Timber					
Logs, Africa, US\$/cu.m	414	392	400	403	406
Metals & Minerals					
Aluminum, US\$/mt	2,108	1,794	1,660	1,680	1,731
Copper, US\$/mt	6,530	6,010	6,050	6,300	6,374
Iron ore, US\$/dmt	69.8	93.8	107.0	105.0	103.2
Lead, US\$/mt	2,240	1,997	1,820	1,860	1,885
Nickel, US\$/mt	13,114	13,914	13,500	13,800	14,213
Tin, US\$/mt	20,145	18,661	16,900	17,100	17,673
Zinc, US\$/mt	2,922	2,550	2,200	2,300	2,321
Precious Metals					
Gold, US\$/toz	1,269	1,392	1,775	1,740	1,698
Platinum, US\$/toz	880	864	875	870	906

mt= Metric ton; bbl= Barrel; btu= British thermal unit; kg= Kilogram; cu.m= Cubic meter; dmt= Dry metric ton; toz= Troy ounce.

Source: Commodity Markets Outlook, World Bank report October 2020.

Table 1: SSA Macro-economic Indicators (%) (Regional average)

	2018	2019	2020	2021
Real GDP growth (%)	3.3	3.2	-3.0	3.1
Nigeria	1.9	2.2	-4.3	1.7
South Africa	0.8	0.2	-8.0	3.0
Angola	-1.2	-0.9	-4.0	3.2
Kenya	6.3	5.4	1.0	4.7
Ethiopia	7.7	9.0	1.9	0.0
Inflation, annual (% chg)	8.4	8.5	10.6	7.9
Fiscal Balance* incl. Grants	-3.5	-4.2	-7.6	-5.9
Government Debt *	48.5	50.4	56.6	57.8
External Official Debt*	22.1	23.4	28.1	27.9
Foreign Reserves **	5.0	6.2	4.1	3.6
External Current Account *	-2.7	-3.6	-4.8	-4.1

* % of GDP; ** Month of imports of goods and services.

Source: IMF, Regional Economic Outlook (SSA) Oct 2020.

downturns in international tourism severely impacted the service sector. By contrast, growth in several non-resource-intensive countries (Côte d'Ivoire, Ethiopia, Kenya and Rwanda) slowed considerably in 2020 but still remained positive, on average thanks to more diversified economies.

Covid-19 havoc exacerbated existing macroeconomic weaknesses (Table 1) – reflected in high 'twin deficits' (the govt. budget and current account), rising public debt and soaring inflation in majority of SSA countries. While private capital flows, including foreign direct

investment (FDI) and portfolio investment flows, were at historical lows. Remittances to SSA are expected to decline by one-tenth in 2020 to US\$44bn (World Bank data). Twenty-nine African countries have participated in the G20's Debt Service Suspension Initiative (DSSI).

Several countries, including South Africa, Nigeria and Ethiopia, started implementing long-due reforms in energy and telecommunications, and a quarter of African firms have deployed digital technology and increased investments in ICT. By mid-September, 46 SSA countries had put

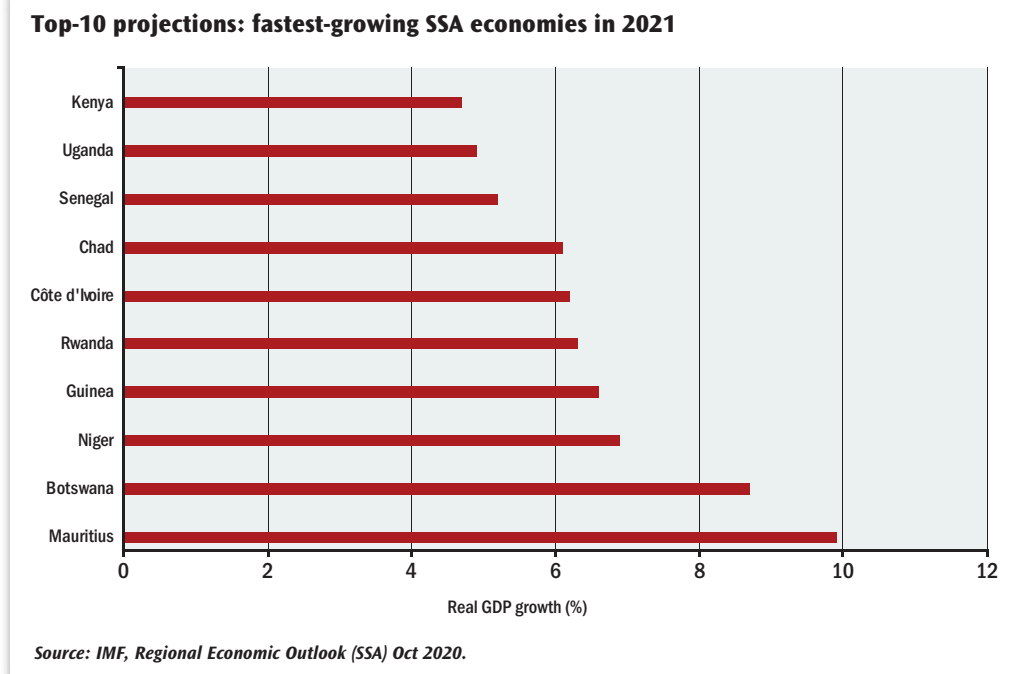
in place 166 social assistance measures to mitigate the pandemic impact on vulnerable groups.

Cautious outlook

The pace of much-needed global recovery depends heavily on accelerated distribution and access to an effective and affordable vaccine. Once available, this would lessen policy uncertainties and boost sentiment – hence underpinning sustained economic growth to pre-Covid-19 levels. Concurrently, services such as travel and hospitality would continue to strengthen and investment would pick-up as consumer and business confidence improve amid buoyant financial markets. Commodity prices would also gradually improve (Table 2).

Under such scenarios, 2021 regional GDP growth in SSA is projected at between 2.1% (World Bank) to 3.1% (IMF), but still below recent trends. Key drivers of forecast growth include higher exports and commodity prices in tandem with global output rebound (expected at 5.2%), coupled with a steady recovery in both domestic consumption and private investment – the former reflecting lockdown relaxation and the latter supported by renewed FDI inflows to SSA.

The strength of anticipated recovery will vary markedly across economies and sub-regions (see Table 3). Among SSA's biggest economies, Angola, Nigeria and South Africa are likely to experience particularly lacklustre recoveries – with real GDP not returning to pre-crisis levels until 2023 or 2024,



according to the IMF. Despite considerable heterogeneity in prospects across SSA, 10 countries are expected to grow robustly in 2021, led by Mauritius, Botswana, Niger, Guinea, Rwanda, and Côte d'Ivoire (bar chart). But many will not return to 2019 levels of output until 2022–24.

Gaping funding gap

Africa faces sizeable funding shortfalls over the medium term. Thus, without official assistance (concessional loans plus grants), many least developed countries (LDCs) could plunge into even deeper health and economic crises, thereby adversely affecting social stability. Estimates show that SSA has cumulative gross external

financing needs of between US\$890bn (IMF figure) to US\$1.2tn (World Bank figure) for the period 2020–23. Foreign debt interest and amortisation obligations (i.e. principal repayments) account for half of these needs, while one third is accounted for by the region's current account deficits.

The potential financing gap, i.e. the portion of required capital for which funds remain unidentified and might not materialise, varies between US\$130bn and US\$410bn for 2020–23. Current commitments from international financial institutions and official bilateral creditors are expected to fill less than a quarter of this need. With private capital still subdued, IMF

projected a gap of US\$345bn through 2023 – nearly half of the burden falling upon African LDCs.

Post-Covid-19 recovery challenges

The path to 'sustainable development' requires a structural transformation agenda that fosters greater resilience and productivity-enhancing growth – hence job creation for youthful populations. To succeed in this, policy-makers need to revamp strategies to address the region's many challenges. Chief among which are improving the quality of spending in major areas – basic infrastructure, health, social safety net, education and digitalisation – underpinned by sound public investment systems that allocate scarce resources to priority sectors.

The region needs to raise the depth and resilience of its domestic financial industry; strengthen governance and institutions that ensure rule of law, increase transparency/accountability of governments; boost trade (intra-regional and foreign); and eliminate barriers to private investments, as well as investing in human capital and skill upgrades to boost labour productivity. Many countries should reduce regulatory barriers and

Table 3: Large disparities in growth performance across SSA (% , sub-region avg)

	2018	2019	2020	2021
CEMAC *	0.9	2.0	-3.2	3.0
EAC-5 #	6.5	6.2	1.0	4.5
ECOWAS //	3.5	3.6	-2.5	3.0
SADC ~	2.0	1.2	-5.5	3.3

* Economic & Monetary Community of Central African States: Cameroon, Central African Rep. Chad, Congo Rep, Equatorial Guinea and Gabon.

East Africa Community-Five: Burundi, Kenya, Rwanda, Tanzania and Uganda.

// Economic Community of West African States: Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, The, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

~ Southern African Development Community: Angola, Botswana, Congo (DRC), Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe.

Source: IMF, *Regional Economic Outlook (SSA) Oct 2020*.

reform the costly subsidies, monopolies and protected state-owned enterprises (SOEs) that hinder competition – thus making Africa’s markets less attractive to foreign investors. “Efficient implementation of such policies would enable African economies to recover faster and thrive in the post-Covid-19 world,” noted the World Bank.

Over time, SSA countries need to divert resources (capital, labour and innovation) toward modern economic activities, such as manufacturing plants, services firms and agro-farms, which are less exposed to volatile commodity prices and more characterised by greater value addition, for example through participating in global value chains (GVCs). The latter encourages new high-quality investment, more job creation and builds technical capabilities – a prerequisite for competing in international markets.

Trade integration and level-field

“Countries are putting in place policies and programmes that help create jobs and accelerate economic transformation to reduce the economic impact of the pandemic.”

HAFEZ GHANEM, WORLD BANK VICE PRESIDENT FOR EASTERN AND SOUTHERN AFRICA

competition policies – as envisaged by the potential of the African Continental Free Trade Area (AfCFTA) – remain crucial for future region-wide growth. AfCFTA was originally scheduled to start in July 2020 but has been delayed because of the pandemic.

“Countries are putting in place policies and programmes that help create jobs and accelerate economic transformation to reduce the economic impact of the pandemic now and build the capabilities needed to ensure inclusive economic growth in the future,” said Hafez

Ghanem, World Bank vice president for eastern and southern Africa.

In sum, post-crisis goals are boosting productivity and growth while simultaneously fostering a more vibrant and stronger economy to withstand exogenous shocks (i.e. global disruptions). Africa needs infrastructure (both physical and digital) to drive trade/investment in a post Covid-19 era. Donors and multilaterals should do more to help Africa build a lasting recovery.

“The potential of the region and the resourcefulness of its people remain intact. With the help of the

international community, the region will eventually find its way back to a path of sustainable and inclusive development, to the benefit of all. Countries can also help ensure better outcomes through a renewed commitment to reform, allowing them to both contribute to and benefit from the global effort to promote a more resilient future,” stated the IMF.

The near-term prospects, however, are still subject to considerable uncertainty. ■

By economist, Moin Siddiqi

The global recovery depends on the rapid distribution and access to an effective and affordable vaccine.



Image Credit: Adobe Stock

Eaif invests US\$15mn as Senegal's national port begins move to new location

As the Port of Dakar begins its move away from the city centre, the proceeds of the bond supported by the Emerging Africa Infrastructure Fund (EAIF) will help fund the first three phases of the project.

After operating for the past 150 years, the Port of Dakar is now reaching the end of its productive life as global shipping demands deeper water, custom-built facilities for specialist cargoes, and fast turnaround times. As part of the Senegal government's economic development plan, the port is being transferred away from the centre of the city to a deep water location at Poppinguine-Ndayane, 35km by sea and 70km by road away from the existing site.

Covering an area of 1200ha, the new port is being purpose built to respond to shipping market needs, will be capable of taking very large ships with a draught of up to 16.5m and, depending on the cargo, will shorten turnaround times by a half to two thirds. It will be rated a '4th generation' industrial port, meaning that it will be capable of competing with the most advanced ports on the global stage. Scheduled first to use the new facilities is container-based shipping, followed by roll on, roll off traffic, then other activities.

Private Infrastructure Development Group (PIDG) company, EAIF, have invested US\$15mn in a local currency capital market bond issued by Senegal's Port Autonome de Dakar (PAD), the owner of the Port of Dakar.

The bond has raised more than US\$107mn and marks the start of the process relocating the city's port and its operations to the greenfield site. The seven year bonds will have a coupon rate of 6.6%.

Roland Janssens, a director at EAIF's managers, Ninety One, stated, "Supporting enterprise zones around major ports is a core strategic

The new port will shorten turnaround times by a half to two thirds.

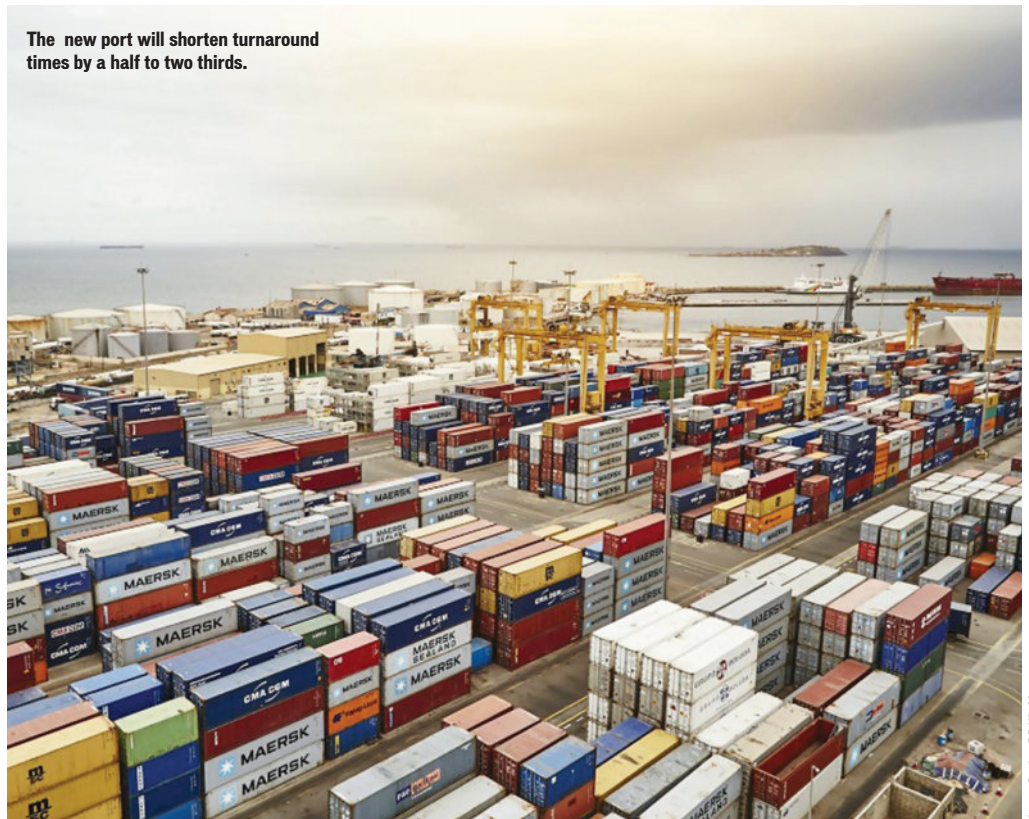


Image Credit: DP World

economic development objective of PIDG and EAIF. So too is contributing towards strengthening local capital markets. Port Autonome de Dakar is to be congratulated on its vision and ambition. The new port will help make Senegal a more competitive international economy and have benefits for the whole of

West Africa."

PAD have developed a 'green port' strategy that aims to minimise the port's carbon footprint. The plan includes a commitment to a large-scale tree-planting programme to help deforestation in other parts of the country.

Speaking for PAD, managing

director Aboubacar Sedikh Beye, said, "Creating a great new port to serve west African economies on a new site is one of the foundation stones of building a more successful, more prosperous and greener future for Senegal. It is of great benefit to Port Autonome de Dakar to have EAIF and PIDG supporting us in this venture. They bring deep expertise of financing African infrastructure and share with us a vision of long-term investment delivering a legacy of economic and social progress."

The project is forecast to have a 10-15 year construction period and is estimated to create an additional 400 jobs upon completion. ■

“The new port will help make Senegal a more competitive international economy and have benefits for the whole of West Africa.”

