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African Review

of BUSINESS and TECHNOLOGY

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"In Africa, we actually see people being a bit more innovative, a bit more open minded because of the challenges they face."
Albert du Preez, head of TOMRA Mining

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Cover Inset: Albert du Preez, head of TOMRA Mining.
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Editor's Note

Welcome to the October issue of African Review magazine: your essential, trusted monthly business guide to all that's going on in Africa.

As always, we've got all the latest news, events and features from right across the continent to help you make sense of key trends and gain valuable market insight, including exclusive interviews and comment from leading experts and business insiders.

These are values that have driven us for almost 60 years, helping businesses of all sizes to take more informed decisions based on our unique, ultra-dependable content. That's the African Review advantage in an era of information overload.

This month, we've spoken to top executives from across the region working in a wide variety of areas, such as Albert du Preez, head of TOMRA Mining, a company seeking to help a whole industry improve both its performance and its environmental footprint. It underscores the changing, evolutionary dynamics of doing business in Africa in 2021, especially as we emerge from the Covid-19 crisis and face up to climate change threats, page 45.

There's also analysis on the growth of electric vehicles, another key emerging sector, page 22, and insight into other key industries from asphalt mixing, page 40, to the future of diesel gensets in power generation, page 26.

Africa is a large, diverse and ever-changing market for business — stay on top with African Review.

Martin Clark, Acting Editor

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Siemens Mobility signs contract for US$3bn turnkey rail system in Egypt

Image Credit: Siemens Mobility GmbH

The US$3bn project will span 660 km of modern rail, linking the Red and Mediterranean seas.

Committing to the delivery of a new US$3bn railway project that will link the Red and Mediterranean Sea for people and goods, Siemens Mobility has announced the signing of a contract with the National Authority for Tunnels.

The contract spans the initial 660 km of the 1800 km rail network, and will mark the first high-speed, electrified main and freight rail to transform transportation across Egypt. It also marks the first contract to be signed from the MoU agreed upon between the National Authority of Tunnels and Siemens Mobility, Orascom Construction and The Arab Contractors, which was initially agreed upon in January 2021.

Along with Orascom Construction S.A.E. and The Arab Contractors, Siemens Mobility will provide comprehensive turnkey services to design, install, commission and maintain the systems for the first 15 years of operation. The vast majority of the order intake is expected to be booked in 2022 after financial closing. In total, the contract is valued at US$4.5bn, of which Siemens Mobility's share sits at around US$3bn.

H.E Lieutenant General Kamel El-Wazir, the Egyptian Minister for Transport, explained, "This high-speed train will strengthen the infrastructure of the areas it passes through, and help achieve urban sprawl, in addition to linking the New Administrative Capital and new cities to the railway network for transporting passengers and goods.

"The project will also help promote tourism through a fast, modern and safe means of transportation characterised by the highest levels of efficiency and safety to meet the needs and expectations of all Egyptians across the country, which is considered a major leap in the field of rail transport. For its part, Siemens will provide its latest smart technology solutions, along with its continuous support to local skills development."

To complete all aspects of the consortium, estimates predict that 15,000 local jobs will be created, with Siemens committing to support the use of local labour and skills development.

O&M CONTRACT FOR SFAX DESALINATION PLANT

Leading provider of water and alternative energy management solutions, Metito, has announced that its consortium with Orascom and Cobra has won the tender to operate and maintain a seawater desalination plant in Sfax, Tunisia.

The project is fully funded by the Japanese International Cooperation Organization (JICA), and is set to begin operations in February 2024. Metito will handle the design, procurement and construction of the plant with a target date of completion within 30 months. Once operational, the plant will provide an output of 100,000 cubic metres of potable water every day, with the potential to double capacity in the long-term.

Eng. Karim Madwar, managing director of Metito Africa, explained, "Water is a key contributor to socio-economic development, from industries to families and farms... the new plant will ensure that local communities have access to a clean, secure, and sustainable water supply."

AFRICA DATA CENTRES' LARGEST-EVER EXPANSION

One of the leading carrier-neutral co-location data centre providers, Africa Data Centres, has announced plans to build large hyperscale data centres throughout Africa, including in the North African countries of Morocco, Tunisia and Egypt. The project will involve building ten hyperscale data centres in ten countries over the next two years – at a cost of more than US$500mn.

Africa Data Centres CEO, Stephane Duproz, explains that the finance has been provided by equity and loans to Africa Data Centres' parent company, Liquid Intelligent Technologies, to fund the expansion.

Explaining the ambitious initiative, Duproz said, "We have already begun to acquire land in these countries and plan to roll out very quickly to meet the needs of our existing and new customers. This is just the beginning for us. Examining Africa's growth trajectory has allowed us to make decisions on new locations and confidently commit to expanding selected existing locations, resulting in the largest investment of its kind in history.

"This commitment to Africa, through the continuous deployment of capital-intensive infrastructure projects, has pivotal knock-on effects for the communities and economies we serve. Additionally, without access to always-on, high-speed data centre facilities, the private sector cannot compete globally and will see slowed growth locally; equally important is the impact IT services have on the public sector – from healthcare to transport infrastructure."

"Data centres are digital ecosystems, acting as magnets to organisations – as the digital ecosystem grows within the data centre, so the local economy grows. The impact of a data centre is long-lasting, with immediate job creation stemming from the physical build and enduring economic growth once operational," Duproz added.

BRIEFS

Image Credit: Adobe Stock

APICORP's ESG commits US$1bn to green energy.

APICORP enforces energy ESG

The Arab Petroleum Investments Corporation (APICORP) has unveiled a new Environmental, Social, and Governance (ESG) framework, reflecting its commitment to drive support for an international energy transition.

Included in the framework is a vow to allocate US$1bn towards green energy projects and sustainable energy companies over the next two years, as well as a robust due diligence toolkit to measure the corporation's ESG impact.

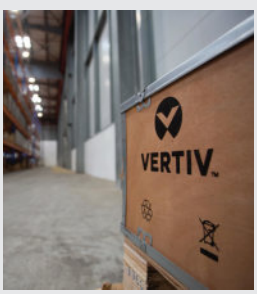

Image Credit: Vertiv

The hub aims to improve connectivity.

Vertiv launches Morocco hub

Digital infrastructure and continuity solution provider Vertiv has confirmed the launch of its US$1mn hub in Morocco.

The hub aims to improve connectivity and provide superior services to existing and new clients.

"The launch of our new hub in Morocco continues our commitment of delivering revolutionary, game-changing, core-to-edge solutions to our customers," explained Pierre Havenga, managing director of Vertiv's Middle East and Africa.

Fit for the toughest jobs - The robust EC350D is designed to take on severe heavy-duty applications.
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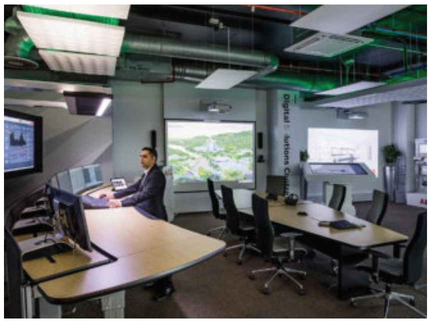


Image Credit: ABB

ABB's newly launched Digital Solutions Centre.

ABB has unveiled its new South African Digital Solutions Centre, which gives customers in the energy, mining and minerals resources, manufacturing, process industries, transportation and utilities sectors the opportunity to co-develop solutions that take advantage of the opportunities offered by digitalisation to unlock lasting business value.

It will help customers to take major leaps in productivity and efficiency, driving competitiveness, quality, and security, through smart grid technology, electrification of all points of energy consumption and advanced automation solutions. It offers customers the ability to experience ABB's digital solutions, advanced automation and 24/7 control room solutions in a fully equipped environment, encountering and solving challenging real-life scenarios.

"The new centre is the only one of its kind in Africa and represents a significant commitment to South Africa and the wider region as growth markets and an important customer base," commented John Manuell, local division manager for Process Industries, ABB South Africa. "Most industries and sectors are going through a rapid transformation that is being enabled by digital technologies. The South African Digital Solutions Centre strengthens our capacity to serve and support customers with technologies and capabilities that are key to the digital transformation of their operations."

Remote support is going to be a major feature, with ABB Ability Remote Insights for service allowing customers to remotely connect with ABB's global experts using a laptop, tablet or mobile. Another focus is what ABB calls 'the control room of the future'. Here, clients can actively participate in designing their control room and experience how the space will be utilised in virtual reality before it is even constructed or delivered on site.

The centre, which went live virtually for the first month of its operation, from the 10th of September to the 8th of October, will also offer a range of webinars and workshops designed to reveal the digital maturity level of an organisation, either at site or enterprise level.

RENEWED FOCUS ON CYBER SECURITY

Liquid Intelligent Technologies' latest 2021 research suggests that more than 90% of IT decision makers across South Africa, Zimbabwe and Kenya have accelerated their cyber security due to the substantial emergence of digital ways of working.

A critical insight from the research suggests that 79% of businesses from all three countries attribute an increase in cyber security threats to the advent of remote working. More than 70% of South African and Zimbabwean organisations consider email attacks such as phishing the most prominent digital threats.

Ignus de Villiers, group head of cyber security, Liquid Intelligent Technologies, said, "The result of our research confirms that cyber security should be at the centre of every business conversation and emphasises the need to establish an appropriate cyber security framework that matches the business environment."

ATI SUPPORTS ANGOLA'S BITA WATER PROJECT

ATI has provided insurance support for the World Bank's partially guaranteed facility to the Government of Angola for expansion and improvement of water supply service in the urban and peri-urban belts of Luanda.

The BITA Water Project consists of production, transmission and distribution investments to serve two million people and is expected to have overall positive environmental and social impacts by improving the health and environmental conditions of the beneficiaries.

The project is valued at US$1.09bn and is a 15-year syndicated loan financed through a combination of private commercial banks. Given the size of investment required for the project and the level of uncovered risk, the Government of Angola initiated discussions with ATI to explore potential additional credit insurance options.

Working together with the private insurance market, ATI provided the lenders a second loss insurance above the World Bank's Guarantee of up to US$351mn to cover principal and interest, enabling the project to reach financial close.

ATI's cover will mitigate the risk of the Government's failure to make debt service payments under the loans for the project.

The project itself is designed to be financially sustainable in its own right and will generate cash flows.

ATI supported this strategic deal as Angola's membership in ATI gains momentum, with an equity injection of US$25mn expected in the coming months.

Becoming a shareholder of ATI will enable Angola to access a range of guarantee instruments and other investment and trade insurance products offered by ATI. It will also benefit both the local private sector, through the provision of an extensive set of financing tools in support of trade and investment.

BRIEFS

Upturn for South Africa's economy

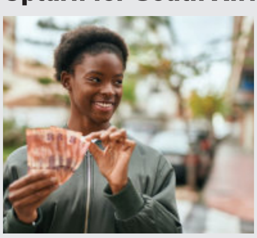


Image Credit: Adobe Stock

Year-on-year, GDP for the country jumped 19.3% in Q2.

According to Reuters, South Africa's economy grew by 1.2% in Q2 2021 compared to the previous three months, a better-than-expected outcome driven by sectors such as communications, agriculture and mining. Transport and communication activity grew 6.9% quarter-on-quarter, agriculture 6.2%, trade 2.2% and mining 1.9%. This was slightly offset by finance contracting 0.4%, manufacturing 0.8% and construction 1.4%.

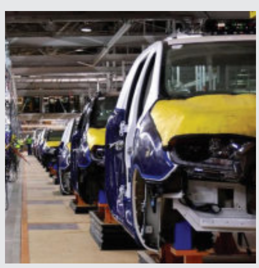


Image Credit: Ford South Africa

Silverton Assembly Plant will operate around the clock, five days a week.

Ford creates 1,200 jobs

Ford South Africa has created around 1,200 incremental jobs by adding a third shift as part of the US$1.05bn investment in its Silverton Assembly Plant.