ROLAND JANSSENS, DIRECTOR AT NINETY ONE

Ethiopian Airlines at the forefront of distributing Covid-19 vaccine across the globe

The cargo division of Ethiopian Airlines won 'Best Cargo Airline-Africa' at the Air Cargo News Awards 2020, following its outstanding effort in the fight against Covid-19. Robert Daniels reports.



Image Credit: Ethiopian Airlines

The cargo freighters have a capacity of 100 tonnes.

Since the outbreak of Covid-19, Ethiopian Airlines has been playing its part in the struggle against the virus. It has operated 360 charter flights to transport PPE and medical supplies to more than 100 countries across five continents via its cargo terminal in Addis Ababa Bole International Airport.

The cargo airline is now preparing to join the aviation industry's wider effort to distribute the Covid-19 vaccine as soon as it becomes available to the public, with the Pharma Wing facility at Addis Ababa on stand-by to store and deliver the vaccines across Africa and the rest of the world. The 54,000m² facility is a fully temperature controlled operation, which handled temperature-sensitive healthcare products during the summer.

Tewolde GebreMariam, CEO of Ethiopian Airlines, said, "Ethiopian Pharma Wing will repeat its

remarkable and globally recognised success in leading the fast delivery of PPE a few months ago with similar delivery speed, professional handling and maintaining the cool chain during the forthcoming global distribution of the Covid-19 vaccine. We are major partners of WHO, WFP donor governments and philanthropists in facilitating the flow of essential medical supplies owing to our massive cargo facility including our Pharma Wing, our large dedicated freighter fleet and well trained manpower. As the world prepares to welcome the

Covid-19 vaccines, we will be at the forefront to further discharge our responsibility in the distribution of the vaccine across the globe." While other airlines have collapsed, Ethiopian Airlines has managed to keep afloat during the pandemic. It reconfigured 25 passenger aircraft into freighters alongside the 12 dedicated 100 tonne capacity cargo aircraft.

The airline's versatility to navigate Covid-19 was recognised at the Air Cargo News Awards 2020 on 29 October, with its Ethiopian Cargo and Logistics Services, winning 'Best

Cargo Airline-Africa'.

Fitsum Abadi, managing director at Ethiopian Cargo, said, "We are pleased to win the 'Best Cargo Airline-Africa' award. While the aviation industry is in its toughest time of fighting for survival, winning this award will mark us as a major player in the air cargo industry. Our hard-working employees, modern fleet and state-of-the-art infrastructure coupled with operational efficiency as well as the very agile and flexible leadership that helped us in successfully navigating the Covid-19 pandemic have gained us the prestigious award from the industry's highly regarded Air Cargo News Awards 2020, which will make us strive more as always."

Such assurance is needed within the aviation industry at the present time as a recent survey by The International Air Cargo Association (TIACA) and Pharma.Aero found that

“ We will be at the forefront to further discharge our responsibility in the distribution of the vaccine across the globe.”

TEWOLDE GEBREMARIAM, CEO OF ETHIOPIAN AIRLINES

“Delivering Covid-19 vaccines is a life-saving mission, which will need a combination of people, infrastructure, standards, packaging solutions and collaboration.”

NATHAN DE VALCK, CHAIRMAN OF PHARMA. AERO'S BOARD OF DIRECTORS

just 28% of the sector feels well prepared to distribute the vaccine, with 19% feeling very unprepared as temperature excursions, lack of adequate infrastructure, capacity shortages, end-to-end connectivity, security and costs could all pose risks to the vaccine supply chains.

Nathan de Valck, chairman of Pharma.Aero's board of directors commented, “We are still at early stages of industry preparation for the transportation of Covid-19 vaccines and there are still a lot of unknowns. Delivering Covid-19 vaccines is a life-saving mission, which will need a combination of people, infrastructure, standards, packaging solutions and collaboration. Getting the equation right requires us to work together now.”

Director general and CEO of The International Air Transport Association (IATA), Alexandre de Juniac, added, “Delivering billions of doses of a vaccine that must be transported and stored in a deep-frozen state to the entire world efficiently will involve hugely complex logistical challenges across the supply chain. While the immediate challenge is the implementation of Covid-19 testing measures to re-open borders without quarantine, we must be prepared for when a vaccine is ready.”

The global aviation industry has been one of the sectors hit hardest by Covid-19 with travel and tourism restricted by lockdown measures and air

Image Credit: Ethiopian Airlines

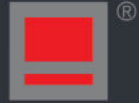


The Pharma Wing facilities at Addis Ababa.

cargo traffic deflated by a smaller demand for trade. The most recent data released by IATA, in September, has revealed that global demand for air cargo, measured in cargo tonne-kilometres (CTKs) was down 8% from the previous year with global capacity, measured in available cargo tonne-kilometres (ACTKs) shrinking by 25.2%.

Despite this trend, the African air cargo market appeared to weather the storm far better than the rest of the world. Although the IATA report indicated a similar level of ACTKs decline, the CTKs actually increased by 8.2% from last September, the fifth consecutive month that the region has posted an increase in international demand. ■

CANTONI
MOTOR



**DRIVING
YOUR
BUSINESS**



ELECTRIC MOTORS

from **0,04kW**

up to **6000kW**

www.cantonigroup.com

Liebherr presents the new generation of ADTs

The TA 230 Litronic is the first representative of the new generation of articulated dump trucks from Liebherr that has been redeveloped from scratch on the basis of comprehensive market and customer analyses.



Image Credit: Liebherr

The TA 230 Litronic.

With the introduction of the new generation of articulated dump trucks, Liebherr becomes a full-liner in the earthmoving area. Apart from a comprehensive product portfolio of earthmoving machines for diverse applications, a Liebherr dump truck is now available to customers with the new TA 230 Litronic. The extremely robust, powerful and all-terrain machine is primarily designed for overburden transport and the mining industry. The articulated dump trucks are also a useful assistant for larger infrastructure projects. Thanks to their optimal structure gauge, they can also be used for special applications, such as tunnel construction.

Maximum performance in challenging off-road applications

The new TA 230 Litronic convinces with a clever machine concept, which has been developed specially

for challenging off-road applications. New designs in the front end area create maximum ground clearance for superb off-road performance. For example, in the TA 230 Litronic, the powershift transmission is positioned safely and compactly under the operator's cab and the exhaust gas aftertreatment is safely installed behind the operator's cab in a space-saving manner, whereby a large slope angle could be generated.

The newly designed, solid

articulated swivel joint creates excellent off-road capability: It allows independent movements of front and rear end, thus ensuring maximum manoeuvrability. The robust and positive-locking swivel joint with tapered roller bearing is perfect for the shear stresses arising during use, withstands maximum loads and provides optimal force distribution. A powerful six-cylinder construction machinery engine with 12 litre displacement and 265 kW/360hp is installed in the

TA 230 Litronic, which complies with the requirements of exhaust emissions standard V.

At a glance:

- Empty vehicle weight: 24,600 kg
- Payload: 28,000 kg (metric tons)
Max. trough capacity with tailgate: 18.1 m³
- Engine power (ISO 9249): 265 kW/ 360 hp
- Exhaust emissions standard V
- Max. driving speed: 57 km/h (forward) / 16 km/h (reverse) ■

MAN INTRODUCES ECOSTYLE - A NEW TELEMATICS SOLUTION SUITE FOR CUSTOMERS IN MEA REGION

MAN Truck & Bus has introduced a powerful enterprise grade telematics solution for customers in the Middle East-Africa (MEA) region. This dynamic solution suite is designed to support improved levels of fleet efficiency and safety, and reduce environmental impact. EcoStyle has been fine-tuned through millions of hours in service, and combines powerful technology to help customers enhance their earnings. EcoStyle provides customers with key operational information, allowing them to monitor fuel consumption, driver performance, and much more. Dashboards provide full visibility of the information that matters at a glance, or users can delve deeper through a rich suite of reports and views.

Joerg Mommertz, senior vice president, head of sales area Middle East, Africa & Latin America (MEA&LA), MAN Truck & Bus, said, "Over the years, MAN vehicles have become the reference for reliability and efficiency. However, our customers are constantly looking at ways to achieve greater operational efficiency, with the aim to increase their earnings. With the MAN EcoStyle, we are confident that customers will get to gain more from their vehicles."

Ansaldo Energia presents GT36 gas turbine

Ansaldo Energia, a subsidiary of the CDP Group, has presented the new GT36 turbine at their Genoa plant.

Made entirely in the workshop of Ansaldo Energia, the GT36 turbine is the most powerful machine in the company's product portfolio and the most powerful and performing turbine ever built in Italy.

"The GT36 turbine built for Edison will take off to power the Porto Marghera combined cycle plant, which will then be able to reach a total electrical power of 780MW and an energy efficiency of 63%, the highest made available today by technology, with a reduction of specific CO2 emissions by 40% compared to the average of the current Italian thermoelectric park, and of nitrogen oxides (NOX) by more than 70%. When fully operational, it will be the most efficient thermoelectric plant in Europe," according to the company.

The project, including the research and development process, unfolded over seven years, with a commitment of more than 3.7 million hours worked. Nicknamed 'Monte Bianco' as the European top for power, this turbine, in the 50Hz version presented, reaches 538MW (ISO conditions) of power. This means that, with its activity, it is able to support the consumption of electricity of almost 500,000 households.

In total, the turbine weighs 520 tonnes, as much as 400 cars. It is almost 13.5m long, as high as a large coach bus; placed vertically, it would be as high as a four-storey building.

"We do not hide our pride in the result achieved. For this we also thank our majority shareholder, CDP, who has believed in this project," said Giuseppe Marino, CEO of Ansaldo Energia. "All the work for the construction of this turbine took place in a difficult period of time, due to the limitations imposed by Covid: nevertheless, in maximum safety, Ansaldo Energia staff worked tirelessly to guarantee that the Edison turbine could be delivered in due time."

"It is with great satisfaction that we participate today in the departure of the brand new GT36 turbine from the Ansaldo Energia shipyard," declared Nicola Monti, Edison's CEO.



The maxi H class GT36 gas turbine is the most powerful piece of machinery from Ansaldo Energia's product portfolio.

Image Credit: Ansaldo Energia

KONEXA WINS 'UTILITY OF THE FUTURE' AWARD

At the Africa Energy Forum (aef), Konexa was announced the winner of the African Utility of the Future award, receiving US\$5,000. The competition, organised by the African Development Bank (AfDB) and aef, inspired innovative ideas to transform utilities into advanced, futuristic, smart, sustainable and agile African power utilities. The principle was to create a platform for current and aspiring asset-owners to devise innovative, realistic, practical and implementable ideas to leapfrog existing utilities in the future.

In the face of steep competition, Konexa's anonymous submission was chosen by the panel of judges based on its transformative value across five pillars of sustainable utility operation as defined by AfDB.

Konexa aspires to own and operate grid and off-grid power assets across Africa. They are pioneering a utility model that accelerates access to reliable power by leveraging cost-efficient and disruptive technologies.

Batchi Baldeh, director of the power systems development division at AfDB, said, "The bank in partnership with EnergyNet is happy to announce the winner of the African Utility of the Future competition for 2020 as Konexa, with their innovative integrated distribution franchise model. The proposed model challenges financing institutions such as the African Development Bank to begin leapfrogging into the future and to develop financing mechanisms to match the needs of these futuristic utilities by providing opportunities and mechanisms for access to low cost infrastructure finance, and mechanisms to address local and hard currency challenges."

CEO of Konexa, Pradeep Pursnani, added, "We're honoured to be awarded this prize. Konexa's integrated utility model aims to help governments and utilities deliver their vision of 24/7 power for everyone in the country on a rapid timeframe."

UNLOCKING HYDROPOWER'S POTENTIAL IN AFRICA

Hydropower plays a key role in all of the African Development Bank's (AfDB) High 5 priority areas that are intended to support the continent's achievement of the UN Sustainability Goals.

This is according to Batchi Baldeh, director of power systems development at the AfDB, who took part in a discussion at the Africa Energy Forum on 'Overcoming Development and Environmental challenges to unlock Hydropower's Potential in Africa'. Hydropower provides the vast majority of electricity generation in countries such as Ethiopia, Malawi, Mozambique, Namibia and Zambia.

"AfDB is the continent's bank," said Baldeh. "We offer various financial instruments across the project cycle for both private sector and public sector operations. Our strategic framework for power is based on the High 5s which are to Light up and Power Africa; Feed Africa; Industrialise Africa; Integrate Africa; and Improve the living conditions of Africans, and hydropower plays a key role in all of those High 5s."

BRIEFS



Women are empowered by having access to electricity.

Access to energy helps women

Power Africa's Nigeria programme has helped to electrify two centres in Lagos that are focused on protecting women against gender based violence (GBV). It was discussed at aef on linkages between GBV and energy, entitled: 'GBV and Electricity: What's Light Got To Do With It?'. "Evidence demonstrates women in electrified households report lower acceptance of GBV," said Melissa Basque Roux, a gender and energy specialist, who runs the Energy to Equal Gender Programme at the IFC.

Volvo Penta upgrades D16 engine

Volvo Penta's D16 engine is the newest addition to the company's IMO Tier III range – cutting emissions without compromising on power.



Volvo Penta's upgraded D16 engine.

The new D16 MH/MG IMO III engine has been developed to sustain high backpressure while also maintaining efficiency and drivability.

The company said the IMO III solution has already proved itself for the smaller D13 model, in tough marine conditions, having undergone 65,000 hours of field-testing.

Lekela's Kangnas wind farm commences operations

Lekela, the renewable power generation company that delivers utility-scale projects across Africa, has announced that its 140MW Kangnas wind farm in South Africa has successfully reached commercial operations. This marks the completion of all five wind farms in a Lekela-led consortium across South Africa. Together, these total more than 600MW and will provide clean, cost-effective power for up to 485,000 South African homes over the next 20 years.

The Kangnas wind farm is situated just over 50km east of the town of Springbok in the Nama Khoi Local Municipality of the Northern Cape. Construction of the project began in 2018 and has been achieved with 50% of construction content manufactured locally in South Africa, including the site's two transformers. The Kangnas wind farm also committed to drive local job creation on top of manufacturing, providing more than 550 jobs at the height of the project's construction. Long-term operations and maintenance jobs will also be supported while the 61 Siemens SWT-2.3-108 wind turbines generate electricity for 20 years.

Chris Antonopoulos, chief executive officer at Lekela said, "Just five years after Lekela was created, this is a significant milestone for us all. Our completed portfolio places Lekela firmly as one of the leading providers of clean, renewable energy in the country, and across the African continent more broadly.

"Kangnas' success supporting local manufacturing and jobs is an indicator of how low-carbon technologies can drive renewed economic growth in the wake of Covid."

Elsewhere in its wider portfolio of pan-African projects, Lekela has also recently been awarded a grant from the U.S. Trade and Development Agency to fund a feasibility study in partnership with Senelec for Senegal's first grid-scale battery electric storage system. The study will focus on how to provide increased grid stability and integrate intermittent renewable energy into Senelec's electricity grid. The battery will be located at Lekela's 158.7MW Parc Eolien Taiba N'Diaye (PETN) project, which is itself the first utility-scale wind farm in Senegal.



The Kangnas wind farm is the fifth wind farm in a Lekela-led consortium across South Africa.

Image Credit: Lekela

UGANDA TOP PERFORMER FOR ELECTRICITY REGULATION

Uganda has for the third time been ranked top performer in this year's *Electricity Regulatory Index Report* published by the African Development Bank.

The ERI, a flagship report of the African Development Bank, is a composite index which measures the level of development of electricity sector regulatory frameworks in African countries against international standards and best practice. The report was launched during the Digital Energy Festival of the Africa Energy Forum, on 5 November.

Uganda, along with Namibia, Tanzania, Zambia and Kenya, the other top performers, have effective regulators. However, the overall electricity regulatory frameworks of African countries are poorly developed, and most countries experience major regulatory weaknesses.

"The African Development Bank has been at the forefront of efforts to mainstream electricity sector regulation issues in Africa within the broader sector discourse, recognising the importance of establishing robust legal and regulatory frameworks to support the financial sustainability of the sector and attract private sector investment," said Dr. Kevin Kariuki, vice president, Power, Energy, Climate and Green Growth, at the African Development Bank.

Wale Shonibare, director for Energy Financial Solutions, Policy and Regulations, at the African Development Bank, said Covid-19 related restrictions had increased residential electricity demand and decreased industrial demand. This had resulted in shortfalls in the revenues of utilities.

"To address these challenges, regulators will be required to play an even more critical role post-Covid, to ensure the sector recovers with minimal impact on consumers and utilities," he said.

ATI SUPPORTS MALAWI SOLAR POWER PLANT

The African Trade Insurance Agency (ATI) is supporting the US\$67mn Nkhotakota Solar Power Plant, one of Malawi's first commercial scale independent solar power projects, which is expected to add a significant 37 MWac of clean energy to the national capacity, currently estimated at 362 MWac. The solar plant, which is being developed in two phases of 21 MWac and 16 MWac, is the second renewable energy project to be backed by the ATI's Regional Liquidity Support Facility (RLSF). ATI, through the RLSF, is providing liquidity cover for up to 10 years. The completed project will supply electricity for up to 150,000 Malawian households. The Nkhotakota Solar Power Plant is part of the Malawian government's plan to move the country from its reliance on hydropower, which currently represents more than 90% of its energy mix and has left the country vulnerable to frequent power supply cuts in times of drought. The solar power plant aims to provide a more sustainable solution for stable and consistent energy access.

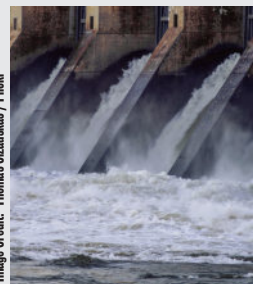
► BRIEFS



Bokpoort CSP plant has set a new record for continuous operation.

CSP plant sets new record

ACWA Power, lead shareholder in South Africa's Bokpoort CSP Plant, has announced that the 50MW CSP plant has become the first renewable facility on the continent to complete a full week of continuous round the clock operation. Bokpoort CSP set the new African continental benchmark achieving 13 days (312 hours) of continuous operations on 23 October 2020. This was made possible by optimally managing 9.3 hours of the thermal salt storage system overnight.



The project will boost power supply to the city of Mouila.

Hydroelectric plant upgraded

The Société d'Énergie et d'Eau du Gabon (SEEG) has commenced restoration work on the Bongolo hydroelectric power plant in Ngounié province, according to a report on africaoilandpower.com. The scope of the US\$10.8mn project includes the upgrade of all hydro-mechanical structures and the rehabilitation of automation and control systems. The Bongolo project will boost power supply to the city of Mouila, and is part of SEEG's 2020 roadmap to increase access to power.

MYTILINEOS: Sustainable strategy for the future

MYTILINEOS has adopted sustainability policies in all its corporate strategy, managing to create value for its shareholders and the communities where it operates.



MYTILINEOS's approach to sustainable development stems from its business mission and through specific strategic priorities contributes substantially to its uninterrupted and sustainable operation, while being closely linked to the 17 global Sustainable Development Goals.

This strategy uplifts its core business and rewards the company with a healthy balance sheet that manages to absorb even the turbulences of the global pandemic. As we are approaching the end of an odd year, characterised by unprecedented challenges, MYTILINEOS managed to remain fully operational across all of its different activities.

This was not, of course, an easy task; MYTILINEOS has a strong presence in all five continents and it is active in the Metallurgy sector, in the Sustainable Engineering Solutions sector, in the Production and Trading of Power and Gas and in the Renewable and Storage Development sector.

Through this challenging year, MYTILINEOS took the initiative to upgrade its core business and invest in the global goal of energy transition, putting all its forces at the service of sustainable development. By transforming the world known EPC BU – METKA into the Sustainable Engineering Solutions BU (SES BU), it proved its commitment to a prosperous future for all.

While treasuring METKA's high expertise and experience, the SES BU will go one step forward and will provide solutions in a wide engineering spectre.

In Africa alone, MYTILINEOS has already proved business excellence, by delivering on-time high-edge EPC projects in Ghana, Nigeria, Uganda, Tunisia and Algeria, while the long-expected project in Libya is finally on track.

In all its projects, MYTILINEOS employs local workers. The company, through Corporate Social Responsibility (CSR) expresses its firm commitment to the goal of sustainable development. While providing energy solutions to countries with substantial needs, MYTILINEOS focuses on improving the lives of the local communities. ■



Image Credit: Mytilineos



Image Credit: Mytilineos



Image Credit: Mytilineos



Image Credit: Mytilineos

Flexible generation: Changing Africa's energy landscape

Wale Yusuff, managing director-Nigeria, Wärtsilä, talks to Samantha Payne at African Review during the virtual African Energy Forum to discuss flexible power systems.

For the last 14 years, Wale Yusuff has been at the helm of shaping the energy and power sector in Nigeria. In his current role as managing director-Nigeria for Wärtsilä, he is helping to drive the company's agenda towards a 100% renewable energy future by helping customers to transition their power generation from traditional thermal power plants to incorporating renewables and flexible engine and storage solutions. He tells us more.

African Review: How important are flexible power systems in changing the African energy landscape?

Wale Yusuff: The energy landscape is in transition towards more flexible and

sustainable energy systems. We envision a 100% renewable energy future, with Wärtsilä leading the transition as the energy system integrator – we understand, design, build and serve optimal power systems for future generations.

Engines and storage will provide the needed flexibility to integrate renewables and secure reliability. We help our customers unlock the value of the energy transition by optimising their energy systems and future-proofing their assets.

We also develop and deliver solutions and services to help our customers maximise performance and profitability throughout the asset lifecycle.

Wärtsilä has delivered 72GW of power plant capacity in 180 countries around the world, 7.4GW of this has been delivered in Africa and about 1GW of this has been delivered in Nigeria across IPPs, industrial and marine customers.

AR: Have you been in talks with existing power plants in Nigeria to integrate the technology?

WY: The majority of baseload plants in Nigeria are mostly gas turbine power plants. In the journey towards a 100% renewables energy

Wärtsilä Modular Block solution will function as an IPP at a thermal power plant for a mine in Mali.

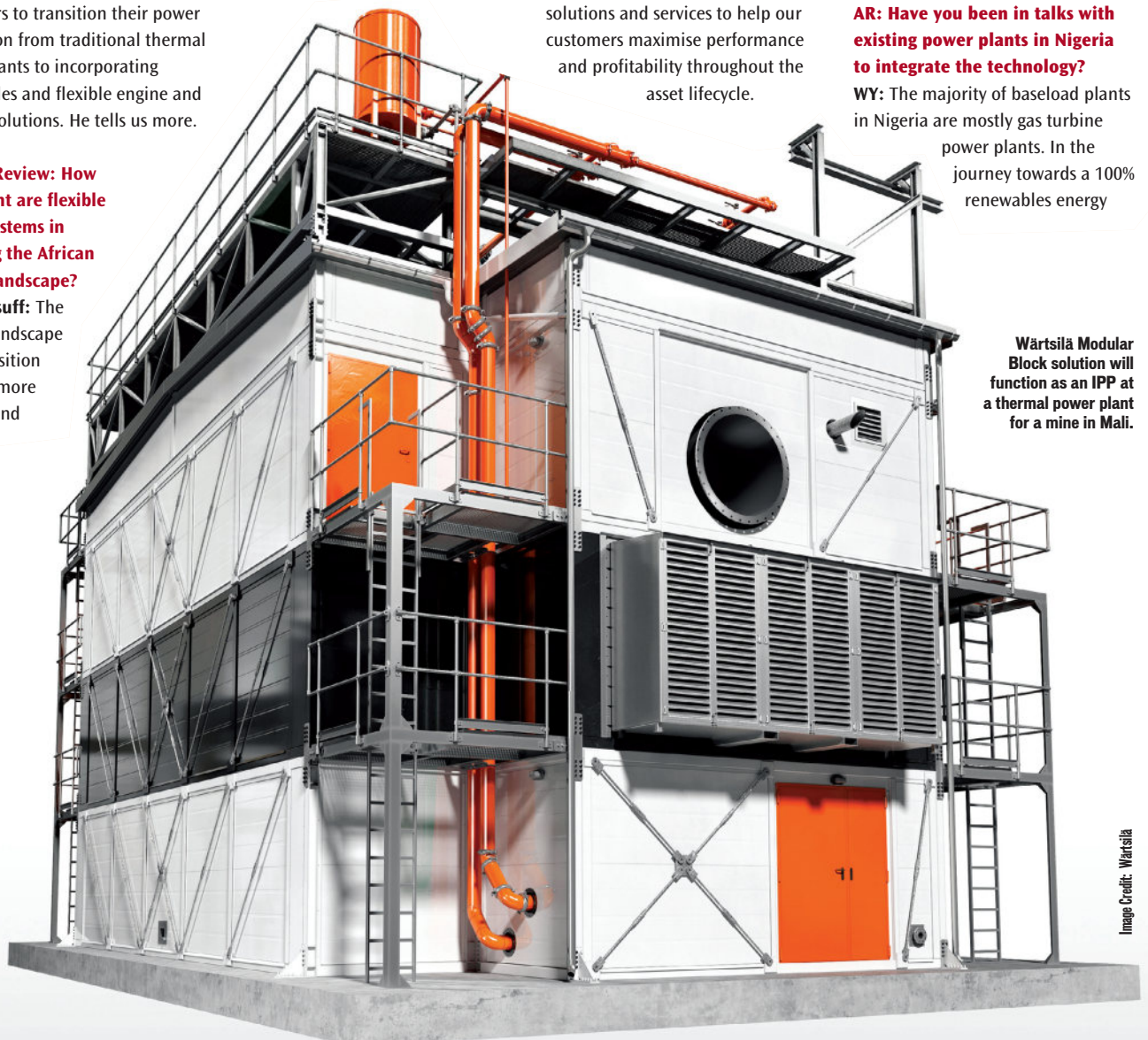


Image Credit: Wärtsilä

future that we are driving at Wärtsilä, we think existing power plants should have flexible thermal power plant solutions. This will help to integrate renewables that can be quickly ramped up or down, depending on when the renewable energy resources are coming into the power mix and still maintaining grid stability.

AR: Could more be done in Nigeria, as in South Africa, through the REIPPP programme to encourage hybrid renewable solutions?

WY: The Federal Government of Nigeria has many renewable energy initiatives being led by the Rural Electricity Agency, specifically for universities, markets and communities, which are located in rural areas with no access to the grid. There are also many industries that are generating their own power in off-grid areas, which would be made easier if they installed systems to integrate the tariff and renewable resources together. Again, this is a solution that Wärtsilä can offer. Our GEMS software platform integrates energy storage, renewables and thermal generation assets as and when you need the different type of power generation.

AR: What needs to be done to improve on-grid power systems in Nigeria?

WY: Admittedly, the government has a lot of work to do in revitalising the grid. The transmission in Nigeria is the weakest link in the electricity chain and is not robust enough to transmit all the power that is generated. However, if the government centred its work on fixing the grid, there is no reason why renewables could not be integrated in the future to improve its performance.

I will also like to add, that, the government's plans can only be implemented if there is significant transformation of the whole sector, with the private sector participating equally in the upliftment. The government needs to provide substantial financial incentives for new power projects and must also restructure the distribution companies to improve liquidity. Lastly it must counter the corruption and bureaucracy in the sector and ensure that generating companies receive complete and timely cost-reflective tariffs from the government. While these measures are difficult to achieve, they are the only way the sector can see any respite in the coming years.

AR: Are there any more modular block solutions on order for 2021 for the mining sector?

WY: This was an initiative that was launched at the Africa Energy Forum in Lisbon in 2019, and we are pleased to announce that we have had successful case studies of the solution being implemented already. We also have a couple of projects in the pipeline where the modular power block solution is being considered, one of which will function as an IPP at a thermal power plant for a mine in Mali.

There is also another hybrid power plant at the Syama mine in Mali, which will have battery storage and solar PV integrated as well. The existing solution is equipped with four Wärtsilä Modular Block enclosures, each equipped with a Wärtsilä 32 engine.

AR: Do you think the Nigerian Electricity Regulatory Commission's aim of reaching 11,000MW by 2023 is realistic?

WY: As an engineer, I believe technically, anything is doable, but it depends on the right policy and

the enabling environment being in place. Until the frictions in the industry, such as corruption, the right pricing of electricity tariffs and the right pricing of gas are fixed, as well as a solution to the transmission grid problem, this will be a difficult target to achieve.

However, the recent agreement between the federal government and a European energy company to help fix the transmission grid is a laudable step, and Wärtsilä is open to this type of cooperation with the federal government to achieve this power generation target.

AR: What is the role of Wärtsilä in helping Nigeria meet this target?

WY: As a technology company, we have in our basket all the right solutions to enable this vision to be achieved but it will depend on what the policies will be. But we have flexible power plants in our portfolio. Nigeria has a lot of gas and we have efficient modular gas power plants, which can be grown in line with demand. The nation is also blessed with wind, solar and hydro. Depending on where these power plants will be and the energy mix. We have the technology that can integrate all this together. By doing this we will be contributing our own part in meeting this target of boosting the renewable energy share to 30% in a decade.

AR: How has Wärtsilä navigated the Covid-19 pandemic?

WY: The world has changed with this pandemic and has caused a lot of dislocations and even in some cases, business paralysis.

To survive as a business in the new normal as it is called, we needed to evolve systems and approaches that were agile and resilient to adapt.

As a company, our top priorities are the health and safety of our employees, customers, partners and communities, customer commitments and the best possible support for our customers and partners as well as business continuity and Wärtsilä's long-term success.

FROM OIL TO POWER



Image Credit: Wärtsilä

Wale Yusuff.

Place of birth: Kwara state, Ekiti LGA, in a town called Isolo-Opin, Nigeria.

Place of study: B.Eng and MSc in Chemical Engineering from the Federal University of Technology, Minna and University of Lagos.

Further qualifications: MBA in Innovation, Growth and Digital Execution-Techniques for Building Category King Companies from Tekedia Institute.

Previous company experience: Trained at one of the nation's four refineries as a young trainee engineer before transitioning to the services sector in Nigeria's upstream oil industry in business development roles. In the last 14 years, he has been involved in the energy and power sector in management positions in sales and market development in leading global technology companies in Nigeria that have shaped the sector positively.

Key to success: Dedication, tenacity of purpose, never giving up, interpersonal skills and having a good relationship with management, and most importantly, his faith in God.

Most outstanding career achievement to date: "Nothing gives me more joy than to know I played a significant role in changing the fabric of the power industry, especially in the industrial sector by helping companies switch from liquid fuel to gas to power for their operations. This has helped some of these companies reduce their overall production cost by about 40%, and hence has helped them not only to survive, but remain very competitive and profitable."

“Wärtsilä is leading the transition as the energy system integrator.”

WALE YUSUFF, MANAGING DIRECTOR-NIGERIA, WÄRTSILÄ

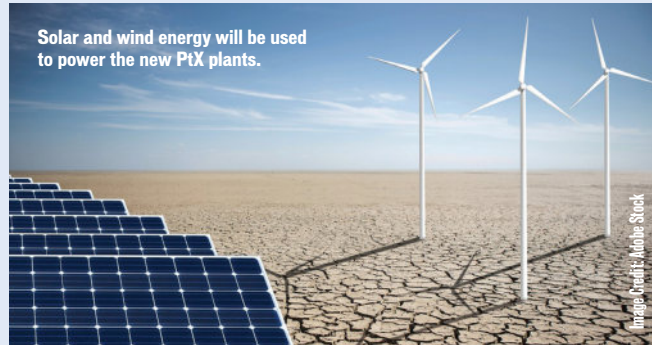
More insights from the Africa Energy Forum

MAN Energy Solutions identifies Africa as key continent for greener future

Marc Grünwald, vice president of MAN Energy Solutions, presented their Power-to-X (PtX) plants at the Africa Energy Forum, (aef) to help meet the worldwide demand for hydrogen.

Grünwald outlined MAN Energy Solution's strategy to sustainably create carbon neutral fuels from renewable energy resources such as solar and wind. In MAN Energy Solution's Power-to-X (PtX) plants, renewable energy, aside from feeding into the local grid, will power electrolyzers converting H₂O into hydrogen. If the local industry is capable of doing so, this gas can be used immediately locally, but there needs to be more development of engines able to use this fuel. In the meantime, hydrogen gas can be converted into other synthetic liquid fuels such as kerosene, methanol, ammonia which can be transported, stored, and then used in existing combustion engines for mobility, electricity and heat.

Due to the development of this method, the worldwide demand for hydrogen could increase 10-fold by 2050 and MAN Energy



Solutions have already developed industry ready plants to cope with this. One of their 50 MW power-to-gas plants can produce enough synthetic natural gas (SNG) to provide carbon neutral fuel for 19,800 cars, 470 buses or two maritime car carriers performing two round trips a year. Grünwald stressed that, of course, different size plants could be constructed to meet the demands of each individual project.