The reintroduction of the third shift will support expanded production of the current Ranger pickup to meet strong local and international demand.

It will also enable an increased production capacity for the next-generation Ranger, starting in 2022.

DGCX signs MoU with VFEX to strengthen commodities trading


Image Credit: DGCX

The agreement is set to strengthen commodities trading across Africa.

The Dubai Gold and Commodities Exchange (DGCX), the region's leading derivatives exchange, has signed a memorandum of understanding (MoU) with Victoria Falls Stock Exchange (VFEX), a subsidiary of the Zimbabwe Stock Exchange, to strengthen bilateral cooperation and exchange knowledge around commodities trading.

As part of the agreement, the DGCX will extend its technical support, knowledge and skills to VFEX, with the aim of establishing a network of international commodities exchange in Zimbabwe. Additionally, VFEX will seek support from the DGCX when establishing a framework for a clearing and settlement commodities exchange.

Signing a one-year agreement, Les Male, CEO of DGCX, said, "We are delighted to forge a partnership with the Victoria Falls Stock Exchange as part of our wider strategy to strengthen commodities trading across Africa. We are confident that our deep knowledge and expertise will help bring value to VFEX."

VFEX's CEO, Justin Bgoni, added, "We are looking forward to a fruitful exchange of ideas and technical know-how."

AFDB APPROVES RECOVERY LOAN

The African Development Bank (AfDB) has approved a US$137mn loan to boost multi-sector reforms and spending efficiency, create jobs and drive inclusive growth across Botswana,

AfDB's board of directors have approved the loan, which will be extended under the bank group's Botswana Economy Recovery Support Program.

The project is comprised of three components: enhancing the mobilisation of domestic resources and mitigating fiscal risks to enhance macroeconomic performance and create fiscal space for social safety net spending; supporting private sector-led agriculture and industry to reinforce productivity and value addition while increasing job opportunities; and offering business development services to micro and small enterprises to advance social protection and gender equality.

Leila Mokadem, director general of the Southern Africa Regional Development and Business Delivery Office, explained, "The African Development Bank is providing support for reforms to enhance private sector-led agriculture and transformation of the industrial sector. Agriculture value addition can serve as a springboard for industrialisation and job creation."

Aligning with the bank group's 'Ten Year Strategy (2013-2022)' and its 'High Five' strategic priorities, the loan enhances Botswana's low risk of debt distress and positive medium-term growth outlook, in spite of a lack of economic diversification.

P&O Maritime Logistics and IOMS launch FlexDELIVERY in Nigeria

P&O Maritime Logistics and Nigerian firm IO Materials Services (IOMS) have announced the launch of the new 'FlexDELIVERY' model to provide integrated last-mile delivery services to the offshore energy industry in Nigeria.

FlexDELIVERY disrupts the traditional model of high shore base startup costs, rentals and vessel time-chartered contracts by focusing on the service that is required by the energy industry – cargo delivery. FlexDELIVERY has marked new grounds with a freight rate model targeted at the offshore energy industry which traditionally worked on an asset and facility model.

Image Credit: P&O Maritime Logistics

The inaugural service FlexDELIVERY sails from Nigeria on board the Topaz Seema, reducing distance travelled and fuel consumption of vessels.

This service proves to reduce delivery times, enhance visibility and predictability which will re-invent procurement strategies, inventory management tactics and the energy supply chain as a whole. This industry first model will drive down operating costs and capital expenditures for the energy producers by driving out structural oversupply in the energy industry which will be a welcoming shift.

By injecting a tech-led solution, FlexDELIVERY enhances visibility throughout the last mile delivery which has been a bottleneck for some time. Harnessing big data and AI technology, it provides predictability with a real time view on cargo movement and delivery dates all controlled through an online booking platform. The platform reinforces the integrity of the energy supply chain, providing energy producers with peace of mind to focus on their core business being extraction of energy.

The new offering, is an expansion of P&O Maritime Logistics' disruptive innovation 'Supply on Demand' to integrate shore base and quayside operations to deliver a comprehensive logistics solution.

On average, FlexDELIVERY reduces costs by 20-30% per good transported, has 20-30% lower fuel consumption and 40-50% less distance travelled compared to traditional time-charter supply contracts.

Martin Helweg, CEO at P&O Maritime Logistics, said, "We saw a gap in the Nigerian market, spotting that the country's offshore supply market was ripe for the revolutionary FlexDELIVERY system that brings efficiency and value to our customers. With the continued expansion of our innovative service in partnership with IOMS, we're bringing a step change to the offshore supply industry and aligning our service to be in sync with our customers' needs: reduced delivery times, visibility and predictability."

NIGERIA ENDORSES SAPZ

Nigeria's federal and state governments have expressed overwhelming support for an initiative to create Special Agro-industrial Processing Zones (SAPZ) - public-private partnerships aimed at developing priority value chains through developing infrastructure in rural areas, focused on finishing and transforming raw materials and commodities.

The Nigeria Special Agro-industrial Processing Zone programme consists of four mutually reinforcing components - infrastructure development and agro-industrial hubs management; agriculture productivity and production; policy and institutional development; and programme coordination and management.

"The Bank and its development partners are mobilising US$520mn to co-finance the first phase of the programme in Nigeria, to be implemented in phases across six geo-political zones," commented Lamin Barrow, director general of the African Development Bank's Nigeria Country Department.

TWIN CITY ENERGY POWER PROJECT REACHES COMMERCIAL OPERATION

Amandi Energy Limited has announced that its Twin City Energy Power Project, a 200 MW dual fuel combined cycle power plant, achieved commercial operations.

Endeavor Energy Holdings LLC (Endeavor), an Africa-focused independent power generation company backed by Denham Capital, is the majority owner of this greenfield development project and its affiliated construction management and operator entities that provide critical services to the project.

Twin City Energy will facilitate increased access to affordable and reliable electricity whilst accelerating Ghana's transition to a low-carbon energy system by adding 200 MW of baseload power at one of the lowest tariffs in the country and using 33 mscf/d of natural gas from Ghana's offshore fields. ThepProject, which created more than 1,750 direct jobs during construction, will also provide direct socio-economic support via local job creation by employing more than 100 people (98% Ghanaian) to operate and maintain the plant.

The Twin City Energy Power Project was developed and is owned by international equity sponsors including Endeavor Energy Holdings LLC (Endeavor), Anergi Group (Anergi), African Infrastructure Investment Management (AIIM) and members of the Amandi Founding Group.

Reginald France, general manager of Twin City Energy and Ghana country managing director for Endeavor, commented, "The pedestal on which Ghana's economic transformation agenda will rest upon is sustainable, cost effective power generation. The management and the entire staff of Twin City Energy are excited to play a part in this transformation by getting this 200 MW combined cycle plant into commercial operation"

BRIEFS

Improving Africa's trade environments

Cellulant has entered into a 5-year partnership with Senegal-based GAINDE 2000 to offer an end-to-end pan-African technology infrastructure and payments solutions for trade, revenue and tax collection for governments and companies.

GAINDE will bundle its e-government solutions with Cellulant's payments solutions offering the most comprehensive regional payments solution to help governments improve their trade environment.

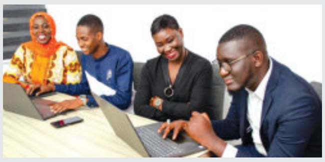


Image Credit: Gainde 2000

Cellulant will provide a single digital payments platform – Tingg.

Africa's first fully digital high voltage substation

Image Credit: GE

The substation is in Thiès, 70 km from Dakar in Senegal.

GE Renewable Energy's Grid Solutions business has commissioned the first ever fully digital high voltage substation on the African continent in Thiès, 70 km from Dakar in Senegal.

This 225 kV substation project is part of Senegal's national electricity company Senelec's transmission and distribution grid expansion, reinforcement and reliability enhancement programme to be completed by VINCI Energies West Africa.

Extended warehouse space for expanding Bolloré Transport & Logistics


Image Credit: Bolloré Transport & Logistics

The warehouse at the Nairobi Gate Industrial Park.

Bolloré Transport & Logistics has acquired 5,000 sq m warehousing space at the Nairobi Gate Industrial Park in Nairobi in order to accommodate its expanding supply chain activities.

The company, established in Kenya in 1968, has become a major player in international transport and logistics with 35,000 employees currently working across 109 countries. A major international supply chain operator, the company designs and deploys tailored solutions with a strong added value and offers its clients a local service, perfect knowledge of the markets and skilled end-to-end operations. It has developed specialised expertise and facilities for a wide range of industry including manufacturing and retail FMCG, commodities, aid and relief, oil and gas, mining, telecoms, and more.

The newly acquired highly flexible warehouse allows Bolloré Transport & Logistics to accommodate the expanding requirements of its contract logistics clientele from the FMCG and Beverage industries.

Located on Nairobi's Eastern Bypass, the warehouse is highly accessible and convenient with connectivity to key arterial roads, Jomo Kenyatta international airport and the inland container depot. Modifications were also introduced for the warehouse to suite the requirements and be fully operational.

In addition to this new acquisition, Bolloré Transport & Logistics operates 161,277 sq m warehousing space in Nairobi and Mombasa through ownership or long-term lease. The company provides both customs bonded and free value-added warehousing facilities for FMCG, retail, manufacturing, and soft commodities such as tea and coffee, and the aid and relief sector.

"Bolloré Transport & Logistics has experienced a rapid expansion of our contract logistics and warehousing business in Kenya, prompting us to seek out high-quality third-party warehousing facilities to supplement our owned sites. The Nairobi Gate Industrial Park meets our infrastructural standards from which we can continue to offer value-added inventory management services to our clients," commented Jason Reynard, regional CEO for East Africa of Bolloré Transport & Logistics.

RIDELINK RAISES FUNDS TO ADVANCE BUSINESS

Ridelink operates an e-logistics platform developed to connect small and medium sized enterprises to a network of transport operators at the tap of a button. The company has served more than 250 SMEs with over 2000 drivers delivering Cargo throughout East Africa.

Ridelink aims to drive down the cost of transport for SMEs by connecting businesses to truck drivers using technology to facilitate the smooth running of business operations, increase revenue earning, improve mobility efficiency and performance. The platform services a market in the urban, peri-urban and rural Uganda, Kenya and Tanzania.

The new raise of US$150,000 was made possible with strong partnership from Ortus Africa Capital, Omidyar Network and African Leadership Academy's Young Entrepreneurs Fund (Anzisha) and brings the total investment into Ridelink to US$250,000.

MTN AND FLUTTERWAVE EXTEND COLLABORATION BEYOND EAST AFRICA

MTN has announced a mobile money partnership with Africa's leading payments technology company, Flutterwave, to allow businesses integrating Flutterwave in Cameroon, Côte d'Ivoire, Rwanda, Uganda and Zambia to receive payments via MTN Mobile Money (MoMo).

The new partnership will further expand on Flutterwave's previous collaboration with MTN, beyond Uganda and Rwanda – with the potential of deepening adoption of digital payments and e-commerce in Africa.

MTN MoMo is a fintech platform providing consumers and businesses with an electronic wallet, enabling electronic transfers and payments as well as access to digital and financial services. At the end of June 2021, MTN MoMo had 48.9 million active users and 581,514 merchants. MoMo enables businesses to accept and make payments within the mobile money ecosystem. This new partnership will enable Flutterwave to offer MTN Mobile Money as a payment method to its business customers.

Through this partnership, MTN and Flutterwave will increase mobile money usage and penetration in Africa to improve local economies and livelihoods as well as create opportunities for individuals and businesses across the continent.

Serigne Dioum, MTN group chief digital and fintech officer, said, "As we progress on our journey to becoming the largest fintech platform in Africa, we will empower millions of businesses to embrace e-commerce in our markets to accept digital payments from MoMo consumers. We believe this is an enabler to accelerating digitised payments in Africa. Building strong ecosystems through partnerships is central to our platform strategy and we will continue to invest in expanding the reach of our platform to consumers and businesses in Africa."