Africa, due to its high potential wind and solar energy, holds the highest potential for the production of green fuels and has been identified as a key continent by MAN Energy Solutions. European countries are searching for international partners to

import hydrogen and SNG to meet their growing demand for green energy in the forthcoming decades. MAN Energy Solutions have the technology and are now searching for suitable regions in Africa where they can set up their PtX plants. These projects would be a "win-win", said Grünwald, providing European countries with green energy but "that has to have an impact on the regional development as well."

MAN Energy Solutions is committed to building a carbon neutral world through sustainable renewable energy and effective energy storage.

For more information visit www.man-es.com

TOP TAKEAWAYS FROM AEF 2020

“ We need to make African

governments understand that the time is now to fill the [energy] gap of the other regions and take advantage of this opportunity.”

H.E. Honourable Cesar Augusto Hinestrosa Gómez, Vice-Minister of Industry & Energy, Ministry of Industry & Energy, Equatorial Guinea

“ From the existing technology

worldwide we need to be sure that we can bring the best to help the people of Africa to maximise the opportunities available now.”

H.E. Honourable Eng. Khairy Abdel-Rahman, Acting Minister of Energy & Mining, Sudan

“ Let's find a way for us to collaborate

and tap into all the funds that are available to us to put power on the continent.”

Linda Munyengerwa, regional industry director for infrastructure, IFC

“ Over the last few years, many African countries have made good progress in energy access, but the truth is that there is about 540 million Africans that still lack access to power. We need bankable projects from governments. They need to structure projects so that we can come in and finance those projects.”

Dr. Kevin Kariuki, Vice President for Power, Energy, Climate & Green Growth African Development Bank AfDB

UPDATE ON SYAMA MINE IN MALI

The Syama mine is owned by Australian miner Resolute. It is the world's first fully automated underground mining gold mine.

John Lewis, head of Africa from Aggreko told attendees at aef's media roundtable, "We are currently deploying a 40MW HFO plant combined with storage and will follow with solar. This deployment is now due to be completed in early 2021. It is only a few weeks late which is good, considering we have to contend with the Covid-19 pandemic and this will



Four Wärtsilä Modular Block enclosures, each equipped with a Wärtsilä 32 engine are installed at the Syama mine.

deliver significant efficiencies in terms of power. On the subject of bankable projects, it is a 15-year commitment on the part of Resolute. When you start deploying renewables on that scale, that is the length of term you need, to make sensible returns.”



John Lewis, head of Africa, Aggreko

The Water Show Africa 2020 and Power & Electricity World Africa highlights

DIGITALISATION: THE FUTURE OF THE WATER SECTOR



During The Water Show Africa 2020, Katrina Zlobich, marketing director at Grundfos, one of the event's sponsors, encouraged digitalisation and innovation within the water sector.

Zlobich said digitalisation and innovation should be embraced within the water sector and not feared, as she hosted the webinar entitled: *'How digital is your water utility?'* on 3 November at the show.

She outlined that the International Water Association's five-year plan already identified the need for innovation to address global water challenges, which was aligned with Grundfos's own belief that

digitalisation will play a critical part in the water sector and the water utility market in the future.

Although there are difficulties in implementing digitalisation and innovation, Zlobich was keen to emphasise that "there is nothing to be scared of, it has lots of benefits not just for individual companies but also on a higher economical level", and declared that Grundfos was happy to share more about their journey to anyone seeking to progress or begin their digitalisation process.

Zlobich was joined by Valerie Naidoo, executive manager of innovation and business

development at the Water Research Commissions; Dan Naidoo, regional manager of Umgeni Water; Loreen Grobelaar, junior process engineer at WEC Projects; and Roseline Shumba, project manager at Rand Water. The panel described the positive impacts that digitalisation can have within the sector.

Dan Naidoo reported that previously water was monitored manually before the gradual introduction of remote monitoring of hard wire devices and all data was paper-based. New innovations within this sector have paved the way for more sophisticated methods of remote monitoring (which can

produce far more data) and storing data through the internet on bigger platforms.

Big data

Large databases can now be accessed by different departments within a company and even shared with outside partners, allowing for data collaboration on a much bigger picture. Valerie Naidoo noted that the Water Research Commission is working on a national data programme in South Africa to identify issues on a countrywide scale. She added that access to "big data" can lead to early recognition of problems such as droughts, leading to quicker solutions.

GRID COINCIDENT PEAK SHAVING USING ENERGY STORAGE

At the Power & Electricity World Africa Show 2020, Honeywell representatives talked attendees through how White Pine Chemicals plant at Ontario, Canada, is using Honeywell's Experion Energy Control System to manage their global adjustment costs in relation to grid peaks.

Prudence Hoffman, senior manager, technical solutions, renewables and distributed assets, Honeywell, told attendees, "It's interesting to see

how the Honeywell solution used the intelligence software to predict when the peak was coming, and how the scheduling of the charging and discharging of the battery system worked."

By being able to predict grid peaks and schedule energy storage systems, it helps customers avoid tariffs associated with coincident peaks.

Other demo videos, which were available for viewing at Honeywell's virtual booth also showed

how the Experion Energy Control System is the same system that their customers already know to control their processes. Hoffman added, "We demonstrate how we help our customers manage their energy costs by shaving their facility peaks and help them meet their corporate sustainability goals."

For more information visit www.honeywellprocess.com

Testing data centre demand

As data centre usage increases thanks to technology advances and changing business requirements, providers need to ensure that their facilities can handle this demand. Samuel Tumma, Head of Engineering at Aggreko Africa, explains how Aggreko can help companies test their data centres and eliminate downtime.



Global data centre spend is expected to reach an impressive total of US\$208bn by the end of 2020. Demand, thanks to expanding business footprints and the move to the cloud and alternative infrastructure solutions, has pushed the market into overdrive with an estimated 628 hyper scalers expected to rise by 2021. The edge, artificial intelligence, cloud IT infrastructure investment, machine learning and the rise of emerging technologies are shifting the data centre into high gear and centre stage.

But what if the data centre fails? What if demand overtakes infrastructure? Downtime can incur huge costs, put an organisation's

reputation on the line and can have unexpected knock-on ripple effects throughout the company and its infrastructure.

Therefore, it is essential to tick two particularly important boxes when investing in a robust data centre strategy – reliable power and

comprehensive loadbank testing.

As data centre usage continues to rise exponentially alongside technology advances and rapidly changing business requirements, providers must ensure that their facilities can handle this demand. If they miss a crucial step and ignore a

potential problem, then the results can be expensive and damaging. Even if the power outage is not the fault of the service provider, the resultant power and temperature control infrastructure must be prepared for such an eventuality, especially in Africa.

“ The UK's TSB suffered a data centre outage that left millions without access to their accounts and cost the company an estimated US\$497mn (£370mn). The reason is an untested data centre.”

The crucial task of data centre testing

Effective loadbank testing of facilities is essential. There are plenty of expensive examples of companies that failed to test their systems and lost millions thanks to an unexpected outage. In the UK, leading financial institution TSB suffered a data centre outage that left millions without access to their

accounts and cost the company an estimated US\$497mn (£370mn). The reason? An untested data centre.

Testing provides insight into any weaknesses inherent in the system, flaws that may only be apparent when pressure is applied to the system. To prevent critical infrastructure from being the source of potential downtime, every part of the data centre must be carefully tested before the facility starts operations. Loadbank testing puts immense pressure on the data centre, determining whether it is capable of withstanding full load demand conditions, or not. This testing process follows five key steps to ensure that maximum capacity is not the point at which a data centre fails, but when it succeeds.

The first step is factory acceptance testing that ensures all equipment has undergone evaluation before and after assembly. This determines whether it has been built according to design specifications and can operate within those parameters. Resistive and reactive loadbank testing can simulate electrical loading for generators and UPS systems to ensure 100% performance at full load. The second step is site acceptance testing. This is carried out by OEMs and installation contractors on-site to ensure that the solution meets specification criteria. At this stage, full load test documentation should be developed to cover quality auditing that includes method statements and schematics. Third place is pre-functional testing that verifies the functionality of the equipment and whether it has been correctly

installed, wired, torqued and 'Megger' tested before initial energisation.

The fourth step is individual system testing that takes each item – UPS module, generators, PDUs, bus-bar systems, et al – and individually tests it for full functionality. This includes burn-in tests for hardware using loadbanks or thermal imaging. Finally, integrated system testing wraps the entire system together to test the entire data centre's performance at full load for all critical infrastructure. This layer of the process should be ensuring that varying loads, staged machinery failures and potential utility problems are applied to the data centre to ensure that it can handle it.

The power conundrum

While testing is always going to be a critical part of data centre maintenance and development, additional power sources and solutions should also be high on the priority list. Power solutions that can hold the data centre upright in the event of an unplanned, or in South Africa, a planned outage. Aggreko not only provides collaborative expertise in testing for data centre capability but is the world's largest hire company for temporary power and storage alongside precise temperature control.

Aggreko works with data centre providers to ensure that power is always on when needed, and to support data centres with anything from seasonal changes in temperature to unplanned outages in power. The company tests all



According to Samuel Tumma, reliable power and comprehensive loadbank testing must be considered while investing in a robust data centre strategy.

Image Credit: Aggreko Africa

equipment constantly to ensure reliability and works closely with data centre providers to ensure that their systems are ready, no matter what.

In Mombasa, Kenya, for example, Aggreko worked with icolo.io to test all the equipment, including power generators, UPS systems and precision cooling to get their Tier 3 unit in Mombasa online. icolo.io designs, builds, and operates state-of-the-art carrier-neutral data centres. Aggreko's loadbank service helped icolo.io test and commission the data centre and meet the Uptime Institute's requirement for a Tier 3 facility. With our help, they were able to demonstrate the capability of the data centre and attract global customers with their unique offering.

Extra as a standard

For data centre contractors and operators, it makes sense to enlist testing and commissioning experts, such as those from Aggreko, because they can evaluate exactly what testing should be carried out and provide the correct level of

equipment and expertise for carrying it out. For all stakeholders, using an outside consultant and outsourced equipment can generate even more cost savings thanks to the elimination of any capital expenditure on testing equipment.

Aggreko promises extra innovation, reassurance, expertise, and flexibility to ensure your data centre is tested properly and eliminating the risk of downtime. We use the latest technology to stress-test your equipment – a task which can be performed remotely with the results sent through to your smart device. We always ensure resilience and consistency by delivering global standards for testing and providing the most extensive range of equipment.

We conduct robust testing of all power and cooling infrastructure – quickly and safely. With our mobile systems, it means we can work around you and other trades on-site, reducing the risk of delays and maximising health and safety. ■

www.aggreko.com

“Aggreko provides collaborative expertise in testing for data centre capability. It is also the world's largest hire company for temporary power and storage alongside precise temperature control.”

Liebherr sees steady demand for construction machines

Liebherr Group reports that while the coronavirus pandemic has had an impact on sales levels, it continues to see a steady demand in the area of construction machines and mining.

In the first half of 2020 the Liebherr Group achieved a turnover of more than 4.9 billion euros, 13.5% below the revenue level of the previous year. Overall, the area of construction machines and mining recorded smaller drops than the other product areas, with the tower cranes and earthmoving divisions more affected than the mining, mobile cranes and concrete technology divisions, where revenues only fell moderately.

Africa sales have held up well in contrast with significant reductions in turnover in Central and South America, Europe and North America.

On the whole, demand improved in the third quarter of 2020, and the order situation for construction machines is currently steady in the majority of product segments. For example, the demand for wheel loaders remains constant, even increasing in the segment of small wheel loaders. There is also strong interest in the eighth generation of Liebherr crawler excavators. In contrast, some product segments for medium- and large-sized machines, including crawler tractors, have yet to gain momentum. This also applies to material handling technology. Whereas the market demand for concrete technology has achieved a lower level than the previous year, the interest from customers in tower cranes has stabilised again.

In the mobile crane market, there is currently a strong demand for large machines. Conversely, customers are more reluctant or cautious with regard to medium-sized telescopic mobile cranes. For crawler cranes up to 300 tonnes, the incoming orders are steady and are at the level of the previous year. The same applies to special deep foundation machines. In the area of mining, mine operators are currently investing less in new machines than in the previous year, but Liebherr was able to increase its market share for mining excavators in a declining overall market. Business with spare parts is steady.

Even at the peak of the coronavirus pandemic, work continued on construction sites in most countries. Liebherr maintained close contact with its customers and continued its work on innovative products and technologies.

New products from Liebherr include the telescopic wheel loader L 509 Tele, as well as the new wheel loader models L 526, L 538, L 546. The earthmoving division launched a new crawler excavator, the R 940 Demolition, at the end of September. The TA 230 Litronic articulated dump truck celebrated its product launch at the end of October. In addition, the division announced the start of a strategic partnership with Leica Geosystems and now provides 2D and 3D machine control systems for their mobile and crawler excavators of the 6th and 8th generations in-house. At Conexpo, Liebherr presented a new mobile crane, the LTM 1120-4.1, for which delivery has just started. The LTM 1150-5.3, another new mobile crane model, is currently being prepared for its product launch. Liebherr also responded to the digital transformation of the working world, which was accelerated by the pandemic, and further expanded activities in remote services, as well as the offer of digital training formats.



Image Credit: Liebherr Group

A new Liebherr crawler excavator: the R 940 Demolition replaces the R 944 C.

PROJECTS PRIORITISED FOR 2021-2030

Seventy one regional infrastructure projects in the four Programme for Infrastructure Development in Africa (PIDA) sectors: energy, transport, transboundary water, and ICT have been prioritised from a long list of 240 projects for 2021-2030, proposed by the member states, regional economic communities (RECs), and specialised institutions.

The list will be submitted to the Assembly of the African Union Heads of State and Government in February 2021 for adoption.

At a PIDA Continental Technical Validation Workshop, Cheikh Bedda, director for Infrastructure and Energy at the African Union Commission (AUC), commented, "The second phase of PIDA has been guided by strategic directives for a shorter, more operational list of projects which promote an integrated, multi-sectorial corridor approach that is employment-oriented, gender-sensitive and climate-friendly and that connects urban/industrial hubs with rural areas."

According to Bedda, the ongoing Covid-19 pandemic was a major challenge on the PIDA PAP2 process, which led to a fully-digitalised process of project submission, selection, screening, and ranking, with active participation and engagement with regional economic committees and member states' focal points.

Oumarou Amadou, director of Infrastructure and Urban Development at the African Development Bank (AfDB) recalled that the bank has provided US\$7bn for PIDA projects in the past ten years, making it the lead financier of the continent's infrastructure programmes.

The workshop highlighted the importance of seamless and timely implementation of infrastructure projects and involving the private sector from planning to execution of infrastructure for a higher rate of success.

► BRIEFS

Work begins on Ghana project



Image Credit: Adobe Stock

The project will facilitate the imports and exports for shippers in northern Ghana.

President of the Republic of Ghana, Nana Akufo-Addo, has inaugurated work on the US\$330mn Boankra Integrated Logistics Terminal project, which is intended to bring import and export services closer to the doorstep of shippers in the northern part of Ghana, improve the operational efficiency of the existing seaports in Tema and Takoradi, and facilitate greater intermodal linkages with Ghana's landlocked trade partners in Burkina Faso, Mali and Niger.



Image Credit: Deborah/Flickr

Wady El Nile hopes to benefit from construction activity in Kenya.

New office opening in Nairobi

Egyptian construction company Wady El Nile has opened an office in Nairobi, according to a report in CCE News. The company hopes to participate in the government's plan to build 500,000 new affordable houses, and will also be seeking tenders to develop health facilities in Kenya, in line with Kenya's plan for universal healthcare. It is also looking to develop major infrastructure projects, such as roads, railway projects, ports, waterways and irrigation channels.

Lusaka roads receive major revamp

Beauty has come to the capital city of Lusaka through the Lusaka Decongestion Project (LDP), which is tailored to ease traffic and improve its appearance. Nawa Mutumweno reports.

The Lusaka Decongestion Project (LDP) aims at redesigning the major road network, with a view to reducing traffic jams, travel time, travel distances and saving precious fuel.

This dream is being realised following its conception in 2008 when the Ministry of Local Government, its local authority – Lusaka City Council (LCC) and the Japan International Cooperation Agency (JICA) re-planned the road network.

Indeed, someone who has not been to the capital in the last five or 10 years would simply get 'lost' in the myriad of new roads and road expansions. It is like visiting a town for the first time.

AFCONS International, an Indian firm, has been contracted to build the roads, fly-over bridges and overpasses at a cost of US\$389mn. It is co-financed by the Government of the Republic of Zambia (15%) and Exim Bank of India (85%). The 36-month programme has created jobs for around 1,000 Zambians, in line with the country's employment drive.

The ground-breaking ceremony for the project took place on April 12, 2018. Two and a half years along the line has seen a massive change in Lusaka roads, with many of them transformed into four lanes, thus facilitating the easy flow of traffic, enhancing movement of people and indeed the conduct of business.

Scope of works include construction, rehabilitation and widening of 120.7km of roads. The project also includes improvement of nine junctions along with four new fly-over bridges. Three bridges are already operational on Kafue Road; Longacres and Arcades roundabout.

One of the main features of the project is a new outer ring road from Kafue Road near Makeni area



The Lusaka decongestion project has eased traffic flow immensely.

to the new Mumbwa Road. It will stretch to Lusaka West and join the Great North Road on Chikumbi road in Kabwe.

Dubbed the 'Lusaka West Ring Road', it has since been opened to traffic and has become the new highway for heavy goods trucks, easing traffic within the Central Business District (CBD). A less congested CBD entails fast moving haulage (including inter-country) from Livingstone in the south to the Copperbelt in the north.

Other salient features of the project encompass:

- Dedicated bus lanes in the middle of the road
- Modern street lights to be installed
- Some roads such as Kasangula, Lake, Mwaipona, Nangwenwa, Alick Nkhata,, Munali- Mutumbi, Kamloops and Buyantanshi to be extended to four lanes
- Ben Bella, Kafue, Great East (from Kabwe roundabout to Palm Drive), Independence and Kalambo Roads are being extended to six lanes
- Further road expansions are being made at the Church-Cairo junction, Kabulonga roundabout, High Court roundabout,

Longacres roundabout and Mosi-o-Tunya road

Drivers interviewed along Alick Nkhata Road expressed joy on the new development, which has made driving a lot easier and faster.

"Driving is no longer as cumbersome as it used to be! It is now a pleasure, stress-free and faster with no unnecessary traffic jams. Traffic is now easy flowing and more coordinated. One actually longs to be on the road, unlike the case in the recent past," they said in unison.

Statistics indicate that Zambia has more than 780,000 cars, with Lusaka accounting for 60%, representing around 480,000 cars.

A recent University of Zambia (UNZA) report shows that motorists lose an average of US\$100 on a monthly basis due to high fuel consumption and low productivity in view of the traffic congestion in Lusaka.

While the city population and the number of cars has been on a rapid upswing over the years, road infrastructure development has lagged behind with no meaningful and sustainable works being undertaken for years on end.

Many drivers have over the years complained about regular occurrences of wear and tear to their vehicles due to bad roads, teeming with potholes, for instance.

According to the project cost-benefit analysis, the city was losing a lot of time in commuting due to congestion, and this also resulted in high levels of pollution emissions from vehicles.

"Because people spend a lot of time in traffic, vehicles consume a lot of fuel, but implementation of the project will reduce the government's fuel import bill and commuting time will be faster,"

AFCONS executive director for surface transport Akhil Gupta said at the launch of the project.

AFCONS is one of India's top construction firms, with consistently earned accolades from projects such as marine and industry, surface transport, and urban infrastructure, among others.

"The project is a key catalyst to social development. The infrastructure is helping people to conduct their business with ease and reducing travel time for people within the city," said Ministry of Local Government Permanent Secretary, Bishop Ed Chomba.

Beatrice Mukinga, a motorist and CEO of branding and marketing firm SmarSource, said, "Certainly, there has been an improved flow of traffic since the decongestion project started. It has really helped, especially with the influx of motor vehicles in the country, reducing time spent navigating roads, so that people can have more time to work."

One area that the Patriotic Front government has scored high marks in their two decades in power is infrastructure development, and roads remain on the top rung of their social-economic ladder. ■

Collaborative construction in the ‘new normal’

How can industries collaborate in times of social distancing? HAKI shares insights with African Review on how the construction and infrastructure sectors can collaborate during and after the pandemic.



Image Credit: Adobe Stock

Human interaction forms the very basis of work onsite and is key to collaborative working, in a physical sense. Although many employees can work collectively on a project through computer applications, the two-metre social distancing enforcement since the pandemic outbreak will prove to make it difficult for workers onsite, particularly those working with more traditional methods of scaffolding. The most basic method of scaffolding, the most common component, is a 5ft tube. How can two workers maintain a safe two-

metre distance when passing fittings to each other? Maybe system scaffold is a potential solution.

What is system scaffold?
System scaffold, which is

prefabricated, will definitely come into its own as a potential solution that can ensure projects go ahead while complying with social distancing measures. Unlike traditional methods, system

scaffolding uses fewer components and requires no mechanical fixings. The benefit here is two-fold. Firstly, it reduces manual operation and lengthy hammer action at height, and secondly, it lowers the number of workers required to complete the job at hand. To put it simply, system scaffolding needs fewer workers in less time.

The NASC has published guidance on how to work on socially-distanced construction sites. It pinpoints that where it is not possible to socially distance, workers should face away from each other,

“ Unlike traditional methods, system scaffolding uses fewer components and requires no mechanical fixings.

HAKI

minimise the frequency they are together and reduce the number of employees involved in any given task. By lowering the number of staff and the time taken to fit scaffold, risk is significantly reduced. Two workers can collaborate and keep their time working together to a minimum.

Furthermore, temporary access solutions including stair towers can manage the amount of foot traffic entering and exiting a space, and can facilitate the flow of one-way traffic – a prerequisite to maintaining social distancing in the time of coronavirus. With stair towers, therefore, it is easier to keep the two-metre distance and control who can be onsite at a given time. Temporary crossings, using solutions such as the HAKI Bridge System, are an option to be utilised to control foot traffic and mediate the flow of people on a site, or in public spaces integrated with the Public Access Stair.

BIM and collaboration

Prior to the pandemic, digital was certainly helping the industry collaborate across projects. Yet, since the coronavirus there has been an increase in workers using technology daily. Building Information Modelling, BIM, is giving a

project's entire supply chain improved visibility when it comes to planning, designing and managing built assets.

From enabling architects to design out risk, to providing contractors with the capability to digitise construction sites, the intelligent 3D model is optimising work processes and collaboration, which is essential when many of us cannot work together physically.

BIM is bringing the construction industry into the modern age by improving safety in which buildings are made and maintained.

Although technology within the scaffold sector is still in its infancy its prospects are invaluable, with 4D BIM, in particular, more focused on collaborative working.

Mattias Kuduk, VDC and innovation manager at HAKI, says, "For the temporary works industry, BIM is enabling internal and external design engineers to produce complex 3D scaffolding blueprints for simple structures. Unlike 2D CAD drawings, 3D modelling produces detailed designs in far less time and with more reliability. Designers can reap these benefits with the HAKI Design Tool and HAKI BIM; two solutions in which the former enables designers to configure

scaffolding designs on a cloud-based platform – Inventor iLogic and Configurator 360 from Autodesk – and then advances this configuration onto Revit for greater customisation and capability, particularly when it comes to interacting with the components within the 3D model. As BIM progresses, the industry will see the wider adoption of 4D, 5D and 6D iterations."

Augmented reality

On construction projects, virtual or augmented reality gives a clear visualisation of how a project will function in real-life. A project's 3D BIM model is loaded onto the AR software, to give full visibility of the components. Users can interact and walk through the 'project world' to review the work before construction.

HAKI has developed a version of such software named HAKI Playground, which allows users to walk around the project directly on-screen. This can be used on any device including a PC, tablet, smartphone, Xbox and PlayStation. ■

Source: HAKI

For more information visit www.haki.com

PASCHAL formwork makes concrete (props) of any shape

Formwork expert PASCHAL has supplied a prefabricated plant with high-quality, easy-to-handle special column forms with 30 different cross-sections.

For special fields of application such as formwork for columns, pillars and shafts, PASCHAL says it works in close co-ordination with its customers to achieve tailored formwork solutions for unusual geometries and high frequencies of reuse.

This was the experience of Hungarian precast concrete elements manufacturer PREbeton Zrt. in Erd telek, a subsidiary of Market Épít Zrt., which decided to award PASCHAL the contract to deliver column forms. In total, PASCHAL produced 68 column forms with 30 different cross-sections, in heights of 150 cm and 450 cm. As a special highlight, the formwork panels were delivered in the company colour, RAL 6018 yellow-green.

The product range is due to be expanded with standing heavy-duty props with oval, square and circular column cross-sections suitable for exposed concrete.

Varying geometries

For precast concrete elements, time and cost-savings are key, as are short production times, high quality and precision. In order to meet



Whether oval, square or circular column forms, PASCHAL offers tailor-made formwork solutions.

these specifications, the formwork used to produce the precast element is extremely important with regard to dimensional accuracy and the concrete surface.

PASCHAL special formwork impresses in quality and handling

PASCHAL's building-specific formwork and its formwork for precast elements are designed

according to customer requirements, perfected with the client, and finally produced to very high quality standards in PASCHAL's own manufacturing department. All the precast elements, of every shape and size, must be able to be formed and, due to the large number of pieces to be produced, the formwork used must guarantee a long life and quick formworking times.

Kazungula bridge opens up market opportunities

The long-awaited US\$259.3mn bridge joining Zambia and Botswana has finally been completed, and is expected to bring an enormous trade boost for the southern African region. Robert Daniels reports.



The fully completed Kazungula bridge.

Image Credit: Daewoo E & C

The Kazungula bridge project, first announced in 2014, has been constructed between Zambia and Botswana, over the Zambezi river. Crossing at this point has been traditionally achieved through the use of pontoon ferry services, but this will change when the bridge is opened for business in December allowing for quicker, and more cost-efficient passage.

The six-towered, road and rail bridge, standing at 923m long and 18.5m wide was constructed by Daewoo Engineering and Construction (Daewoo E&C) and was jointly financed by the African Development Bank and Japan International Cooperation Agency, as well as the governments of Botswana and Zambia.

The bridge itself cost US\$259.3mn, and is now fully complete. The stop border posts on the Botswana and Zambia sides are nearly completed and amount to US\$38.4mn and US\$13.1mn respectively.

The project will become part of

the prospected 430 km Mosetse-Kazungula-Livingstone Railway connecting the train lines of Botswana and Zambia.

On 17 October, the housing and infrastructure development minister for Zambia, Hon. Vincent Mwale, inspected the bridge alongside the Botswana Minister of Transport and Communications, Hon Thulangano Segokgo before holding a joint media meeting in the middle of the new structure. Both ministers shared their delight with the project, which they deemed one of the best modern engineering

ventures not only in southern Africa, but in the whole of Africa itself.

In a press statement, Mwale commented, “We are excited that this state-of-the-art bridge has been completed and I have been told that this facility will reduce the transit time for heavy duty vehicles between Zambia and Botswana from more than three days to only two hours. This is a great milestone in the promotion of trade and regional integration.”

Segokgo added, “As Botswana, we are proud that this great piece of engineering will further improve our

two countries’ cordial and warm relations, promote regional integration in the region and increase trade traffic between the two countries.”

Not only is this project a source of excitement for the two countries that it connects, but it is also expected to provide a major boost to trade, commerce and ease of travel for the entire southern region. The structure is located in the north-south corridor and is part of a infrastructure improvement programme to enhance integration and regional trade. This corridor development will help link the countries of South Africa, Malawi, Mozambique, the DRC, Zambia, Zimbabwe, Tanzania and Botswana.

Southern Province Minister Edify Hamukale expressed his gratitude to the governments for implementing the project and said, “We the people of Southern Province cannot wait to see the operationalisation of the bridge. That is how excited we are with this bridge.” ■

“ This facility will reduce the transit time for heavy duty vehicles between Zambia and Botswana from more than three days to only two hours.”

VINCENT MWALE, ZAMBIAN MINISTER OF HOUSING AND INFRASTRUCTURE DEVELOPMENT

Other major construction projects across Africa

LEKKI DEEP SEA PORT BACK ON TRACK WITH BEGINNING OF QUAY WALL CONSTRUCTION

The Lekki Deep Sea Port, located 65km east of Lagos city, is one of the major industrial projects currently in progress in western Africa. Built over 90ha of land and costing US\$1.5bn, the port is expected to bring huge economic benefits for the surrounding region and the nation, generating US\$200bn for the government coffers and creating up to 170,000 jobs over the concession period of 45 years.

The Lekki Port LFTZ Enterprise Limited (LPLEL); led by China Harbour Engineering Company, Tolaram Group, the Lagos State Government and the Nigerian Ports Authority, obtained the rights to construct and operate the port in 2011 under a BOOT arrangement. The project was stalled due to the effects of Covid-19, but with the driving in of the first piles of the quay wall progress is now back on track.

Speaking at a ceremony on Tuesday, 13 October at the project site the CEO of LPLEL, Ruogang Du, told attendees that the piling



Construction of the port is back on track after setbacks caused by Covid-19.

Image Credit: Integrated Indigo Limited

of the quay wall was underway and described it as a major phase of the construction, symbolising a significant step towards the timely delivery of the project.

“The epidemic has harmed global economic development and personnel mobility everywhere. However, developers and investors in Lekki Port have not stopped moving forward. We

are actively resuming construction and are striving to fulfil our commitment to officially open the port for operations in the first half of 2023. This is a commitment to Lagos and a commitment to Nigeria, and we will do our best to achieve it,” he said, according to a news update at lekkiport.com.

The 680m quay wall will be

capable of berthing two container vessels of 18,000 TEUs each. The wall will be part of phase one of the operation, which will see the port have a capacity of 1.2mn TEUs per year, before rising to 2.5mn in phase two. Upon completion the port will feature three container berths, one dry bulk berth and three liquid bulk berths.

ENEL GREEN POWER COMPLETES 140MW NXUBA WIND FARM IN EASTERN CAPE

Construction began on the EU€200mn (US\$237.4mn) windfarm in February 2019, with the final turbine commissioned at the start of November. The facility at Nxuba is projected to generate 460GWh per year, offsetting more than 500,000 tonnes of CO₂ annually.

The windfarm was one of five projects awarded to Enel Green Power South Africa, a subsidiary of Enel Green Power, in the country's renewable Energy Independent Power Producer Procurement Programme. Together they have cost a total of EU€1.2bn (US\$1.4bn), which has been partially funded by South African banks Nedbank and Absa, and will have a combined capacity of 700MW.

William Price, country manager of Enel Green Power South Africa, said, “Nxuba Wind Farm is yet another example of EGP's commitment to renewables and sustainability in South Africa and globally. We are particularly excited about unlocking the potential of the abundant renewable energy sources in South Africa, as well as supporting the local economy.”

The energy farm was completed through the services of private individuals and small to medium sized enterprises including Blue Crane Route and Raymond Mhlaba Local Municipalities. The EGOpro Safe Move system that was utilised helped to ensure that the two million man hours committed to construction were carried out incident-free.

MONROVIAN WATER PIPELINE REHABILITATED

The new 5km pipeline runs between the dam of Mt. Coffee Hydropower Plant, on the Saint Paul River, and the newly upgraded White Plains Water Treatment Plant. The new 48 inch diameter pipe has replaced the former 36 inch pipe that was destroyed during the civil war and uses gravitational force instead of an electrical pump, saving the Liberia Water and Sewer Corporation US\$780,000 annually on electrical expenditure, according to an estimate by Samuel Tweah. The rehabilitated pipeline will improve water quality to an estimated 1.1 million people in the Greater Monrovia district.

The US\$18mn project was funded by the Millennium Challenge Corporation, which provided a grant of US\$257mn to the government of Liberia in 2015 to help address the lack of access to reliable electricity and suitable road infrastructure. Nicholas O'Dwyer was recruited to supervise the design and construction of the project which was carried out by Denys. Work began in November 2019 with a projected completion date of June 2020, however Covid-19 slowed progress and pushed the inauguration date back five months.

BOBCAT SUPPLIES 25 SKID-STEER LOADERS TO MAJOR SOUTHERN AFRICAN DIY AND BUILDING MATERIALS SUPPLIER

Bobcat Equipment South Africa has concluded a contract to supply 25 Bobcat skid-steer loaders to a major supplier in the Southern African hardware, home improvement, DIY and building materials sectors.

The machines will be delivered to respective stores across the area and a five-year maintenance agreement has been included to ensure top service and back-up from Bobcat Equipment.

On the challenges with the deal, national operations manager Brian Rachman said, "Arranging such a large order from the factory took some well-prepared negotiating with both the customer and the OEM, as well as having the units dispatched punctually within a confined time.