BRIEFS


Image Credit: Walkabout Resources

Site manager Paul Shauri, Walkabout Resources CEO Andrew Cunningham and TNR engineering director Terry Calavrias.

Lindi Jumbo Graphite Mine moves to construction

Walkabout Resources has announced that the Lindi Jumbo Graphite Mine in Tanzania, has progressed to construction after an independent project manager completed site visits, authorising approvals for bulk earthmoving contractor TNR Engineering to commence mobilisation.

In the lead-up to commencement of siteworks, two high-level government delegations – including Prime Minister Kassim Majaliwa and the Deputy Minister of Minerals - visited the site.


Image Credit: Adobe Stock

Africell entered Uganda in 2014.

Africell calls time in Uganda

Africell has announced that it will end operations in Uganda in October after a careful assessment of the long-term commercial outlook.

Africell UG became an important challenger brand, bringing innovations to a mature telecoms sector. The company assured employees that they will be supported in the transition and is working directly with the Uganda Communications Commission to make the migrations process as smooth for its customers as possible.

Rwandan banks join hands with European programmes


Image Credit: Adobe stock

Local currency financing is one of the missing links to scale up investment flows into renewables.

GET.invest and the GIZ Financial Systems Development Cluster have joined hands with financiers in Rwanda to increase investments in decentralised renewable energy projects.

The collaboration is part of GET.invest's mission to strengthen renewable energy markets. Both programmes, GET.invest and GIZ Financial Systems Development Cluster, are implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Although investments in renewable energy in Rwanda have increased over the past years, this has mostly been done with international capital and foreign currency.

Local currency financing is one of the missing links to scale up investment flows into renewables. The newly launched collaboration between banks and programmes aims to support financial institutions in Rwanda in developing and offering finance products to increase the share of financing for renewables.

In a first round, the Bank of Africa Rwanda and Cogebanque will be provided with tailor-made training and coaching to expand their scope for action in this area.

The focus of the tailored activities is now being determined and may include advisory on due diligence processes and developing specific financial products for renewable energy projects and companies. In parallel, a virtual event series will be organised in collaboration with the Rwanda Bankers' Association (RBA) in the remainder of this year, focusing on providing a better understanding of potential clients in the renewable energy sector and facilitating dialogue of financiers and companies and projects from the renewable energy sector.

A statement from the Bank of Africa Rwanda noted, "Rwanda is blessed with renewable energy resources, but there is still untapped potential especially in micro hydropower. To address the low rural electricity access level and the relatively high cost of existing generation alternatives, the government has embarked upon a sizeable micro hydro development programme to provide power to rural villages and towns. This initiative aims at strengthening the national energy security, safeguarding the environment, and preserving the other energy sources."

EAST AFRICA METALS PREPARES FOR TRANSFER OF MAGAMBAZI MINING LICENCE

East Africa Metals Inc. has received a US$2mn payment from PMM Mining Company Limited in accordance with the terms of the sale of Canaco Tanzania Limited (CTL), East Africa's wholly owned subsidiary and is preparing to transfer the Magambazi mining licence into PMM's control.

The Magambazi mine is located in the emerging Handeni gold district in eastern Tanzania, 180 km northwest of Dar es Salaam and 140 km southwest of the port city of Tanga.

Andrew Lee Smith, president & CEO of East Africa, commented, "Once the transfer of shares is complete, PMM will become the 100% owner and operator of the Magambazi Mine. EAM will transition its business plan in Tanzania to that of a gold dealer through its newly formed subsidiary, EG Royalty Company PLC. EAM's management looks forward to continuing to support PMM and the mining operations at Magambazi and growing the Company's cashflow across all of it's operations in East Africa."

AUTOCHEK ACQUIRES ROAM AFRICA'S ONLINE CAR PLATFORMS

Autochek, the automotive technology company facilitating auto financing across Africa and ROAM Africa, have entered into an agreement for autochek to acquire automotive marketplaces Cheki Kenya and Cheki Uganda as autochek expands further into the African market

Launched in 2020 and backed by notable investors such as TLcom Capital and 4DX Ventures, Autochek combines technology underpinned by data analytics to deepen auto finance penetration across the continent. The company's 360-degree automotive solution also provides a strong network of after-sales services that preserve and eases vehicle ownership experience across Africa.

Building on Cheki's ten years of experience, Autochek is set to introduce additional technology solutions that will integrate the auto ecosystem as well as increase market adoption for auto loan financing.

Speaking on the acquisition, Etop Ikpe, founder and CEO of Autochek, said, "Autochek's mandate is to accelerate the ability of African consumers to access better quality and affordable vehicles by providing access to financing while also derisking the auto lending process for financial institutions."

Founded in 2010, Cheki Kenya has built a network of hundreds of dealers, more than 12,000 vehicles listed monthly and 700,000 monthly unique users on its platform with 80% plus year-on-year growth in the last two years.

With credit penetration in Kenya at 27.5%, significantly higher than the West African market, which stands at 5%, East Africa's growing market is positioned as a key auto financing hub, and Autochek is now strategically positioned to scale as it becomes a pan-African player.

BRIEFS

Support for EAC integration process


Image Credit: Adobe stock

The AfDB has financed a number of projects in East Africa.

The executive director of the African Development Bank (AfDB) for Kenya, Eritrea, Ethiopia, Rwanda Seychelles, South Sudan, Tanzania and Uganda, Cheptoo Amos Kipronoh, has pledged more support to infrastructure, power connectivity and capacity building for the East African Community bloc (EAC).

"You are truly on course to the community's intended objective of transforming the region into a single market," said Kipronoh

Interswitch Group partners Codebase Technologies


Image Credit: Adobe stock

Customers will be able to access an extensive range of innovative banking and payment products.

Interswitch Group (Interswitch), a company focused on the digitisation of payments in Africa, has announced a new strategic partnership with Codebase Technologies (CBT), an open API banking solution provider, in order to accelerate the digital banking transformation across Africa. Digibanc SaaS will enable financial institutions in East and West Africa with full front-to-back SaaS capabilities through a rapid and cost-effective deployment model, allowing economies of scale.

Upcoming Events Calendar 2021

OCTOBER

5-7
WINDAC AFRICA 2021
Cape Town, South Africa
www.windac-africa.co.za

11-12
AFSIC
Hybrid (Virtual-Physical)
www.afsic.net

26-29
ECOMONDO
Rimini, Italy
https://en.ecomondo.com/

NOVEMBER

1-3
EGYPT ENERGY
Egypt International Exhibition Centre
www.egypt-energy.com/en/home.html

8-11
AFRICA OIL WEEK
Dubai, UAE
https://africa-oilweek.com/Home

9-12
AFRICAN ENERGY WEEK
Cape Town, South Africa
https://aew2021.com/

15-17
AFRICA ENERGY FORUM
London
www.africa-energy-forum.com

15-21
INTRA-AFRICAN TRADE FAIR 2021
Durban, South Africa
www.intrafricantradefair.com/en

24-26
THE BIG 5 CONSTRUCT KENYA
Nairobi, Kenya
https://www.thebig5constructkenya.com/

DECEMBER

1-3
MSGBC OIL, GAS & POWER 2021
Diamniadio, Senegal
https://energycapitalpower.com/event/msgbc-oil-gas-power-2021/

2-4
SOLAR AFRICA 2021
Addis Ababa, Ethiopia
www.expogr.com/ethiopia/solarexpo/index.php

7-9
MAURITANIDES 2021
Nouakchott, Mauritania
www.mauritanidesmr.com

9-10
U.S.-AFRICA ENERGY FORUM 2021
Houston, Texas
https://energycapitalpower.com/event/us-africa-energy-forum/

Exploring investment opportunities from across the whole of Africa

AFSIC – Investing in Africa is believed to be one of the largest annual events bringing together African investors and investments taking place outside Africa and has become one of the most important conduits of investment into the continent.

Confirmed as a hybrid virtual-physical event from 11-12 October 2021, and with the support of the sophisticated AFSIC African Investments Dashboard, AFSIC is entirely focused on bringing together Africa's business leaders and most important investors and dealmakers and will showcase investment opportunities from across the whole of the continent.

Networking and focused meetings at AFSIC are all set to provide the attendees with an unparalleled opportunity to discover and develop a robust network of the highest quality African business leaders.

AFSIC will offer two days of VIP keynotes and premium content panels across the following industry sectors – banking, agriculture, sustainable growth, infrastructure, education, informed investing, power and fintech. Streams will also feature sector specific networking sessions and investor pitches showcasing the most exciting new projects and businesses. Country focussed sessions will offer an insight into the investment climate and regulations of individual countries with attractive investment opportunities from its investment dashboard highlighted.

Networking is at the heart of AFSIC and free flowing and structured networking sessions have been built into the AFSIC 2021 agenda. High impact scheduled sessions are structured to maximise opportunities to connect with Africa's most important investors, dealmakers and businesses and the networking exhibition runs concurrently with the conference offering a more informal way to engage and meet.

The Meet African Dealmakers Event is specifically designed for high level networking between delegates in a relaxed social environment at the inception of AFSIC. The event has consistently high attendance, offering dealmakers efficient opportunities to develop their pan African contacts.

Image Credit: AFSIC

The AFSIC event and meeting app allows all registered delegates, exhibitors and sponsors to connect and to view in full the conference agenda.

Event and meeting app

The AFSIC event and meeting app allows all registered delegates, exhibitors and sponsors to connect and to view in full the conference agenda. This offers the opportunity to schedule meetings, plan session attendance, promote services and projects and maximise chances of having high quality interactions during AFSIC.

Some of the esteemed speakers include Marcelina Gaoses, founder and director, Myrtle Growth Capital; Sherif Abdel Aal, regional head of M&A, head of country Egypt, KAMCO Investment Company; Richard Abel, managing director, UK Climate Investments; Toyin Abiodun, former strategic advisor, Ministry Of Trade And Industry, Rwanda, Tony Blair Institute Affiliate; Muhtari Adanan, managing partner, Xecced Ventures; Olufunmi Adepoju, CFA, FRM, managing partner, PearlMutual Consulting Limited; Bade Adesemowo, CTO and co-founder, social lender; Daniel Afejuku, managing director, Eagle Flight MFB.

AOW: Powering the sustainable future of the African upstream industry

After going virtual in 2020, Africa Oil Week (AOW) is returning live 8-11 November 2021 in Dubai (as a Covid-19 precaution before returning to Cape Town in 2022) and will bring together the most senior players in the Africa upstream industry.

Focusing on delivering strategic business intelligence and deal-making opportunities across Africa, VIP programmes will return to ensure attendees have a chance to meet those at the very top of the industry and general networking functions will offer further opportunities to build relationships across the sector.

The curated programme will run under the theme 'Succeeding in a Changed Market' where industry experts will discuss and explore the opportunities created by the energy transition for the Africa upstream industry.

66% of African governments (in the form of 45 Ministers and government leaders) will be represented at AOW alongside executives from geo-services companies, international and independent oil companies, oilfield and service companies, and more.


AOW will bring together the most senior players in the Africa upstream industry.

Image Credit: Adobe Stock

Kenya takes centre stage

In the build up to the event, organisers have suggested that Kenya will feature at the heart of AOW. At the forefront of a large contingency of ministerial delegations from East Africa, Cabinet Secretary for Petroleum John Munyes has confirmed his attendance and will present at high-level ministerial panels as well as a dedicated energy showcase.

Paul Sinclair, vice-president of energy for AOW, commented, "Kenya is without a doubt one of the most compelling energy economies on the continent. Following a recent engagement with its ministry, it is clear this year's investment drive at AOW and Future Energy Series: Africa will be fascinating. Kenya has a developed robust policy to support large capital inflows into the sector and we are excited to see the best of what it has to offer."

The Government of Kenya has sought to expand renewable energy generation in its overall power development plan for the period between 2017 and 2037. It projects that, by 2037, renewable energy sources will provide over 60% of the country's installed power capacity.