Image Credit: Bobcat

The brand new machines were supplied direct from the Bobcat factory.

"Our Bobcat skid-steer loaders feature excellent performance, with a compact body size and power to easily operate in confined spaces.

This is due to the fact that, being a vertical lift machine, the load remains closer to the loader throughout the lift path."

Advantages include low maintenance, increased lift for loading trucks, minimal electronics, a larger bucket capacity and a longer wheelbase for better machine stability.

"We believe our vertical path skid-steer loader was the best option based on the client's requirements and needs," Rachman stated, "In addition to its low running costs, not to mention the extra lift height and bucket capacity resulting in quicker cycle times for both the client and its customers."

For more information about Bobcat and Bobcat products, visit their website www.bobcat.com

HYVA ADDS 60TM FAMILY TO THE EDGE LINE CRANES

HYVA has added a 60tm family to its EDGE Line to further strengthen its position in truckmounted cranes – an extensive range which now spans from 1 to 165tm. These heavy cranes are compact and light and have greater lifting capacity. The rewards are higher payloads and faster operation. The Hyva 60tm family of heavy cranes comprises four models, each with two jib options: the J1206 light jib for lifting horizontally, and, the J2006 heavy jib for lifting vertically.



Image Credit: Hyva

Hyva's new EDGE Line cranes offer three years' general warranty.

HC601e – standard lifting control system

HC661e – proportional lifting control system and lifting capacity 10% greater than HC601e

VR60MNG Marine Crane – surface treatment for marine applications

VR62MNG Marine Crane – surface treatment for marine applications and lifting control system innovations which improve operator efficiency and safety, while increasing productivity. These include an auto levelling system, operator auto detection, front stabiliser control, compact installation kit, load diagram and magic touch. Standard features are double linkage, negative angle, up to eight extensions, endless slewing, multifunction radio remote control and auxiliary manual control valve on column side.

Volvo unveils PT220 pneumatic tyre roller

Designed for a variety of compaction applications, Volvo's PT220 pneumatic tyre roller features a fuel-efficient and powerful Volvo diesel engine, increased performance characteristics and enhanced safety features. The PT220 pneumatic tyre roller is available to customers in Middle East and Africa.

This machine features Volvo's D5 Tier 3 compliant turbo-charged diesel engine, which is not only more powerful and fuel efficient, but also considerably quieter in operation. This machine is incorporated with safety features, such as Roll Over Protective Structure (ROPS) sunshade, reversing alarm and automatic engine shutdown.

The PT220 compacts using the forces of mass and manipulation; it can be adapted to a variety of applications by adding or removing ballast or by adjusting tyre inflation pressure. The positioning of the tyres, four each on front and rear, helps to ensure uniform surface coverage while rolling. The tyres' kneading action against the material surface provides better compaction. An isostatic suspension for the front tyres helps to keep the roller stable on irregular surfaces as well as maintaining uniform tyre contract pressure.

Other highlights of the PT220 include dual seats with a sliding console to give the operator the most convenient work position and the best view of the work area.

At the heart of the PT220 is an advanced turbocharged four cylinder Tier 3/Stage IIIA engine, whose 99 kW (135 hp) output provides strong performance with plenty of power in reserve – and yet is fuel efficient and exceeds the requirements of exhaust emission legislation across the machine's intended market.



Image Credit: Volvo CE

The engine and hydraulic components are easily accessible, thanks to a swing-up engine hood and access step.

CATERPILLAR'S NEXT-GEN CAT 349 EXCAVATOR OFFERS INCREASED EFFICIENCY AT LOWER OPERATING COSTS

The next generation Cat 349 excavator replaces the 349D2 model, offering contractors up to 45% more operating efficiency, up to 25% more fuel efficiency, and up to 15% less maintenance costs.

The new 349 excavator features a hydraulic return filter with more than 3,000 hours of service life, fuel system filters synchronised for service at 1,000 hours, easily accessible water and sediment drains and the hydraulic system's oil level check, and air filters with an integrated pre-cleaner and primary and secondary filters, providing double the dust-holding capacity of the previous design.

Main features:

- **Cat Grade with 2D:** gives operators visual guidance to grade via the standard touchscreen monitor so they can make more accurate cuts. The system is readily upgradable to Cat Grade with Advanced 2D or Cat Grade with 3D for enhanced accuracy.
- **Grade Assist (available as a software update):** automates boom and bucket movements to help operators of all skill levels improve their results.
- **Cat Payload:** helps operators increase loading efficiency with on-the-go weighing; real-time payload estimates can be calculated without swinging to help prevent overloading and underloading trucks.
- **Lift Assist:** quickly calculates the weight of the actual load being lifted and compares the result to the rated capability of the excavator. Visual and auditory alerts indicate whether the machine is within a safe working range.
- **E-Fence:** prevents the excavator from moving outside operator-defined points. This helps protect the machine, underground utilities, and other objects from damage.
- **Cat Product Link:** provides a constant stream of wireless information available via the



The Next Generation Cat 349.

Image Credit: CAT

online VisionLink interface, allowing machine managers in the office to quickly evaluate critical operating information.

- **Smart Mode:** automatically matches engine and hydraulic power to digging conditions, reducing fuel consumption and optimising performance. Engine speed automatically lowers when hydraulic demand decreases, further reducing fuel usage.

Additional features:

- Tilt-up console that allows easy cab entry and exit.
- Advanced viscous cab mounts that reduce vibration as much as 50% compared with previous models.
- Bluetooth integrated radio with USB ports for connecting and charging phones.

- Automatic climate control that maintains temperature settings regardless of ambient temperatures.
- Programmable joystick buttons that allow setting control patterns and hydraulic response rates, permitting machine operation to be tailored to individual preferences.
- Large front, rear, and side windows along with standard rearview and right-hand-side cameras to enhance visibility.
- An optional 360-degree-visibility package combines images from multiple cameras to enhance the operator's sight lines in all directions.

For more information about the 349 and other Next Generation Cat hydraulic excavators, contact the local Cat dealer or visit www.cat.com.

CEMEX TO OFFER VERTUA NET-ZERO CO2 CONCRETE WORLDWIDE

CEMEX has announced that Vertua, its first-ever net-zero carbon concrete, will soon be available in its major markets worldwide after a successful launch in Europe.

Vertua, a family of products that ranges from low carbon to the first net-zero CO₂ concrete in the market, places CEMEX at the forefront of the building materials industry's efforts to mitigate climate change.

"We believe that climate change is one of the biggest challenges of our time, and we are committed to doing our part to address it. Vertua is clear evidence that we can

transition to a carbon-neutral economy, where concrete is an essential component in the development of climate-friendly urban projects, sustainable buildings, and resilient infrastructure," said Fernando A Gonzalez, CEO of CEMEX.

Vertua net-zero carbon concrete is possible due to an innovative geopolymers binder solution created by CEMEX's Research and Development Center in Switzerland.

This solution has a reduced carbon footprint of up to 70% without sacrificing performance. The compensation of the

remaining CO₂ is achieved by participating in reforestation projects, among other initiatives.

Early this year, CEMEX announced its Climate Action strategy, defining a global target of a 35% reduction of CO₂ emissions per ton of cementitious products by 2030. Additionally, it is the industry's first company to target a CO₂ reduction in its European operations of at least 55% by 2030. To complement this strategy with a longer-term vision, CEMEX also established an ambition to deliver net-zero CO₂ in all its concretes globally by 2050.

The BF80.3 bucket attached to a Caterpillar 325DL excavator, recycling rocks at Port Conakry in Guinea.



Image Credit: MB Crusher

Paving the way at Conakry Port

MB Crusher's BF80.3 bucket has been working hard on renovating the concrete flooring at Conakry Port in Guinea, which has been badly damaged by heavy containers.

African Review: How was MB Crusher chosen by the Conakry Port authorities to restore the port's paving?

MB Crusher: It was not the port authorities directly that choose MB's units, the job was assigned by a public tender. The company that won it realised that they needed an MB Crusher in order to do this specific job well and chose us. Unfortunately, we don't have a signed disclosure agreement in place so we cannot say who they are. However, we can say that they are a large group specialised in maritime and port jobs.

AR: Please provide details about the work of the BF80.3 and its crushing of the concrete blocks

MBC: The container terminal floor was paved with self-blocking concrete blocks due to heavy traffic in the area, generated by the huge amount of containers in transit in the area each year and also by their heavy cargo weight while stored. As a result the pavement became

uneven and the sub-base practically was not strong enough to sustain the flow of traffic. The irregular floor slowed down port activities and also became a hazard. It became unthinkable to stop activities to fix the actual floor because the economic damage would have been disastrous. At the same time, having much heavy machinery and haulage material coming in and out of the area would have caused too many unacceptable delays to the trading activities. That is why the BF80.3 bucket was the easiest solution to crush the concrete blocks. There was only one

excavator needed. The old floor was removed in sections and reduced down to 0-3 cm. While all the other areas of the port carried out activities as normal.

AR: How has the crushed material been reused in the productive cycle?

MBC: The BF80.3 is a mobile jaw crusher, and the crusher material produced has such an excellent grade that it is ready to be used there and then onsite. In this case it was added on top of the existing damaged subbase in order to create a strong and even surface, which

was able to handle the weight and traffic. The new self-blocking concrete blocks will therefore be laid on top of it.

AR: When is the project due for completion?

MBC: The works at Conakry port are still ongoing. It is a massive project and will continue for a while yet.

AR: Is this MB Crusher's first port project?

MBC: One of our bigger crusher buckets BF120.4 has been used in another port development project in Dublin.

AR: Are there any more African port projects in the pipeline for MB Crusher?

MBC: We are currently carrying out works at Tripoli Airport.

AR: How has business been in light of the Covid-19 crisis in regard to Africa?

MBC: MB Crusher provides machinery solutions to overcome

“ MB Crusher units help companies to be self-sufficient and save money, and are vital assets in the construction and recycling industries in Africa.”

MB CRUSHER

difficult challenges in the industry. MB Crusher's equipment makes companies self-sufficient, saves them costs and is regarded as vital assets in the construction and recycling industries in Africa and across the world. Globally, we faced situations where supplies were limited and haulage became impossible, but our clients managed to work during lockdown, with the stockpiles in their yard, enabling them to get ready for the re-opening of their businesses, thus eliminating the need to purchase raw materials.

AR: What advice would you give to companies struggling in these times?

MBC: We would encourage companies to embrace change and purchase new attachments as a way to keep up with an evolving market, from big enterprises to small family businesses; we all need to keep competitive. MB Crusher manufactures crushing equipment solutions that will get the job done, giving companies the chance to grow and expand their services. This is what our customers tell us, and it is the reason behind our success as a business.



Close-up shot of the BF80.3 MB Crusher bucket crushing material at Conakry Port.

Image Credit: MB Crusher

MB Crusher in action across the globe

A simple way of keeping up with new and complex projects is to embrace the change.

That is the advice of MB Crusher to those companies who have been resisting change and are now looking for new methods or equipment that help get the job

done to grow their business and expand their services.

A company in Argentina purchased a BF90.3 bucket to recycle stones. They used to discard them, but by attaching an MB Crusher unit to their Hyundai excavator they can crush them and sell the products to others. As a result, their business is growing and they have secured a

new revenue stream.

By installing one of our BF90.3s to a Caterpillar 320 excavator, a small mining company in Peru found a way to invest in their company's growth, while also saving their budget from unnecessary expenses. They used to sell chalk at a low price; now they crush it with the MB mobile crusher and have a high quality aggregate, which is very valuable. Switching from an old method to a new one, again allowed another company to make more money, and have a good return on investment from purchasing the MB Crusher unit.

During a road construction project, the BF90.3 bucket is also useful in crushing bedrock down to an appropriate size and using it as filling material, instead of purchasing expensive GSB aggregate and using a truck to dispose of the excavated rocks.

A MB Crusher spokesman said, "A simple solution such as using one of our crusher buckets to process material on site can have you relying on the unit and give you the confidence to take on projects that you wouldn't have been able to before." ■

For more information visit www.mbc crusher.com



The BF90.3 bucket on a Caterpillar 320 excavator working in a quarry in Peru.

Image Credit: MB Crusher

Rosgeo completes geological mapping in Equatorial Guinea

Russia's state-owned company Rosgeo has completed the first phase of its geological mapping project in Equatorial Guinea and is stepping up exploration efforts on the country's mainland.

The landmark exploration programme is being executed under two service contracts signed by the Ministry of Mines and Hydrocarbons in 2020 with JSC Zarubezhgeologia and JSC Yuzhmorgeologia, subsidiaries of Rosgeo. It notably covers an initial phase of seismic acquisition in the transit zone and state geological mapping in the Rio Muni area, in mainland Equatorial Guinea.

As a result, JSC Zarubezhgeologia has been performing scouting works for state geological mapping, while JSC Yuzhmorgeologia has been performing the same for complex seismic acquisition in the transit zone of Rio Muni. The area, which includes large onshore zones but also shallow water areas, is believed to be one of the most promising exploration frontiers in Equatorial Guinea. It could notably turn the country once again into a hotspot for natural resources exploration.

Increased exploration by Rosgeo is expected to help in sustaining and increasing domestic output of oil and gas and in proving additional reserves in key minerals to help Equatorial Guinea further diversify its economy.

"The geological mapping project undertaken by Rosgeo in the Rio Muni is not only a new pillar of energy cooperation between the Republic of Equatorial Guinea and the Russian Federation, but could also shape the future of our natural resources industry. Our mainland is one of the richest regions of the country for mining and minerals which we have identified as strong sectors to diversify our economy and create jobs. We have also always believed in the onshore hydrocarbons potential of the region, and understanding its geology will prove extremely beneficial to support future oil and gas activities there, which could be carried out by local operators," declared H.E. Gabriel Mbaga Obiang Lima, Minister of Mines and Hydrocarbons of Equatorial Guinea.

Image Credit: African Energy Chamber



Russian President Vladimir Putin and H.E. Gabriel Mbaga Obiang Lima, Minister of Mines and Hydrocarbons for Equatorial Guinea are collaborating on a geological mapping project in Equatorial Guinea.

UK'S TECHMET TO INVEST US\$20MN IN RWANDA'S MINING SECTOR

UK-firm TechMet will plough US\$20mn into its Rwanda mining operations in the next two years.

As reported in the New York Times, Brian Menell, a South African businessman and owner of Tinco that operates tin and tungsten mining concessions in Rutongo and Nyakabingo in the Rulindo District, made the announcement during a press conference ahead of the Africa Mining Forum.

Welcoming the development, Francis Gatara, chief executive director at Rwanda Mines, Petroleum and Gas Board (RMB), stated, "TechMet's announcement is very welcome news. I'm looking forward to them quickly concluding their new agreements with Rwanda Development Board (RDB), so that we can begin working with them to redevelop Rutongo Mines, Nyakabingo, and other new joint initiatives." Tinco is negotiating with the government to overhaul its operations and secure mining blocks in the Northern Province.

TOMRA INSIGHT NOW AVAILABLE FOR MINING APPLICATIONS

TOMRA Insight, the cloud-based data platform that aims to enable sorting machine users to improve operational efficiencies, is being rolled out to the customers of TOMRA Mining and TOMRA Food and others industries.

Launched in 2019, TOMRA Insight is a subscription-based service that turns sorting machines into connected devices that generate valuable process data. This data is gathered in near real-time, stored securely in the cloud, and can be accessed from anywhere and across plants via a web portal available for desktop and mobile devices.

Felix Flemming, vice-president and head of digital at TOMRA Sorting, said, "By capturing and using valuable data, TOMRA Insight is transforming sorting from an operational process into a strategic management tool. This tool is constantly becoming more powerful as we continuously develop it in response to customers' needs and priorities. New functionalities and features are released every three weeks – a routine during which TOMRA works closely with customers in pursuit of shared objectives."

One early, pre-launch user of TOMRA Insight is the Black Chrome Mine in South Africa, one of two mining projects that form the basis of the Sail Group's plans for long-term sustainable chrome production. Since TOMRA Insight was connected to sorting machines at the start of 2020, the site has seen improvements in process monitoring and streamlining.

Albert du Preez, senior vice-president and head of TOMRA Mining, said, "Mineral processors can now move from making decisions based on experience and local observations to decisions based on experience and hard facts. This means TOMRA Insight can help reduce waste rock and downstream processing costs."

► BRIEFS

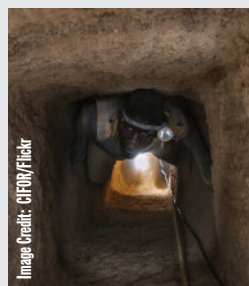
Image Credit: Julian Harnais/Flickr



DRC is set to accelerate its mining sector.

Loncor and Barrick strengthen DRC JV relationship

Loncor Resources has entered into two new agreements with its joint venture partner Barrick Gold (DRC), which further strengthen the Loncor and Barrick joint venture relationship in the Ngayu gold belt in the northeast of the Democratic Republic of the Congo. The ground covered by these agreements includes a number of priority exploration targets already outlined by Barrick, two of which are ready for scout and core drilling.



Glencore Technology's test work will take place in Randberg.

SGS to offer Glencore Technology's test work to South Africa

SGS Minerals will provide Glencore Technology's Albion Process test work to Africa's mining companies. The new test work locations will include Randberg in South Africa, with other sites being discussed in other global areas. Glencore Technology stated, "It extends the global reach of Albion Process test work as it has grown 300% in the last 12-24 months."

Bushveld Minerals and Vanadium Redox Battery market to weather Covid-19 storm

The vanadium redox batteries (VRB) market is expected to make a swift recovery following the Covid-19 pandemic, according to a report by MarketsandMarkets.

The outbreak of Covid-19 caused widespread disruption to mining, construction, and the global economy, including the battery energy storage system market, which had been growing steadily.

The market, however, is set to bounce back quickly, growing at a CAGR of 32.8% and will be worth US\$12.1bn by 2025, predicts MarketsandMarkets.

Vanadium redox batteries are an integral part of this industry, with the market, currently valued at US\$234.9mn, and set to reach US\$4.8bn by 2027, reported analyst firm ResearchAndMarkets.

The forecast for recovery is excellent news for South Africa as the country is the world's third largest global vanadium supplier, contributing 7% of the world's supply in 2019.

Bushveld Minerals has one of the largest, high-grade primary vanadium resource bases in the world, and currently produces 4% of the world's supply of vanadium from their three mineral assets at Brits, Mokopane and Vametco.

Speaking to CNBC Africa, Fortune Majapelo, CEO of Bushveld Minerals, said, "This pandemic found us in a relatively strong position as a company, able to ride the storm. The outlook for vanadium going forward is still quite positive, so we look forward to the future with a lot of optimism."



Image Credit: Adobe Stock

Vanadium is an abundant metal in the earth's crust.

Bushveld Energy, a subsidiary of Bushveld Minerals, develops and distributes vanadium redox flow battery (VRFB) technology to a global client base across Africa and the world. There are few industrial level VRFB storage systems but the advantages of this technology have led to many utilities turning to VRFB as the future of battery storage over alternative energy storage and battery solutions.

In 2019, Bushveld Energy announced its intention to build an innovative mini-hybrid solar and battery grid at the Vametco mining facility, which will feed into the mine's internal network. The mini-grid will combine a 4 MWh VRFB energy storage unit and 1 MWh of solar photovoltaic generation to provide stable power to the internal network for up to 16 hours per day and will supply around 8% of the mine's energy consumption at any one time. Bushveld Energy hopes it will demonstrate the technical and commercial capability of hybrid-mini grids using solar and VRFB technology.

LOW CARBON FUTURE FOR MINING INDUSTRY


Investing in African Mining Indaba hosted a "Mining for a Low Carbon Future" webinar on 18 November. It tackled the question, "How can Africa benefit from an increasing demand while managing the mining sector in a sustainable manner?"

The speakers included Tom Butler, CEO, ICMM, Christopher Sheldon, practice manager, Energy & Extractive Industries Global Practice, World Bank, Samir Whitaker, biodiversity technical specialist – Extractives & Development Infrastructure, Fauna & Flora International and Dr. Kwasi Ampofo, lead metals analyst, Bloomberg NEF.

Sustainability continues to be at the heart of the mining industry, and there has been a substantial increase in the attention paid to its socio-economic and environmental impacts.

Metals and minerals are critically important to the technology and infrastructure needed to achieve sustainable development goals, but it is imperative that these natural resources are mined and used responsibly. Thus, mining companies need to adapt to higher standards of responsibility while under greater scrutiny and increased consumer awareness.


The informative one-hour webinar discussed: supporting sustainable extraction to meet the needs of a low-carbon future, changing the way we source metals and minerals, what evolution will look like in the next five years, the role of different industry players in combatting climate change and transitioning to climate-smart mining. Plus, the speakers looked at balancing challenges and maximising opportunities for African countries.




THESE CRANES HAVE BEEN ENGINEERED TO ENDURE

WORLDWIDE

Condra cranes and hoists are without equal in their quality, performance, reliability and overall lifetime cost. The endurance of all Condra products has been proven around the globe in highly corrosive and abrasive environments, and under wide extremes of temperature, humidity and altitude. Technical support and service are guaranteed worldwide.


condra®
Cranes & Hoists

11 Indianapolis Boulevard, Raceway Industrial Park,
Gosforth Park Ext 4, Germiston, Gauteng.
P O Box 752639, Gardenview, 2047, South Africa
Tel: +27 11 776-6000 | Fax: +27 86 669 2372
e-mail: sales@condra.co.za | www.condra.co.za



**portal cranes | bridge cranes
cantilever cranes | hoists
end-carriages | single &
double-girder overhead travelling
cranes | crane components**

CONDRA V-042019

Powering the mines

Onsite power for Africa's vast mining industry remains a key strategic business, something that will not change even with the arrival of competing new technologies and a sharper focus on the environment. Martin Clark reports.

Onsite power units have long played their part in Africa's key industries, from gold mining to oil and gas.

That continues today, even though there are a myriad of new technologies and other forces shaping the sector – including the economic havoc wreaked by pandemic-related lockdowns throughout much of 2020.

While new hybrid and renewable technologies are continually emerging and competing for business, diesel-back generating sets, or gensets, remain the workhorse of choice at countless mine sites across Africa.

The goal of these units is to reduce utility power costs and provide essential, uninterrupted supply for critical operations.

In a place like Africa that can be integral to the success of a remote project, such as a gold mine, located far away from the national grid system which, itself, may be unreliable.

The remoteness of many of these mine sites means they are often far away from grid-based power supplies.

Even where dependable power exists, like South Africa, onsite generators can provide additional comfort and guarantees to operators.

Serving the continent's vast and growing mining sector has become a long-established and competitive business among top suppliers, the likes of Caterpillar, Kohler SDMO, Rolls-Royce, Perkins, among others.

Platinum mine genset

Zest WEG is currently in the process of delivering a large diesel-powered genset to an undisclosed South African platinum mining customer.

The capacity of the 2,500kVA genset will make it the largest unit yet

to be fully load-tested at the firm's manufacturing site in Cape Town.

"In addition to functional testing, we will be equipping ourselves to conduct load testing to 11kV on this unit," said Craig Bouwer, Zest WEG's projects and product manager. "With load-banks in-house, we will be stepping the voltage down to 400V during the testing, and drawing on MV specialists to ensure a safe and reliable process."

Prime-rated at 11kV, and powered by an MTU diesel engine, it has been designed in close consultation with the mining customer over many months.

Based on limited space at the mine itself, the genset is to be housed within a 12m ISO shipping container with the electrically-driven radiator mounted on the roof.

"To enhance safety and ergonomics, the control panel is in its own compartment within the ISO container," added Bouwer.

A 1,000-litre day tank has also been installed inside a separate compartment within the container, including a fuel cooler and filtration system.

As one of the few Original Equipment Manufacturers (OEMs) capable of undertaking a customised genset of this capacity in-house, Zest WEG will also be supplying the control and protection panel from its range of electrical equipment and products.

The unit will be shipped as three separate components – the genset, radiator and exhaust system.

Once installation is complete – a process that Zest WEG specialists will supervise – experts will then conduct the cold and hot commissioning, before handover to the customer.

Upgrades and innovations

While in many ways this represents a typical project, there is no such thing as the typical onsite power genset.

Innovation has long been a feature of this dynamic sector, bringing more power, more fuel efficiency and, in recent years, reduced environmental footprint to units in service in what remains a highly-competitive business.

Himoinsa, for example, recently developed the new HRYW 1275 D5/6 generator set, with Yanmar, its parent company.

A dual-frequency model, with a Yanmar engine that adjusts to work at the point of maximum efficiency (BEP), it is designed for continuous work over long periods of time and in multiple types of applications from mining and oil extraction, to events, ports and construction work.

The AY40 engines incorporate exclusive Yanmar-patented 'Assign' combustion technology for best-in-class fuel consumption.

It makes it one of the most competitive gensets on the market in terms of fuel consumption and operating costs.



The Zest WEG 2,500 kVA diesel powered generator set with roof mounted table top cooling system.

Image Credit: Zest WEG

This, as ever, remains one of the primary dynamics underpinning the onsite power market – to help operators reduce their overall energy costs and ultimately improve profitability and performance.

But against this backdrop, there are other forms shaping the market simultaneously.

Alternative energy supply

While these workhorses continue to serve the market well, there is increased appetite for new energy technologies, including solar-powered installations to reduce carbon output.

As well as renewables, environmental considerations have also resulted in more gas-powered generation being deployed at a number of mine sites.

One industry leader, Goldfields, now has dedicated gas plants to power its two mines in Ghana, Tarkwa and Damang.

“These have been in full operation since early 2018,” said Sven Lunsche, vice-president, corporate affairs. “It has led to significantly-improved power supply, compared to the supply from the state utility which was very erratic. There are also cost benefits and lower emissions, given that gas is a low-carbon source.”

The two Ghanaian mines completed their transition from the national grid to an independent power producer (IPP), Genser Energy, during 2018.

The IPP commissioned the last of the gas units at the Tarkwa power plant in February 2018 and now supplies 40MW to Tarkwa and 18MW to the Damang mine.

“We maintain nominal grid

electricity consumption and our own emergency diesel generators ensure we have sufficient back-up infrastructure,” the company stated in its 2019 Integrated Report. “Since the switch over, we have realised operational costs savings and processing efficiency gains.”

It has presented some major infrastructural challenges along the way, however.

Genser Energy in 2019 completed the construction of a 77-km buried natural gas pipeline all the way from the port of Takoradi to the mines.

This enabled the IPP – which also has early stage projects in Burkina Faso, Mali and Guinea, some of West Africa’s other core mining territories – to convert both plants from propane to natural gas and discontinue transportation of gas on public roads. As well as minimising road transportation risks this also further reduced its overall ecological footprint.

Renewable energy

Harnessing the power of the sun is likewise becoming more prevalent in feeding energy to Africa’s mines, though its potential is still there to be fully exploited.

Since mining remains an energy-intensive business, it is a natural move into this fast-evolving area.

Goldfields is keen to introduce solar power to its giant South Deep gold mine in South Africa although it is still awaiting regulatory approval before proceeding.

The company estimates that its potential 40MW capacity could meet between 15-20 per cent of the mine’s total power requirements.

South Africa’s electricity industry

remains dominated by state power utility Eskom, which has meant restricted options for mining producers and potential IPPs.

The South Deep mine has been built to extract one of the largest known gold deposits in the world, with a mineral reserve of 38 million ounces – equivalent to almost 100,000 gold bullion bars.

In Mali, Barrick Gold’s first solar power plant has been commissioned and is ramping up to deliver 20MW into the micro-grid around its Loulo-Gounkoto complex, in line with the company’s strategy of transitioning to cleaner forms of energy.

The development of the complex’s third underground mine at Gounkoto is on track to deliver its first ore tonnes in the second quarter of 2021.

Hybrid solutions

Hybrid solutions, combining both solar and traditional genset technology, are also becoming more prevalent across a broad spectrum of applications, from mines to infrastructure and even in support of local grids.

Indian engineering, procurement and construction (EPC) firm, Sterling and Wilson Pvt Ltd (SWPL), is currently working with French company Vergnet, and SNS Niger, to build a solar PV battery storage and diesel genset-based hybrid power plant in Agadez, Niger.

The project, tendered by the Nigerian Electricity Company, consists of 18.9MW solar, plus an 11.55MWh battery energy storage system, alongside a 6.54 MVA (2.18 x 3 MVA) diesel generator and 20 kV substation.

“Hybrid energy solutions is a huge opportunity as many power generation and distribution companies in places like Africa are moving into renewables,” said Deepak Thakur, chief executive of Sterling and Wilson’s hybrid and energy storage division.

The company was also engaged recently in commissioning Nigeria’s first solar storage hybrid power plant, which boasts Africa’s largest battery energy storage system.

It will be interesting to see how these and other hybrid-style solutions are integrated and embedded into Africa’s mining sector as new trends and technologies evolve.

Copper mining

For the most part, diesel gensets continue to drive what remains one of Africa’s primary export industries – though it is not hard to find evidence of the shift to alternatives. Zijin Mining Group Co., Ltd., a large-scale mining business focused on gold, copper and other metals, has depended on Sumec generator sets, fitted with Perkins engines, for much of its mining work in central Africa for years.

In November, the Chinese mining giant successfully linked the northern and southern access tunnels as part of its work programme at Zambia’s Kakula copper mine.

Initial production at the Kakula mine processing plant is scheduled for the third quarter of 2021.

Kakula is the first of multiple, planned, high-grade mining areas on the 400 sq km Kamoia-Kakula mining permit.

While multiple gensets have been deployed on this and Zijin Mining’s other African projects, the mine will ultimately be powered by clean, renewable hydroelectricity; it is expected to be among the world’s lowest greenhouse gas emitters per unit of copper produced.

Zambia’s vast Copperbelt region has long gulped enormous amounts of electricity.

Indeed, despite huge market uncertainties related to the pandemic and its economic effects, and ongoing technology breakthroughs, perhaps the one thing both miners and power companies can take for granted is that all mining activities will continue to demand substantial amounts of energy.

Meeting that demand remains as fundamental as ever for the genset power companies and other niche providers plying their trade in this busy market. ■

Image Credit: Zest WEG



Table top radiator with diesel engine coupled to WEG alternator.

METSO OUTOTEC LAUNCHES COMPACT LARGE-CAPACITY PRIMARY CRUSHER

Metso Outotec has launched an extension to its primary gyratory crusher range: The SUPERIOR MKIII 6275UG. The new crusher, which can be used in different types of applications, provides large capacity with significant savings in CAPEX and operating costs.

“We are very excited about the SUPERIOR MKIII 6275UG. As a direct response to the market demand, we’ve designed a more compact primary gyratory crusher reducing CAPEX that is applicable to both underground and above ground applications for the mining industry,” said Jim Bathie, VP Mining Crushers at Metso Outotec.

The crusher was born out of a need for a high capacity underground primary crusher that did not require a primary feeder, scalper and the associated infrastructure. Minimising the need



Image Credit: Metso Outotec

The SUPERIOR MKIII 6275UG is designed to be part of a SmartStation.

for high cost stationary grids to control topsize underground was a requisite, and the large topsize acceptance was met with the UG design. Additional requirements for an underground

crusher were the ability to transport the components down shafts with spacial restrictions, assemble the crusher with minimal need for welding and hot works, and the ability to feed the crusher from 360 degrees around the feed opening; these were all met with the 6275UG MKIII.

The 6275UG crusher’s feed opening is 15% larger than in similar crushers, while also reaching up to 30% more capacity than comparable crushers. Optimised production can be ensured with advanced automation. The up to 10% reduction in station height translates into a remarkable reduction in the CAPEX costs, reaching even 20%. In MKIII UG, downtime can be reduced by up to 70%, thanks to concave replacements with another Metso Outotec proprietary innovation, the Rotable Topshell.

EPIROC PRESENTS OFFICE TELEREMOTE

Epiroc has introduced the Office TeleREMOTE to control SmartROC DTH drill rigs, MK I (based on RCS 4 platform) from a remote location. Office TeleREMOTE has been designed to address the need for increased safety, efficiency and productivity.

This smart product enables the operator to access and run multiple rigs from a control centre located inside an office. Operator has the option to select the stand-alone TeleREMOTE solution or to update any existing BenchREMOTE to a TeleREMOTE by connecting it to a Wireless Local Area Network (WLAN).

“With Office TeleREMOTE, a single person can control multiple drills in a productive and efficient manner,” said Mayya Popova, product manager automation at Epiroc.

One of the biggest benefits of Office TeleREMOTE is its ability to effectively increase the number of productive hours in a day. It will optimise time as it reduces operator transports and idle time due to shift changes. Remote drilling, together with AutoDrill and Auto-Rod Handling System, can boost productivity as the drill rigs can work almost continuously without breaks.