"We cannot discuss FDI to Africa until we speak about the African Continental Free Trade Area — a single economic zone with 1.3 billion people and a GDP of up to US$3.4 trillion. This is the time to actually make it work. There is no better time. It is going to be critical for Africa's recovery."

SOLOMON QUAYNOR

Vice president for Private Sector, Infrastructure & Industrialization, African Development Bank

"Whether Africa embarks on a rapid change to renewables or continues with hydrocarbon development, African jobs must come first. The growth of the industry leads to job creation and we need to harness the energy sector to work for local development."

Image Credit: African Energy Chamber

ROLAKE AKINKUGBE-FILANI

CCO – Africa, Mixta Africa and advisory board member of the AEC

"Our most important strategy in the energy industry continues to be human capital and the increased participation of local companies to supply products and services made in Angola to support the oil and gas sector. As we shift focus to energy transition efforts, we must implement investment initiatives that foster skills development that will drive the hydrocarbons industry into a cleaner and brighter future for Angola."

H.E. MANUEL NUNES JUNIOR

Angola's Minister of State for Economic Coordination

"Companies are doing a lot with long-term commitment to inclusivity. But it is not about picking someone because of their gender, it's about competency, choosing deliberately and ensuring diversity. We need a collaborative approach in the energy industry. The industry is extremely interesting to work with, with a lot of possibilities for women."

NINA BIRGITTE KOCH

Managing director, Equinor Angola

"Agility has continuously supported education through the global initiatives of its sustainability program. It is extremely important to provide youth with the necessary tools and resources to increase their chances to find suitable jobs and secure their futures. In Côte d'Ivoire and elsewhere, we aim to work closely with our partners at IRC to make sure students receive the support they need to grow in their fields."

GEOFFREY WHITE

CEO of Agility Logistics Parks Africa

"Although percentages may be interpreted as low and may not seem significant to users, crypto-miner malware has been identified as one of the top 3 malware families rife in South Africa, Kenya and Nigeria at present, which we believe emphasises that as cryptocurrency continues to gain momentum, more users will likely be targeted."

Image Credit: Kaspersky

BETHWEL OPIL

Enterprise sales manager at Kaspersky in Africa

"As Covid-19 continues to cause disruptions across Africa, we must prioritise policy and facility support that focuses on rebuilding infrastructures that foster the production, processing and availability of more – and more nutritious – food to feed Africa. AGRF is the platform to move these policy conversations forward, addressing every facet of the continent's food system."

BETH DUNFORD

Vice president for Agriculture, Human and Social Development, African Development Bank

The key to SMME integration in corporate supply chains

If South Africa is to successfully drive job creation and achieve sustainable economic growth, the key is to enable large corporate support for Small and Medium Enterprises (SMMEs), says Hepsy Mkhungo, CEO of One Linkage.

The small business sector is instrumental to creating an inclusive economy and a better life for the previously marginalised. While large organisations are pressed to support smaller businesses as part of their compliance obligations, or adherence to the Broad-based Black Economic Empowerment (BBBEE) policy, the value of supporting SMMEs by integrating them into the supply chain should transcend mere regulatory box-ticking.

Supporting SMMEs extends to supporting the country's economy at large and facilitating the creation of a more competitive and agile market that in turn fosters employment in the formal, as well as informal sectors of the economy. This is imperative for economic inclusivity.

According to the Johannesburg Business School, SMMEs are the cornerstone of most economies and accounts for about half of global Gross Domestic Product (GDP) and 60%-70% of employment. SMMEs make up about two-thirds of the African continent's formally employed workforce. In South Africa, the small business sector provides employment to roughly 47% of the workforce and generates about 20% of the country's annual GDP.

Critical role in the value chain

These statistics underscore the critical role that SMMEs play in the entire corporate value chain.

In most cases, SMME support for large corporates comes in the area of procurement. If procurement opportunities are made available to SMMEs, large enterprises can expect these small businesses to inject innovation, flexibility and creativity into the supply chain. A diverse supply chain allows big businesses to benefit from the ability of SMMEs to navigate operational and business challenges with an agility and flexibility that larger organisations inherently lack. Generally, the nature of small companies allows them to work efficiently with smaller budgets and drive down costs in terms of service delivery and execution.

The digitalisation of enablement tools, solutions and platforms are providing smarter ways to achieve integration, even in emerging markets such as South Africa, where the digital divide and online access remain a hurdle for many small entrepreneurs. However, digital transformation is rolling ahead and, even post Covid-19, there will be no going back to working offline.

Image Credit: One Linkage

Hepsy Mkhungo, CEO of One Linkage.

Need to go digital

With digitalisation playing an increasingly prominent role in the enablement space, corporates can no longer ignore the need to digitalise their solutions and provide digital technologies to support small businesses. In South Africa, almost every small business has adopted some kind of technology and most are now allocating budgets towards this.

According to research by global small business platform Xero, there has been a significant move by small South African businesses towards adopting new technology, with 97% reported to have invested in new technologies in 2019. Furthermore, the research shows that 53% of businesses discovered that new technology adoption has led to large increases to their profitability.

Not without challenges

When challenges arise with small businesses' integration into the supply chain, it is incumbent on corporates to respond by looking at their Environmental, Social and Corporate Governance (ESG) practices and aligning these to the real needs of SMMEs.

The biggest challenge that commonly arises with SMME integration into the corporate supply chain stems from large organisations typically working in siloes, resulting in a lack of collaboration among corporate divisions. On the one hand, procurement departments are often hesitant to take on SMMEs due to uncertainty about their capacity to deliver and meet targets. On the other hand, sustainability enablement teams are tasked with supporting small businesses with skills development, training and funding to help them set up infrastructure and respond to procurement opportunities that could become available.

Mismatch scuppers opportunities

The silo mentality means that there is a mismatch between these two departments, and procurement opportunities for SMMEs often do not materialise. Small businesses often find themselves in a loop where they are continuously being developed, but there is no conversion of this development. Many reach a point where they no longer want to participate in these programmes without understanding where the opportunities lie. This makes it very difficult for SMMEs to have trust in the process.

Another significant challenge that corporates have to address is of a technical nature. The simple fact is that established Enterprise Resource Planning (ERP) systems are not friendly to onboarding small businesses.

While these systems are open for anyone to register, they are also very complex, making it difficult for small businesses to achieve what is required. SMMEs often struggle to find what opportunities are available to them and there is no consolidated platform for enterprises to list the opportunities that SMMEs can apply for.

Corporates should be encouraged to work with enablement partners to co-create solutions that work for them. They need to adopt the mindset that there are no run-of-the-mill solutions. Everything can be customised, so it is important that they to look beyond what they are currently doing and truly support SMMEs through supply chain development. ■

Private capital key to infrastructure projects

Economist Moin Siddiqi explains how private capital can help to close sub-Saharan Africa's (SSA) galloping infrastructure deficit.

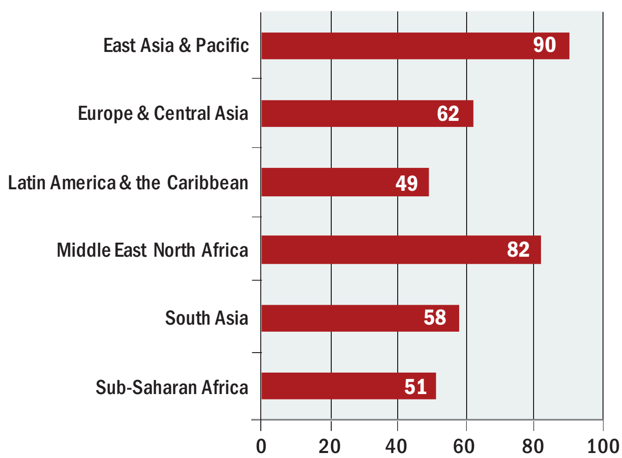
Budgetary constraints and rising national debt in most African countries and decline in foreign aid limit financing scope for large public investment programmes. Private capital can help to close sub-Saharan Africa's galloping infrastructure deficit, which is critical for SSA catching up with other developing regions beyond the pandemic. A recent International Monetary Fund (IMF) research indicates private sources could, by 2030, inject extra financing equivalent to about US$50bn per year for infrastructure projects.

Africa with its young and expanding urbanised population and plentiful natural resources boasts immense opportunities for private investors. Many countries have launched long-term industrialisation and digitalisation initiatives but significant investment and innovation are prerequisites to unlock region's optimal potential. The scale of development needs (both physical and social) is vast – estimated at 20% of SSA gross domestic product (GDP) on average by the end of this decade.

The contribution of private capital across Africa has risen (slightly) but remains lower relative to other regions. The private investment-to-GDP ratio of SSA countries rose, on average, from 10.4% in 1990 to 13.5% of GDP in 2017 (latest IMF data). This compared with 17% of GDP in Asia-Pacific – the region with the highest private capital contribution.

In Africa, the bulk of infrastructure projects are conducted and financed by the public sector. The African governments may need to provide extra incentives to make projects appealing to private investors. In

Government Incentives to Spur Private-sector Investments
(% share of projects receiving official support by regions)



Source: Private Participation in Infrastructure Projects Database, World Bank.

East Asia, 90% of infrastructure projects with private participation received state subsidies and guarantees compared to 51% in SSA (Figure). However, such incentives can be costly and carry fiscal risks. More innovative thinking can also help realise the transformative potential of the continent. The World Bank calculated a 1% hike in a nation's infrastructure stock leads to a direct 1% hike in GDP.

Tapping institutional investors

Pension, mutual, private equity funds, insurance companies and sovereign wealth funds (SWFs) are potential funding sources. Institutional investors are entities that invest in different asset classes and pool risks on behalf of their members, while being bound to meet a minimum threshold of financial return.

Investment in Infrastructure with Private Participation in SSA

	2015	2016	2017	2018	2019
Total Investment, US$bn	6.2	4.9	3.3	7.7	4.9
Number of Projects	28	17	23	34	21

Sources of Financing for PPI Projects in SSA Countries, 2011-20

(% share of total investment)

Foreign debt (40); Local debt (32); Private equity (25); Public equity (3).

Source: Private Participation in Infrastructure Projects Database, World Bank.

*Private Participation in Infrastructure (PPI), where private money and technical/ managerial expertise are used to design, finance and operate infrastructure assets on build-operate-transfer (BOT), build-operate-own (BOO) and build-own-operate and transfer (BOOT) schemes.

**SSA in 2020 received US$6.3bn across 24 projects in PPI (World Bank data). During 2011–20, about 30% of total (PPI) investment in African countries was financed by external debt from bilateral and multilateral development finance institutions (DFIs).

Alternative assets such as infrastructure, which are riskier, less liquid, and less sought after, can potentially offer higher returns in low-yield environments in advanced economies. "In a global context of sustained low interest rates, infrastructure investments in Africa could offer relatively high, inflation-protected, and stable returns," (IMF). Infrastructure investments generate cash flows over long-term, matching the liability horizon of many institutional investors.

Allocations of institutional investors in African infrastructure remain very limited, however, they see regional potential. A 2020 survey by Preqin Ltd (UK) found that one-fifth of global institutional investors view Africa as presenting the best investment opportunities in infrastructure among all emerging markets. If the share of Africa in the portfolio of institutional investors increases from currently 0.5% to about 2% - commensurable to Africa's share of global GDP - African assets under management would increase by US$1.5 trillion, equivalent to an annual flow of about US$50bn/year (over the lifetime of infrastructure asset, assumed to be 30 years), according to Preqin consultancy.

Barriers to private finance

Risks to foreign strategical investors are relatively high in SSA, chiefly (1) project risk wherein most projects are not 'investment-ready' or 'bankable'; (2) macroeconomic (mainly currency) risk or political uncertainty limits the ability to generate projected investment returns; and (3) exit risk, which inhibits the ability to monetise the investment at the right time and repatriate the funds. Investors typically use sovereign rating as a

South African Minister of Public Works Patricia de Lille conducting an oversight visit to the N3 interchange road upgrade infrastructure project in Kwa-Zulu Natal.

Image Credit: GCIS

benchmark for country-risk assessment. SSA ratings (excluding Botswana and Mauritius) are either non-investment grade or speculative – with some countries non-rated.

A large volume of infrastructure projects does not come to fruition in SSA due to poor selection and project execution. 'Bankable' projects to incentivise major institutional investors are few across the region. In most cases, sponsors are unable to provide proof of project feasibility, financial viability, and regulatory/legal compliance. Hence, what's lacking is a well-developed (impartial) externally commissioned proposal to entice financial investors in early-stage concepts.

The risk of unanticipated devaluation can hit (hard) investors' return for a project denominated in local-currency. Greenfield projects have large upfront development costs, but their yields accrue over the longer-term (average holding time of a private-funded project in SSA of about 5–8 years). Thus, investors can incur colossal losses from a weakening local currency or will have to bear hefty hedging costs to secure against downside currency risk over an unspecified period.

Exit occurs when investors sell their stake in a firm or investment but three bottlenecks make exiting more complicated in Africa: illiquid/shallow financial markets prevent investors from exiting by issuing shares in form of initial public offerings (IPOs); weak regulatory/legal systems, (including heavy red tape) also hinder selling or recouping gains – at worst due to expropriation of private returns by the state; and capital account restrictions on financial outflows – which can slow down or increase the cost of exiting.

Risk-mitigating solutions

Some risks can be insured or hedged against with market or government solutions. Investment guarantees, risk insurances, and hedging mechanisms are available through a number of private, government, or multilateral entities to address the needs of financial investors (both local and foreign) in developing countries (Organisation for Economic Co-operation and Development 2012). These instruments and techniques (covering both commercial and non-commercial risks) include:

*The Currency Exchange Fund (TCX) was founded in 2007 by a group of development financial institutions (DFIs). It offers solutions for managing currency risk in developing and frontier markets. TCX covering over 70 currencies – consist of derivative instruments (swaps and forward contracts) that enable TCX's clients to provide their borrowers with funding in their own currency, whilst shifting currency risk to TCX.

*Partial credit guarantees from multilaterals, which cover principal repayment and/or interest up to a predetermined amount and 'full credit guarantees' – i.e., 100% of debt service due. Such facilities (though limited) improve the terms of commercial funding by extending maturity, reduce interest rate costs, increase issue amount, plus facilitate access to international capital markets.

*The African Development Bank (AfDB) currency exchange fund also mitigates exchange-rate risks via medium- and long-term swap arrangements, as well as providing guarantees to private lenders should a government and/or public entities default on debt-servicing.

*The political risk insurance provided by World Bank Multilateral Investment Guarantee Agency (MIGA) underwrites guarantees against non-commercial risk by charging 1% annually of (project's gross development value) – to cover possible losses from debt default due to civil conflicts. SSA accounts for one-quarter of MIGA overall portfolio.

Referring to project, economic and exit risks facing potential investors: technical support by donors and development banks can help fund feasibility studies, project design and other preparatory activities – thereby expanding the pool of bankable projects. A track record of macroprudential policies coupled with sound forex reserve management can reduce currency volatility. The development of secondary markets in SSA for equity and debt will allow investments to be recycled and traded at lower transaction costs.

Conclusion

Private investment, albeit modest, has a critical role to play in Africa. Mega-investments will promote a job-rich recovery after Covid-19-induced downturn. This cannot be achieved solely by tapping traditional public-sector sources. Higher private flows require appropriate contractual regimes to ensure stable long-term returns, the reform of legislative frameworks governing institutional investment, high-level official support and a transparent procurement system with fair/open competition and enforceable contracts.

The scope for private capital is higher in the electricity and transportation sectors. Power generation and highways are better suited for private operators with expertise/capacity to accept risks and generate private returns (through toll roads and/or power purchase agreements) with state-owned utilities.

Private risk-capital is scarce worldwide but equally pipeline of bankable projects in developing countries and, more specifically in Africa also remain scarce. ■

South African Public Works and Infrastructure Minister Patricia de Lille visiting the Clanwilliam dam and irrigation scheme project in the Western Cape.

Image Credit: GCIS

Powering the data centre revolution

With the data centre market ripe for expansion, Paul Brickman, sales and marketing director for Crestchic Loadbanks, explores why backup power and power testing is key to success.

In early September, Africa Data Centres announced a plan to ramp up investment in data centre infrastructure across Africa, with 10 new facilities in the pipeline. At the same time, Liquid Intelligent Technologies and Unitas Global announced their intention to create the largest network of interconnected data centres in Africa.

Powering rapid growth

According to experts in the data centre space, Africa has only 1% of global data centre capacity while being home to about 17% of the world's population. While these statistics may reflect the current situation, the rapid uptake of services by large enterprises entering the region – along with an acceleration in digital infrastructure during lockdown – looks set to address the balance.

While there is power available in the grid across Africa, the issue, according to a recent panel discussion at International Telecoms Week 2021, is distribution. The discussion explored the infrastructure in the region, concluding that many data centre operators are now opting to employ a mix of grid power and independent power plants to counter the issue, as well as shifting to greener solutions.

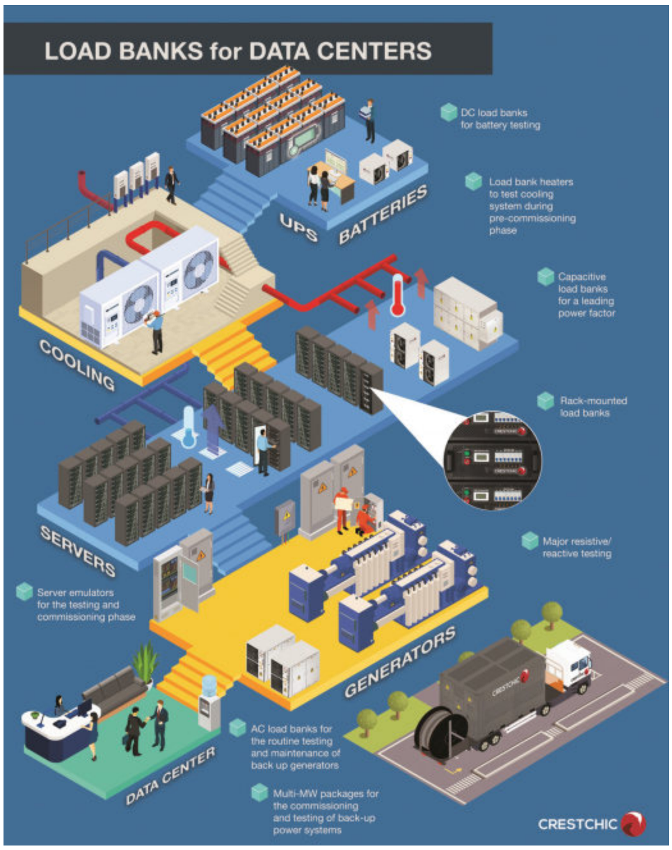


Image Credit: Crestchic

Load banks can be used as part of a preventative maintenance strategy.


Image Credit: Crestchic

To ensure reliability, generators must be tested using a load bank.

The need for resilience

For the data centre industry, a focus on reliability and continuity is paramount. Whether attached to the grid or being powered by fluctuating renewable sources, the danger of downtime remains – with power failures likely to lead to the loss of valuable data and downtime costs mounting quickly. In response, data centres have multiple layers of emergency backup power. But, when resilience is key, how can operators ensure the backup power itself is reliable?

Ensuring backup power

Backup generators are commonly accepted to be a necessity when it comes to accessing backup power in an emergency. To ensure reliability, generators must be tested using a load bank – a device that creates an electrical load that imitates the load that a generator would experience if put to use. Using a load bank to test a system will ensure that the system will function as expected in real-world conditions.

Data centres are often developed in phases, with rack densities and power ratios changing as they grow and more power required as they reach full capacity. With this in mind, it is important that operators take into account a facility's immediate, as well as long-term power needs, and employ backup power systems to suit. In the interim period, with backup generators specified to cover a higher power requirement, generators may run at a low load. By adding a load bank into the equation, a generator can be run at full load, helping to avoid issues such as 'wet stacking' which can occur when engines operate significantly below their rated output level.

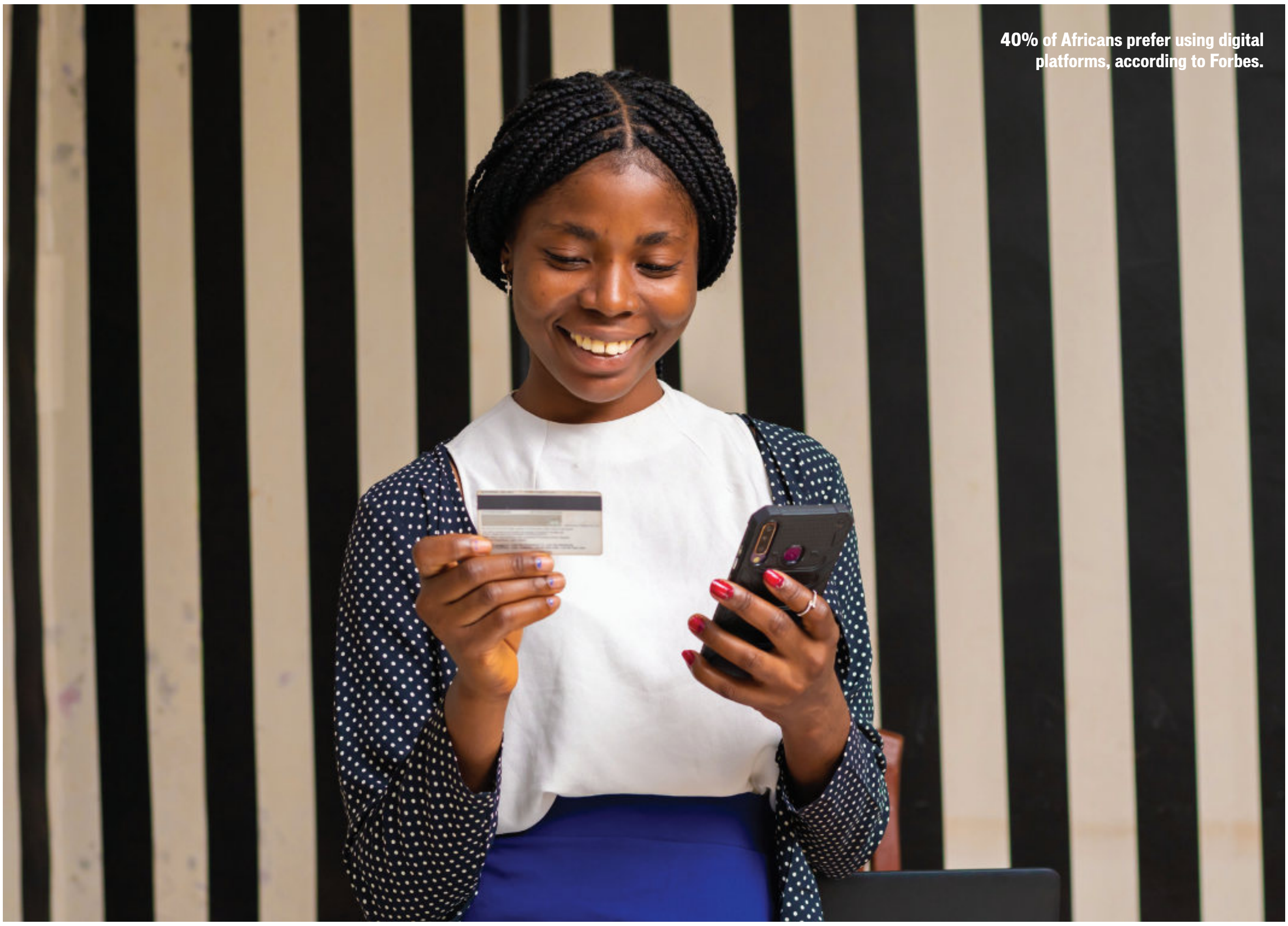
In addition to testing, load banks can also be used to heat load test a data centre – ensuring that the capacity of the air conditioning system is sufficient to overcome the huge amount of heat exuded by servers.