The Office TeleREMOTE operator can run the rig without taking any risks thanks to multiple onboard systems.

The remote rigs are also fitted with multiple cameras which provides the Office TeleREMOTE operator with a 360° view all around the machine.

The SmartROC models currently compatible with Office TeleREMOTE work desk are: SmartROC D50 MKI, SmartROC D55 MKI, SmartROC D60 MKI and SmartROC D65 MKI.

Apex high speed traffic doors contain dust

Efficient processes rely on a predominantly dust-free environment in industrial minerals processing plants. By containing and reducing the ingress of dust, companies experience higher levels of productivity and lower levels of maintenance and downtime. Many such facilities have realised the benefits of installing high speed fold-up or roll-up traffic doors from Apex Strip Curtains & Doors.

In a particular application at a cement production plant, the installation of high speed doors provided the optimal solution in reducing dust deposits.

Wim Dessing, sales executive at Apex Strip Curtains & Doors explains that the cement plant was experiencing an issue with the dust deposited by the incoming coal deliveries.

“A rail line runs alongside the plant and when the coal tipper stops at the siding to offload coal, a large amount of dust was filtering into the surrounding atmosphere. This dust was then carried by the air currents into the plant,” Dessing says. Coal dust is very abrasive and ensuing problems included the unwanted coal dust causing damage to equipment resulting in increased unplanned stoppages with negative effects on product integrity and quality.

The locality and operation called for doors that would offer wind-resistance and that would effectively contain the dust. The solution provided was the installation of two Apex high speed fold-up traffic doors. These are constructed from strong self-extinguishing Class 2 fabric, and in this instance the doors are 4.7m high, with a combined width of 5.5m.

In another application, it was necessary to facilitate access into the product processing area while preventing the ingress of contaminants from outside. With this customer, materials handling equipment needs to occasionally move in and out, and the installation of Apex high speed doors has facilitated the process but still allowed the doorway to remain closed for most of the time.



Image Credit: Apex Strip Curtains & Doors

The installation of high speed doors provides the optimal solution in reducing dust deposits.

GOODYEAR RELEASES NEW OTR TYRE FOR LONG HAUL FLEETS

The Goodyear Tire & Rubber Company has announced its newest addition to its off-highway large haulage product line, the RH-4A+, engineered to deliver a lower operating cost per hour and higher productivity in hard rock underfoot conditions.

This tyre features an extra-deep E-4+ tread depth with a high net-to-gross tread pattern and optimised footprint pressure to help provide long hours to removal.

“Low operating cost per hour is an important requirement for mine operators,” said Eric Matson, global OTR field engineering manager. “Customers also require other performance benefits, such as a tread and casing that together deliver long hours to removal, resistance to cutting, and excellent traction in severe, hard rock underfoot conditions. The new RH-4A+ provides these benefits to help mining fleets optimise productivity and lower their operating costs.”

The large haulage tyre helps operators be more productive and operate at a lower cost by providing the following benefits and features:

- Enhanced sidewall durability and lateral stability with Goodyear's new Durawall Technology, wider bead design, and wider moulded rim width.
- Increased hours to removal and cut protection with its high net-to-gross tread pattern and deep, E-4+ tread depth
- Cool operating temperatures from the tread's centreline blading, shoulder lug pockets, and shoulder lug side notches
- Field results from global mining customers have shown that the RH-4A+



The RH-4A+ is currently available in sizes 59/80R63, 46/90R57 and 27.00R49.

Image Credit: Adobe Stock

delivers up to 12% better hours to removal than RM-4B+.

“Complimenting the RH-4A+ is Goodyear's EMTrack tyre performance tracking software, giving operators the ability to track the tyre's properties to reduce operational costs,” said Matson. “With EMTrack, mining operators can track the performance of their tyres, including the new RH-4A+, in order to project the timing of rotation, replacement and help to manage their inventory.”

The RH-4A+ is currently available in sizes 59/80R63, 46/90R57 and 27.00R49 through Goodyear's global network of authorised OTR dealers.

Terex MPS unveils new high capacity wheeled crushing systems

The new Terex high-capacity, all electric wheeled crushing systems are designed to deliver and built to last. They are quick to set up and dismantle, as well as easy to operate.

WJ3042 Jaw Plant

The Terex WJ3042 is a high performance wheeled jaw crusher plant. Incorporating the aggressive Terex JW42 jaw crusher and a heavy duty vibrating grizzly feeder, the Terex WJ3042 can give optimum production in a range of applications. Plant installation is assisted with hydraulic legs. Its compact size, quick set up times, ease of transport and simple maintenance make the Terex WJ3042 suitable for quarrying, mining, demolition and recycling applications.

WC1150S Cone/Screen Plant

The Terex WC1150S Cone-Screen plant is a high

performance, medium sized wheeled crushing-screening system. At the heart of the plant is the 225 kW (300 HP) Terex TC1150 cone crusher with a modern automated control system. Its unique crushing action provides greater capacity, high reduction and good product cubicity for the production of high quality aggregate and sub-base materials. A level sensor over the cone crusher regulates the feed to ensure the cone chamber is choke fed, essential for maximum production, manganese life and optimal product shape. The large onboard 6'x20' 3 deck screen allows for sizing product from a single plant. Plants come with hydraulics for simple and easy installation of the plant.

Complete Systems

The WJ3042 and WC1150S are available as stand-

alone plants or as part of a multi plant system with product conveyors for a complete crushing and screening solution. All plants and conveyors are designed to fit in standard containers for easy transport overseas or on the road; the entire system with conveyors can be transported in nine containers. Once on site, each assembled plant can be transported in a one piece tow. Hydraulic screen lift and hydraulic support legs reduce craneage and tools required for plant set up and relocation.

For further details on their full product portfolio and services, visit www.terexmps.com



The WJ3042 and WC1150S are available as stand-alone plants or as part of a multi plant system with product conveyors for a complete crushing and screening solution.

Image Credit: Terex MPS

MEGAPIPES SOLUTIONS SOLVES WATER STORAGE ISSUES IN KENYA

Kenyan company, Megapipes Solutions, which manufactures Weholite HDPE pipes for stormwater and sanitation solutions, is to construct a world class production facility in Ruiru, Kiambu County.

This will create up to 100 direct and 1,000 indirect jobs, according to company director Juerg Fluehmann.

“The purpose of this project is to have local manufacturing of innovative, state-of-the-art products for the growing requirements of sanitation and drainage projects in Kenya, contributing to the local economy and industrialisation process and avoiding importation of such products,” said Fluehmann.

He said that once set up, the factory will become the regional centre of excellence in East Africa for stormwater management, sanitation and water storage solutions with innovative Weholite technology.

Megapipes Solutions says a training centre will also be built within the factory to train locals on plastic extrusion, fabrication of Weholite products (tanks, manholes, packaged treatment



The installation of a Weholite pipe in Kenya.

solutions) and jointing techniques for the installation of pipes and manholes.

“Megapipes will be the leader for sustainable stormwater, sanitation and water storage solutions, using innovative world class technology and unique services tailored to customer needs,” he said.

The company has just completed the delivery

and welding of Weholite pipes and manholes for the sewerage system in Narok County.

Weholite is a lightweight, engineered structured wall pipe made from high density polyethylene (HDPE), and is used extensively around the world in low pressure or gravity applications for drinking water storage, storm water, sewage and various other liquids.

Image Credit: Megapipes Solutions

Tech Mahindra and Smart Energy Water to accelerate digitalisation in water utility

Tech Mahindra has partnered with Smart Energy Water (SEW), with an aim to accelerate digital transformation for the energy and water utility industry.

Under the terms of the partnership, Tech Mahindra will deliver end-to-end digital solutions accelerating digital transformation for enterprises to make them future-ready with the seamless transformation of operations.

Tech Mahindra will assist SEW in their product development journey to build industry

solutions, further to manage speed, scale, and availability for successful integration of cloud services, systems integration, managed services, and consulting services projects.

As part of the collaboration, SEW's digital customer experience (CX), workforce experience (WX), artificial intelligence (AI) and machine learning (ML) will enable clients to develop a cost-effective digital transformation strategy.

Ritesh Idnani, president, business process

services, Tech Mahindra, said, “As a global digital transformation provider, we support enterprises to adapt the fast-changing digital landscape with scalable, replicable and sustainable outputs. The partnership with Smart Energy Water (SEW) will enable our energy and utility customers to develop agility and generate greater efficiencies across operational business units, thus significantly improving customer experience and accelerating innovation in rapidly changing markets.”

Advertiser's Index

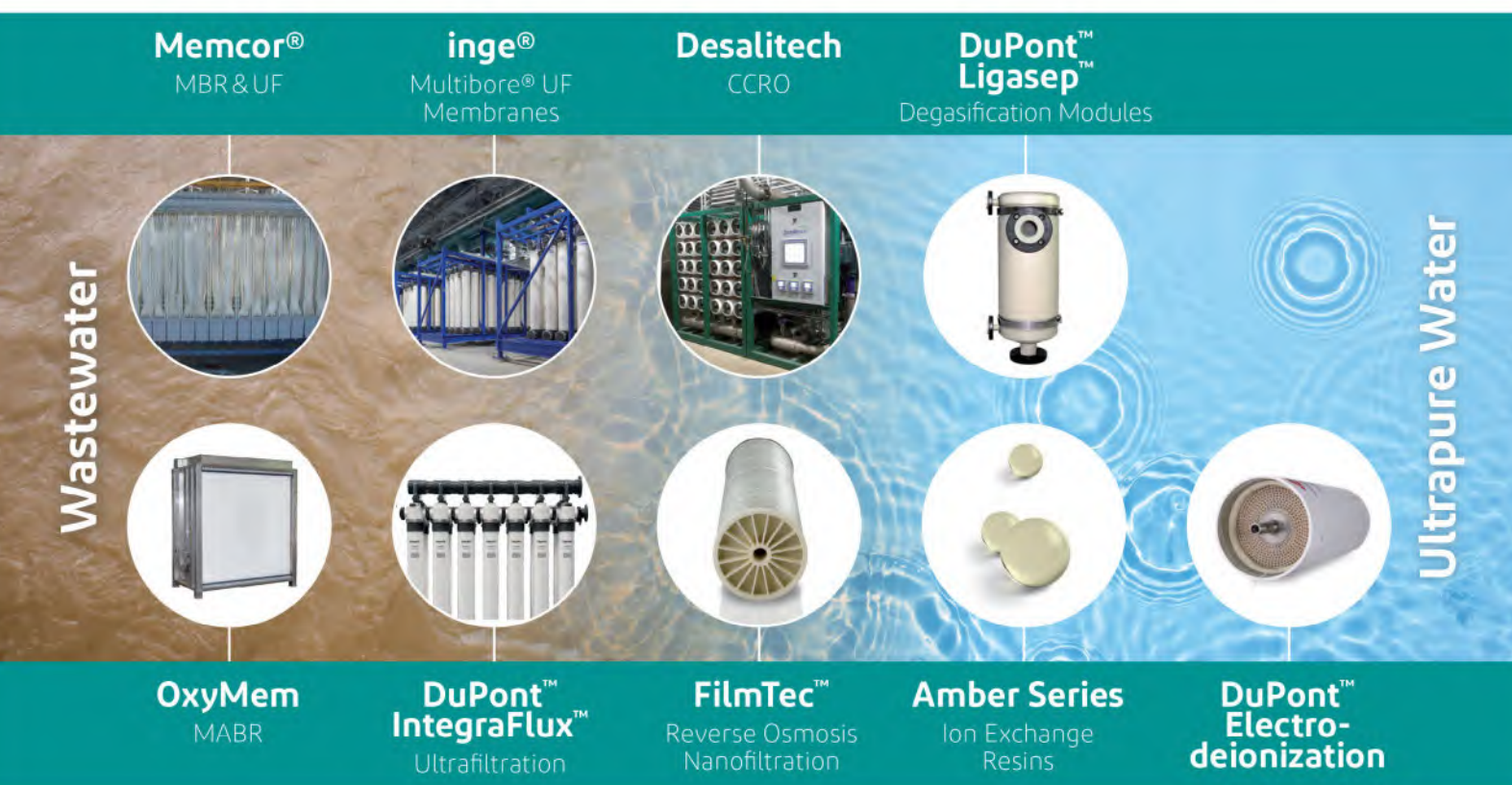
Aggreko South Africa	30	DAL Group Company Ltd	9
Bobcat	52	Dupont Water Spain / Europe	49
Cantoni Motor	21	Jessop & Associates (Pty) Ltd.....	11
Clarke Energy Ltd	2	Metalgalante S.p.A.	15
Condra Cranes and Hoists	43	Mytilineos S.A.	25



Water Solutions

DuPont Water Solutions Portfolio

The broadest in the industry



We understand water and the possibilities it brings.

For some, it's water.
For us, it's possibility.

Possibility Flows With Us.

dupontwatersolutions.com

Mercedes-Benz S 500: A touch of class

Mercedes-Benz is shaping the next generation of individual mobility for our times with innovations that place the focus on people. The new S-Class uses digitisation for a car that responds to the needs of its driver and passengers.

TEN MOST IMPORTANT FEATURES OF THE NEW S-CLASS

1) The second generation of **MBUX (Mercedes-Benz User Experience)** débuts in the S-Class. Another milestone is the interface between the driver, passengers and vehicle: there are up to five screens on board, some with OLED technology, plus a new 3D driver display.

A similarly impressive feature is the very large head-up display with augmented reality content. When navigating, for example, animated turn-off arrows ("fishbones") are virtually and precisely projected onto the road lane.

2) Using cameras in the overhead control panel and learning algorithms, **MBUX Interior Assist** recognises and anticipates the wishes and intentions of the occupants.

3) The active ambient lighting (optional extra) supplements ambient lighting (standard equipment) with an additional layer of light).

4) The latest generation of the **Driving Assistance Package** has new and numerous improved functions. One example is the intelligent compliance with speed limits).

5) During severe frontal collisions, the **rear airbag** (optional extra for



Mercedes-Benz S 500 4MATIC: designo diamond white bright exterior.

“With our new S-Class, we created the most progressive S Class ever since the luxury icon of the 20s.”

GORDEN WAGENER, CHIEF DESIGN OFFICER OF DAIMLER GROUP

MBUX infotainment system, the driver display, the driving assistance systems and the multibeam LED and digital light lighting systems

8) When a side impact with another vehicle threatens, the vehicle body can be raised by the E-Active Body Control suspension (optional) within a few tenths of a second. This is a new function of **Pre-safe Impulse Side**.

9) It is expected that from the second half of 2021 the S-Class will be able to drive in conditionally automated mode with the new **DRIVE PILOT** (optional extra), in situations where traffic density is high or in tailbacks, on suitable motorway sections in Germany.

10) The revolutionary headlamp technology **digital light** (optional extra) allows completely new functions, e.g. the projection of marking aids or warning symbols onto the road ahead. ■



There is an Active Brake Assist system with the new Mercedes S-Class.

the S-Class with long wheelbase) can considerably reduce the loads acting on the head and neck area of the seat-belt-wearing occupants in the outer rear seats.

6) Thanks to **rear-axle steering** (optional), the S-Class is as manoeuvrable as a compact car in the city. The steering angle at the rear axle is up to ten degrees. The turning circle is reduced by up to two metres.

7) More than 50 electronic components in the S-Class can be updated with new software **over-the-air (OTA)**. These include the entire

Communications Africa Afrique

AFRICA'S PREMIER ICT AND BROADCAST MAGAZINE



Published bimonthly, the magazine features articles in both English and French for comprehensive market penetration.

The magazine is read by fixed and mobile operators, internet service providers, local integrators and resellers of hardware and software, broadcasters and regulators and is designed to help inform them of the latest technologies available to enhance their businesses.

**Alain
Charles**
Publishing

MENA Tel: +971 4 448 9260
ASIA Tel: +91 88841 93373

USA Tel: +1 203 226 2882
EUROPE Tel: +44 20 7834 7676

e-mail: post@alaincharles.com
web: www.alaincharles.com

www.communicationsafrica.com

NEXT
IS NOW.

NEXT IS HAPPENING RIGHT NOW AT BOBCAT



We invented the compact equipment industry, and now we're reinventing it.
Get the complete solution for any jobsite with our line-up of powerful and versatile machines:

- ▶ R-SERIES BACKHOE LOADERS
- ▶ M-SERIES COMPACT LOADERS
- ▶ LIGHT COMPACTION RANGE
- ▶ SMALL ARTICULATED LOADERS

For more information, contact your local dealer or visit
www.bobcat.com



Bobcat®

One Tough Animal