Failing to test and maintain a system will put a generator at risk of failure. Properly planned and implemented, load banks can be used as part of a preventative maintenance strategy, minimising the likelihood of unscheduled breakdowns and outages and effectively negating the potential risk of downtime. ■

For more information, visit www.crestchicloadbanks.com

The upsurge of mobile banking in West Africa

West Africa is one region that is taking advantage of the mobile banking space, especially during these uncertain times. Paul Olele reports.



40% of Africans prefer using digital platforms, according to Forbes.

Image Credit: Adobe Stock

According to *Forbes*, it is reported that 40% of Africans prefer using digital platforms for transactions. *The Africa Report* predicts that the rise in mobile and digital banking on the continent is expected to increase to a total revenue of US$129bn in the year of 2022, which will surpass the banking sector's previous predictions on a continental scale.

It is not surprising to see this growth. Sub-Saharan Africa has been witnessing a steady revolution in the banking sector, from the evolution of the Automated Teller Machine usage to internet banking and more recently to the mobile banking through apps and USSD codes that may or may not require the use of internet often fraught with challenges in the region.

Advancing mobile banking

There are several companies in western Africa that have led the charge in advancing the digital mobile banking space.

Airtel, the Indian multinational telecommunications, is currently operating in 15 African countries, such as Niger and Nigeria. In Nigeria, Airtel has established its Airtel money brand, which will allow users to manage their finances using their mobile phone. The platform also enables its users to send money to people and pay for their expenses with the press of a button.

> "The rise in mobile banking on the continent is expected to increase to a total revenue of US$129bn in 2022."

According to *Tech financials*, Airtel money has a total of 21.5 million customers, and it had a growth in transaction value of 53% (US$12.bn). Airtel has also reported that the mobile money business has generated revenue of US$110mn (US$440mn on annual basis). The company money has also partnered with Mastercard following a US$100mn investment earlier this year.

Connecting Africa reports that the deal will see Mastercard take a minority stake in Airtel Mobile Commerce BV (AMC BV) the holding company for the operation of Airtel Money. In addition, the partnership between Airtel and Mastercard has been put in place to strengthen the framework across areas that will ensure card issuance, payment gateway, payment processing, merchant acceptance and remittance solutions.

Airtel has also partnered up with Standard Chartered bank in Nigeria to increase financial inclusion across key markets. In a statement by the company, "Airtel money's customers will be able to make real time online deposits and withdrawals from Standard Chartered bank accounts, receive international money transfers directly to their wallets, and access savings products."

Image Credit: Adobe Stock

During the pandemic, people have avoided using cash which has sparked a rise in the use of mobile money.

MTN

Apart from Airtel, MTN is another telecom service that has also established a mobile money platform. MTN Mobile money works as a virtual wallet that people can use to transfer money via their mobile phone.

According to *Remitly*, customers in Côte d'Ivoire and Ghana can send money to each other in minutes; however, those based in other countries in Western Africa, will have to choose a different delivery method.

MTN mobile money has also partnered with Western Union to introduce an international mobile remittance service available in 21 countries across Africa and the Middle East. The main idea of the partnership, according to *Retail Dive*, is to include international remittances as part of the value-added services on the MTN mobile wallet. The service is expected to be available in Uganda before making its way to Ghana and Côte d'Ivoire.

Orange bank in West Africa

Orange Bank also rolled out its mobile banking app in Côte d'Ivoire last year. Like Airtel money and MTN money, the app from Orange intends to take advantage of the digital financial services that will better cater to individuals from anywhere across the world. The organisation also expects to expand the app into Burkina Faso, Senegal and Mali.

The executive president of Orange, Patrick Roussel anticipates gathering about 10 million customers from this platform as well as a total revenue of US$116mn in five years.

Roussel added, "Right from the first subscription, all steps can be done via a smartphone or USSD. Everything is automated and it only takes a few seconds to open an Orange Bank Africa account. Data from Orange Money allows us to check customers are eligible, for example that they have enough regular income so that their level of risk is acceptable for the bank."

These are just some of the few ways several companies are contributing to the steady rise in mobile banking in West Africa.

> "The rise of mobile money ideology has changed the framework in West Africa."

Ghana leads the way

There have also been country policies that have indeed played a part in the process. Ghana is one country notable for this as they launched a new digital financial policy amidst the chaos of the Covid-19 pandemic. According to *CGAP*, the Ghanaian government intends to support the digital finance space in efforts to and the Covid-19 response in the country.

Currently, the country has about 14.5 million active mobile money accounts, as at January of 2020. Under this new framework, the Ghanaian government has axed the fees for low-value remittances, relaxed transaction and wallet size limits for mobile money accounts, in addition to the zero-rating interoperable transactions made through interbank switch.

This in turn has also led to the rapid progress of mobile money use in Ghana.

According to *Quartz Africa*, there is a strong mobile penetration rate in the country of about 128%, which made the mobile money service operation conducive in the country.

Here to stay

The rise of the mobile money ideology has changed the framework in West Africa, which has aided the people to complete transactions faster and convenient from anywhere in the world.

Though the problem of infrastructure still lurks in certain countries, mobile money is the way forward, especially in these events of the pandemic, where people are not allowed to gather at banks or shops to make transactions. ■

The African circular plastics industry

Carolina Perujo Holland, analyst, plastic recycling at Independent Commodity Intelligence Services (ICIS) explores the waste management challenges facing Africa and the opportunities on the horizon for the industry.

Most of Africa's population has no access to kerbside collection nor a formal waste collection system, and relies heavily on waste pickers in the informal sector for waste collection and sorting. According to industry estimates, 90% of waste still ends up in landfill or illegal dumping sites, some even burned in the open.

Thirty-four African governments have implemented or are planning to implement different types of plastic bans to tackle the rise in plastic waste generation.

Extended Producer Responsibility (EPR) initiatives in Kenya, Ghana and Nigeria are also encouraging, with the most recent EPR scheme being implemented in South Africa applied to all companies importing or manufacturing plastic packaging for distribution from 5 May 2021. Particular to the region, brands have often taken action and led these types of bans and EPR schemes.

Recycled content targets for plastic packaging set by legislation in other regions, coupled with consumer pressure, have pushed brands who operate in multiple regions to set sustainability pledges at a global level.

Now, these Fast Moving Consumer Goods (FMCG) brands are also looking for supplies of high-quality recycled plastic in Africa, particularly for polyethylene terephthalate (PET), polyethylene (PE) and polypropylene (PP) packaging.

The ICIS Mechanical Recycling Supply Tracker has identified just under 50 mechanical plastic recycling plants for PET, PE and PP in the African region with a total capacity of more than 370,000 tonnes/year for post-consumer and post-industrial waste feedstocks. 55% of the recycling capacity is allocated to recycling PET, and the majority of the polyolefin recycling capacity is allocated to PE. However, in 2020, production of recycled PET, PE and PP represented only 3% of total virgin and recycled PET, PE and PP consumption in the region.

The African plastic recycling industry is very fractured and fluid, and end markets are less well established in the region for the different grades of recycled plastic.

In Africa, 81% of PET, 49% of PE and 67% of PP capacity is from post-consumer feedstock. Food and beverage brands looking to meet their sustainability targets need the highest quality food grade recycled material, suitable for food contact applications.

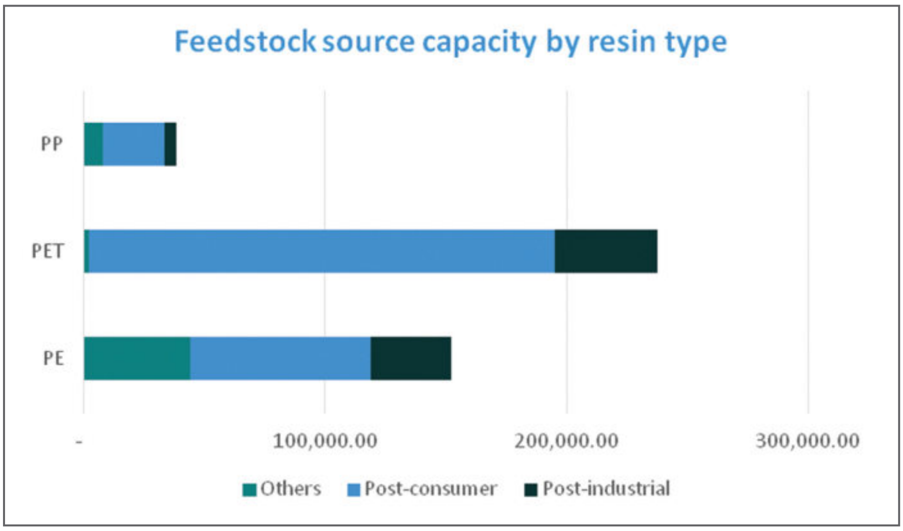


Image Credit: ICIS

There are three PET recyclers in Morocco, Egypt and South Africa with US FDA (Food and Drug Administration) Letter of No Objection (LNO) and EU EFSA (European Food Safety Authority) positive opinion, processing 21% of post-consumer PET feedstocks in the region.

Announced expansions in 2021 and 2022 will see food grade recycled PET (R-PET) capacity increase by up to 40,000 tonnes per year.

An opportunity to evolve

Up until 2018, Africa was a net exporter of plastic waste, with China being the number one destination. In January 2018, China implemented its National Sword policy banning imports of plastic waste into the country. Since then, plastic waste exports from Africa have dropped: 2019 volumes amounted to only 45% of what was exported in 2017, and 2020 volumes only 17%.

Access to this plastic waste is an opportunity to develop the plastic recycling industry within the region rather than the current focus on trade outside the region. Investment in infrastructure will help to improve collection and sorting, increase recycling capacity and build end markets for recyclates in the domestic market.

The European recycling market is facing a shortage of quality feedstock material and attracts African recycled polymer suppliers to be net exporters. However, the recycled material must still meet quality and traceability requirements of such markets. In meeting the quality standards for export markets, this will naturally help develop the value of African recycling materials and markets.

South Africa is often viewed as the most developed country in the region for circular plastics. This is largely due to the close collaboration across the plastics industry which often takes the lead in finding solutions.

The ICIS Recycling Supply Tracker has identified just under 20 PET, PE and PP recycling plants in the country, the highest number in any African country, followed by Nigeria and Egypt. South Africa was also the first country to have a food grade PET recycler with EFSA positive opinion in 2015.

Collaboration with the plastics industry has shown to bring about the fastest growth, and has become the chosen strategy to develop the recycling industry in Africa.

Brands have realised that collection of plastic waste is necessary to ensure sufficient good quality recycled product to meet their sustainability targets. Companies such as Coca Cola, Dow, Nestlé, Diageo and Unilever have launched initiatives with a local focus to improve waste collection in a region where there is very little access to a formal waste management system.

The informal sector waste pickers are crucial to the African recycling industry and must be incorporated and supported in any solutions in its development. With more investment, the recycling industry will be able to take advantage of the large volumes of plastic waste available. ■

Driving electric vehicles in Africa

Despite infrastructure restrictions, a growing number of electric vehicle manufacturers are entering the African market. Robert Daniels reports.

Traditionally, brickyards have always been regarded a no-go area for electric forklifts.

Image Credit: Smith Power Electric

According to figures published by IDTechEx, the growth of electric vehicles (EV) across the globe has expanded at a rate that has surpassed analyst expectations, with electric car sales alone expected to surpass five million this year. With developed countries such as the USA supporting the uptake of electric vehicles, it is pushing the narrative into the mainstream and is creating tremendous opportunities for those operating in the EV supply chain.

A fledgling market on the rise

Traditionally, the EV market has not been one at home in Africa. Much of the population of the continent struggles to fulfil even the most basic energy requirements and infrastructure constraints in many areas means it remains a challenge for EV's to be used for long distance travel (with ports for re-charging few and far between).

And yet, despite this, with the demand for more climate friendly travel stronger than ever, there is a lot of movement within the EV market in Africa, with a growing number of manufacturers entering the continent. Alongside this, some governments have shown their willingness to embrace this new generation of automation – the South African cabinet is due to review policy proposals to help make the country a leading and competitive location in the production of EVs globally.

Such intentions appear to be catching on already in the country as earlier this year Golden Arrow Bus Services (GABS) officially launched the first active electric bus in South Africa with the incorporation of two such vehicles carrying passengers between Retreat and Cape Town. The introduction was the result of a year's worth of testing carried out by the company and partners BYD and uYilo and whilst there is still a lot to be learned about the capabilities of the vehicles, Golden Arrow engineers noted that excitement is continuing to build for these types of vehicles.

The uptake of EV in Africa is most commonly associated with short term, urban travel such as buses and smaller automobiles such as motorcycles (often for use in services such as food delivery). One Electric has launched its Made in India Motorcycle to Africa by starting deliveries and registrations for their flagship electric motorcycle, KRIDN, in Kenya and harbours ambitions to become a serious player on the continent with four more African countries opening up soon.

The appetite for such vehicles in Africa is also displayed by Ampersand Rwanda's acquisition of a US$3.5mn investment from the Ecosystem Integrity Fund (EIF) earlier this year. This marked the largest ever e-mobility investment by a venture capital fund in sub-Saharan Africa and will encourage the Kigali-based company to develop electric motorcycles to rival the five million petrol motorcycle taxis in use across East Africa.

Electric vehicles are not just permeating the African travel industry but are also pushing into other sectors such as construction and manufacturing too. For instance, Conframat Bricks has made headlines after becoming the first brick manufacturer in South Africa to deploy electric forklifts in its brickyard following the purchase of three Baoli electric forklifts from Smith Power Equipment. For an environment where diesel counterparts are generally preferred (largely due to the tough operating conditions synonymous with brickyards) the new forklifts have been performing admirably, managing 90% of the workload of that their 3.5t diesel units could handle.

Bridging the gap

In spite of the movement within this space, EVs are still, for the most part, rare in Africa, especially outside of heavily urbanised and more developed environments. The focus on controlling global warming means that electric vehicles are surely, as with the rest of the globe, the future for the African continent, but the restrictions of infrastructure and reliability of such vehicles suggests that they will most likely be in the minority for the short to medium term.

In the mean time, hybrid vehicles could prove a solution to bridge the gap between reliability and carbon footprint reduction. Chery is one of a number of manufacturers who have positioned themselves to capitalise on this. The company announced that they have taken steps to directly enter the South African market with the establishment of Chery South Africa.

From its head office in Johannesburg the company will introduce to the market its forthcoming Chery Universal Hybrid system which will offer a real-world fuel consumption of 1 litre per 100 km in a combined driving cycle. This will not come at the cost of performance, with the system offering a 0-100 km/h time of five seconds. ■

Facing an unprecedented challenge

Stephen Williams explores how Africa's aviation industry has dealt with one of the most challenging periods inliving memory.

The pandemic caused unprecedented difficulties for the aviation industry.

Image Credit: Adobe Stock

In January 2018, The African Union Heads of State and Government launched the Single African Air Transport Market (SAATM) more commonly referred to as the Open Skies Treaty.

This initiative is one of the flagship projects of the African Union's (AU) Agenda 2063 and is geared towards creating a single unified air transport market in Africa through the liberalisation of civil aviation in Africa – seen as an essential for the continent's economic integration agenda and empowering the African Continental Free Trade Agreement.

But Africa's aviation sector has been impacted as severely as any global region by the pandemic. A significant drop in travel led to the grounding of approximately two-thirds of the global airline fleet at the peak of the Covid-19 pandemic in April 2020.

The African Airlines Association (AFRAA) reported in July 2021 that air passenger traffic is estimated to fallen to less than 43% of the level of the same month in 2019. Similarly, as of July 2021, capacity reached 53.7%.

The one encouraging statistic in AFRAA's report was that domestic markets across Africa continue to outperform intra-Africa and intercontinental at 64% – compared to 22.9% for intra-Africa and 13.1% for intercontinental.

With regard to passenger seats offered; domestic, intra-Africa and intercontinental account for 50.2%, 27.3% and 22.5% respectively.

May 2021 saw a resumption of 62.5% of international routes compared to the pre-Covid period, and recovery further improved to 72.7% in June 2021 and 74.7% in July.

"Africa's aviation sector has been impacted as severely as any global region by the pandemic."

Generally, across Africa, passenger traffic volumes remain low due to confusion over border closures, health protocols and continued surge in Covid-19 infections in some countries.

A threat to the industry

The result is significantly lower airlines revenues. In the first six months of this year, AFRAA estimates the total revenue losses of the continent's carriers at US$8.4 billion.

In the full year 2020, African airlines made a cumulative revenue loss of US$10.21bn due to the impacts of Covid-19.

AFFRA, which boasts 46 members accounting for more than 85% of total international traffic carried by

African airlines, warns that the poor financial performance by the continent's airlines in the first half of 2021 represented "a direct threat to the survival of the African aviation industry if the trend continues to the end of the year".

It is clear that the pandemic's impact has not been evenly felt by all airlines in the continent. Africa's three biggest airlines, Ethiopian Airlines, South African Airlines and Kenya Airways have had three very different experiences.

Ethiopian Airlines

Ethiopian Airlines, Africa's largest airline, realised that the Covid-19 pandemic would result in a sharp drop in passenger traffic and decided to convert a number of aircraft from passenger to cargo (P2C) services.

25 passenger planes have been converted since March 2020 and have made more than 5,500 cargo flights for customers including the World Health Organization, aid agencies, and UNICEF — distributing food, medicine, medical protective equipment, and vaccines.

The airline's quick 'P2C' programme enabled the airline to protect most its revenue streams, reporting US$3.3 billion in revenues during Ethiopian's budget year ending 7 July 2020.

Image Credit: Ethiopian Airlines

Airlines took precautious to ensure the safety of passengers during the pandemic.

Kenya Airways

Kenya Airways, by contrast, has been forced to trim its flight schedules across the continent down to an absolute minimum. Popular destinations to Asia, Europe, and North America have also been adversely affected.

The local Kenyan press reported that Kenya Airways had four idle aircraft parked at the Jomo Kenyatta International Airport , underlining the negative impact of the Covid-19 pandemic on the airline's business.

The cost of maintaining two Embraers and two Boeing 737s (that are currently in storage after cuts to routes) is US$178,000 each month that the equipment is grounded.

"The airline suffered a 60% drop in passenger numbers in 2020, resulting in a record loss of around EU€277mn (approx. US$331mn)," commented Allan Kilavuka, CEO of Kenya Airways. "Nevertheless, the airline remains optimistic. We want to grow and reduce our costs at the same time."

South African Airways

Even before the full impact of the Covid-19 pandemic, South African Airways (SAA) was experiencing significant turbulence.

South Africa's state-owned national carrier South African Airways (SAA) only resumed flying between limited destinations last month a year after it halted operations being unable to pay its operational costs

In July, the government announced that it was selling a 51% stake in the carrier to Takatso a private equity consortium, which had committed more than US$200mn to bring the airline back from the brink and restart operations.

It had entered a form of bankruptcy protection in December 2019, but its condition worsened as the Covid-19 pandemic restricted air travel and hurt its minimal cash flows further.

"After months of diligent work, we are delighted that SAA is resuming services," stated Thomas Kgokolo, interim chief executive of SAA.

Initially, SAA began operating flights from Johannesburg to Cape Town, Accra, Kinshasa, Harare, Lusaka and Maputo, but more destinations will be added to the route network as SAA ramps up operations in response to market conditions. ■

Image Credit: Ethiopian Airlines

Ethiopian Airlines decided to convert a number of aircraft from passenger to cargo services.

SunBrush mobil and AVANT SA establish sales in South Africa

Image Credit: SunBrush mobil

SunBrush mobil cleaning equipment are compatible for AVANT loaders.

SunBrush mobil, makers of cleaning devices for photovoltaic installation and building facade, has opened a joint service and sales location partnered with AVANT South Africa.

Solar park operators and maintenance companies from South Africa and Namibia are now able to purchase SunBrush mobil cleaning equipment made in Lachen, Germany, with the matching loader vehicles from AVANT.

The loaders from AVANT are aimed at being used flexibly as they are compatible with over 200 attachments, including lawnmowers or machines for removing weeds. SunBrush cleaning systems are also adaptable to fit multifunction vehicles. "Solar park employees can thus maintain the entire solar park with just one loader vehicle. This not only saves them costs but also time," said Oliver Köster, sales manager at SunBrush mobil.

Customers are also given the option of purchasing cleaning equipment individually if a loader vehicle is already at their disposal. Currently, SunBrush mobil and AVANT SA have also partnered to build a spare parts warehouse that facilitates trained personnel to maintain and repair the SunBrush machines on site.

Wally Loftie-Eaton, managing director of AVANT SA, said, "We are very excited and honoured with new partnership between AVANT South Africa and SunBrush Germany. We have been importing only quality equipment from Europe since 2007 and SunBrush is a very popular addition to the AVANT range of attachments. AVANT SA will be distributing the complete range of SunBrush equipment in South Africa and neighbouring countries. Prospective and existing customers can expect only the best service possible – something that we are known for in the industry."

Several cleaning units of the SunBrush mobil compact model are already in the market in South Africa and are used by operators across the country states Sunbrush. "The photovoltaic market in South Africa is growing rapidly. Together with our powerful partner, we want to exploit this potential," said Köster. AVANT SA has been one of the leading AVANT distributors for about 15 years with branches in the South African cities of Durban and Gauteng.

SOLINC TO DISTRIBUTE TRINA SOLAR'S PRODUCTS

Trina Solar, a PV and smart energy total solution provider, has announced the appointment of Solinc East Africa Ltd in Kenya as an official distributor to supply Trina Solar's products and solutions in East Africa. The new appointment comes as part of Trina Solar's aim to further increase its footprint and presence in the African continent to cater to the rapidly growing demand for solar energy.

According to Trina, as of Q2 2021, C&I's and SMEs form about 39% of Kenya's National Grid (KPLC) total number of customers and together they consume over 60% of KPLC's installed capacity, with this figure rapidly growing day after day.

Antonio Jimenez, managing director and vice president for Trina Solar MEA, said, "The Middle East and Africa region is witnessing a significant boom in the renewable energy industry. We are already seeing a big rise in demand for solar power in Kenya with Trina Solar aiming to capture a big share of this growing solar energy market."

AIIM ACQUIRES STAKE IN SODIGAZ TO DELIVER CLEAN FUEL IN AFRICA

African Infrastructure Investment Managers (AIIM) will support Sodigaz's expansion across West Africa to promote and provide LPG, a cleaner cooking fuel replacing wood and charcoal, to households in the region.

AIIM, one of Africa's largest infrastructure-focused private equity fund managers has acquired stakes in Sodigaz, an LPG distributor based in Burkina Faso and Benin, through AIIM's pan-African infrastructure fund, AIIF3.

Sodigaz and its Benin subsidiary Progaz distribute LPG cylinders to households to replace higher carbon fuel sources in cooking. Sodigaz in Burkina Faso leverages its network of over 2,200 resellers and ensures coverage of the main cities and provinces of the country. Launched in 2019, Progaz owns a filling centre and currently manages one service station (a second one to be open by the end of 2021) and a developing reseller network.

As part of Sodigaz's commitment to the energy transition, the company also operates a solar energy business, supplying domestic and industrial solutions as well as plug-and-play kits distributed through its reseller network.

According to the IEA, the transition to lower-emission fuels has been slow in sub-Saharan Africa and only 17% of the population have access to clean cooking in Burkina Faso and less than 6% in Benin. A large proportion of African households continue to rely heavily on wood, charcoal, kerosene and paraffin as their main sources of energy.

Lala Bolly, CEO of Sodigaz Group, said, "AIIM's entry into the capital of Sodigaz marks a new era of impetus for the Group's sub-regional expansion and positioning in the development of gas and solar energy infrastructure in West Africa."

BRIEFS

Sasol and CEF partner for gas development

Image Credit: Adobe Stock

Gas is a big contributor to SA's energy mix.

Sasol and the Central Energy Fund (CEF) have signed a memorandum of understanding (MoU) to collaborate on accelerating the development of gas solutions in South Africa. Key focus areas of the agreement will include future gas supply options, as well as enabling infrastructure critical to the sustainabilty and growth of the gas market in the region. Both companies will explore developing multiple low-cost gas import locations around the country.

Trine invests on energy

Image Credit: Adobe Stock

The first debt financing round will fund five solar projects.

Swedish investment platform Trine announced their new partnership with Solarise Africa, an African energy leasing firm. The partnership venture brings an investment of US$5.9mn to propel advances in food security, renewable energy, urban development and manufacturing and production in South Africa, Kenya, Ghana and Rwanda. The first debt financing round provided by Trine will finance five solar projects in the regions of South Africa and Kenya.

Africa genset market on road to recovery

The market for diesel gensets in Africa is growing once more after a turbulent year, but this is an industry fast evolving as hybrid power solutions come into sharper focus. Martin Clark reports

Growth in the genset market is set to pick up in the coming year as demand rebounds after the lockdown-induced economic hiatus of the past 18 months or so.

But it is an industry experiencing rapid change and evolution too, as customers seek to minimise their eco footprint at the same time as securing dependable power.

Leading operators supplying reliable energy in Africa include the likes of Caterpillar, Clarke Energy, Kohler SDMO, Mantrac and Perkins, among others.

While diesel gensets continue to support countless businesses and industries up and down the African continent, the shift toward hybrid solutions, incorporating renewable and other sources, is well documented.

Hybrid portable generators are expected to enjoy a continued strong growth of around 6.5% over the next ten years, according to a report by Fact.MR.

It continues by noting that photovoltaic (PV) diesel hybrid generators have garnered increased attention of late, while higher spending on research and development (R&D) is on the rise to find new solutions.

The report shows that while Asia Pacific is set to gulp the largest share of global revenues in 2021 and beyond, the Africa market is set to rise "at a high single-digit" rate through to 2031.

"Due to the Covid-19 crisis, demand for portable generators was hit in 2020, which saw a decline," the report notes.

"But with the manufacturing industry back on track, demand is expected to bounce back over the coming months."

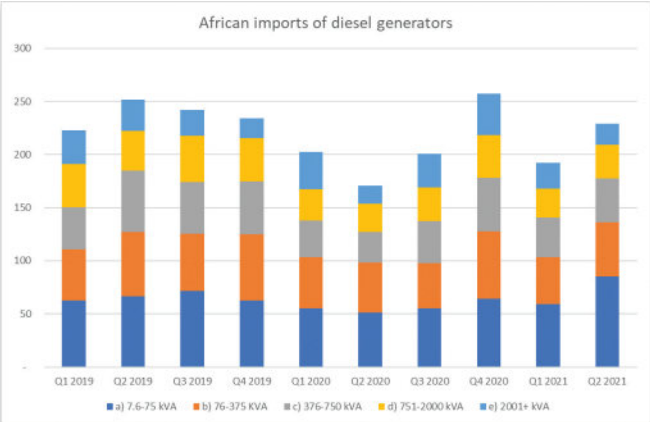


Image Credit: www.powergen-pages.com

Genset demand

Growth in the import of diesel generators during the second quarter of 2021 certainly points to a healthy uptick in overall demand across all sizes and ranges.

Imports of diesel gensets increased by 34% in Q2 2021 compared to the same quarter last year (Q2 2020), although they are still significantly down on pre-pandemic levels — 9% lower than the pre-crisis volume (Q2 2019).

This increase is especially significant in the lower ranges, for genset groups below 75 kVA, which saw their imports increase by 67% compared to last year — and are even 28% above 2019.

This strong increase, surpassing even pre-pandemic 2019 levels, is due to an upswell in demand and the consequences of an inventory level increase at most distributors.

> "While diesel gensets continue to support countless businesses up and down the African continent, the shift toward hybrid solutions is well documented."

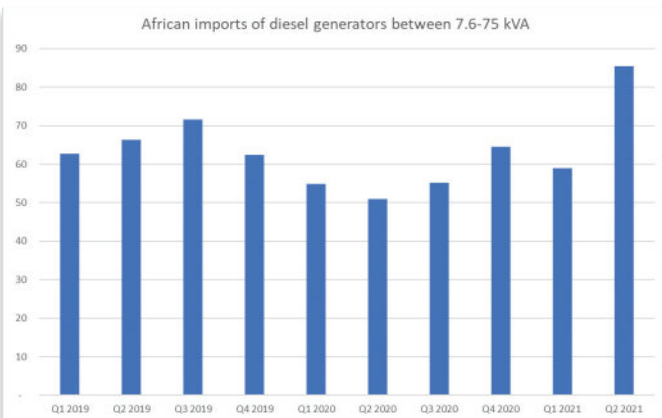


Image Credit: ww.powergen-pages.com

It hints at a healthier market overall, backed by strong demand, particularly in the 7.6 kVA to 75 kVA segment.

However, there are also a few grey areas preventing the market from bouncing back more substantially or rapidly.

Supply times have considerably lengthened, the higher price of transport and materials is biting, plus some economies are still suffering from the impacts of the Covid crisis.

From this, it's clear that Africa's traditional diesel genset market still faces considerable challenges that are impacting both demand and supply.

And, longer term, there are many other broader challenges and considerations that will test the resolve, skill and innovation of power companies and their clients.

Hybrid solutions

There are new projects in the pipeline that illustrate the challenges genset makers are facing, with the shift to alternative and hybrid power solutions.

Australian miner Lotus Resources recently commenced a definitive feasibility study for its Kayelekera uranium project in Malawi that includes a range of power supply options.

The open cast mine, Malawi's largest, is located 52 km west of the regional administrative and commercial centre, Karonga, and is currently in care and maintenance since 2014 due to the sustained low uranium spot price.

But plans to bring it back into production amply illustrate the

complexity and multi-faceted approach of powering remote site projects in Africa in 2021 and beyond.

When the project previously operated, from 2009 to 2014 — when mine output hit a record high —power was generated by diesel gensets, the only reliable energy source available at that time.

Estimated power costs are around US$0.28 - $0.32/kWh based on the current diesel price, according to the mining company.

Lotus is now exploring various options including replacement of the existing diesel gensets with a Build-Own-Operate contract arrangement, as well as connection to the national grid.

It is also looking at alternatives such as generating power from excess heat produced in the onsite acid plant (estimated at 2MW), plus renewable options, including solar.

Connection to the grid is likely to provide the lowest cost option — talks are ongoing with ESCOM, the Malawian electricity supply company — but it also poses a risk in terms of reliability of supply.

As such, Lotus says it expects its future energy supply to incorporate a combination of options, which, together, will help to reduce both power costs and carbon dioxide (CO_2) emissions.

A Malawian consultant has been hired to look into connecting the mine to the grid either at the nearby town of Karonga, about 50 km away, or other potential substations.

Separately, Metso Outotec is preparing a study for recovering energy via a steam turbine from the acid plant and two solar providers have been asked for proposals for various solar options.

Industry innovation

At the same time, key industry players continue to improve and innovate to better serve clients.

> "In 2019, we introduced the 20-cylinder variant of the TCG 3020, which has successfully established itself in the market in a short time."
>
> **TIM SCOTT, MWM DIRECTOR**

Caterpillar Energy Solutions announced recently that it is adding a V12 and V16 cylinder variant to its MWM TCG 3020 gas generator set series.

These leverage the same durability and reliability from the 20-cylinder variant and boast an electrical efficiency of up to 45%, and are characterised by more power and reduced oil consumption.

The MWM TCG 3020 generators are also suitable for natural gas, biogas, landfill gas, and propane gas applications.

"In 2019, we introduced the 20-cylinder variant of the TCG 3020, which has successfully established itself in the market in a short time. With the two new variants, we offer our customers further powerful alternatives in the sought-after performance range," said Tim Scott, MWM director.

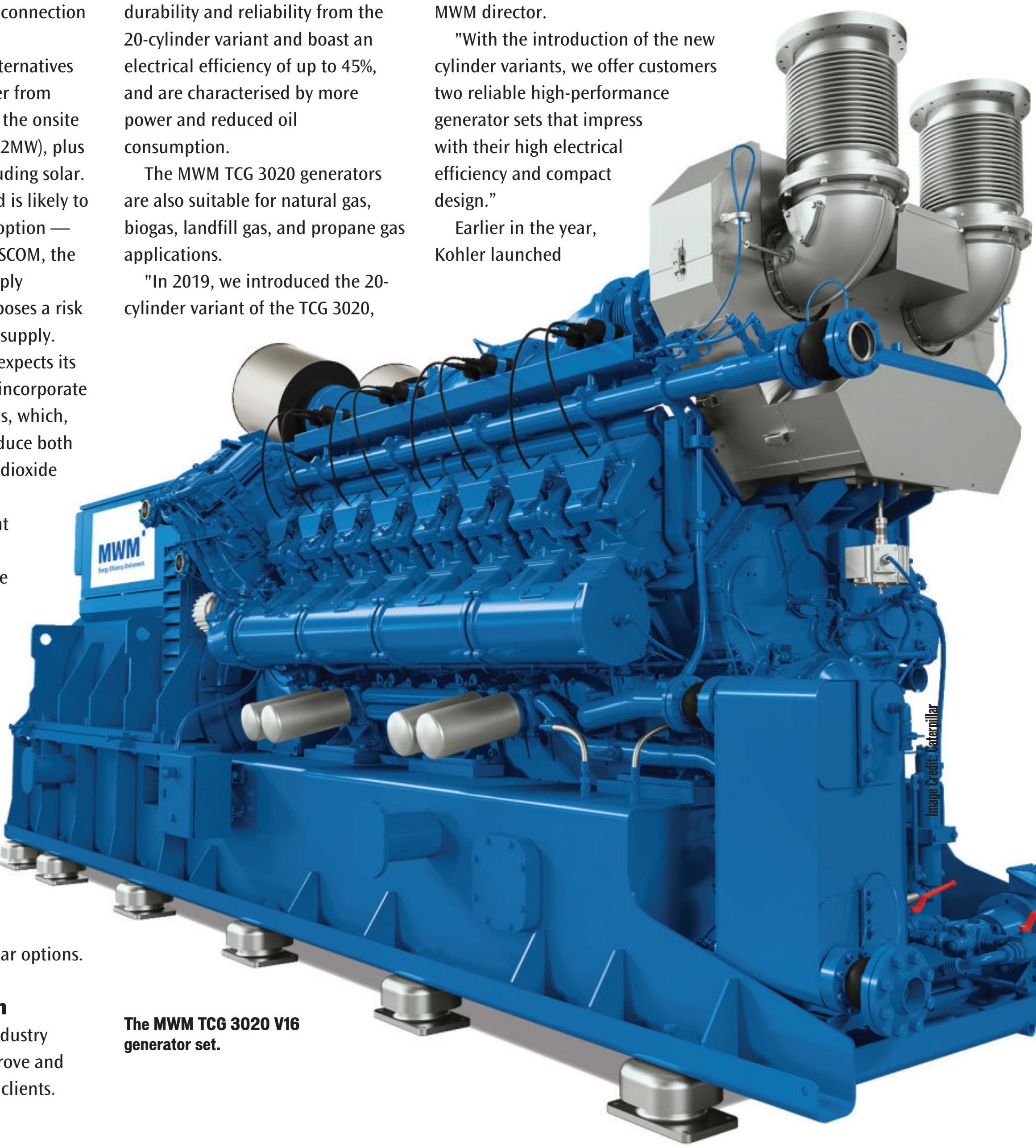
"With the introduction of the new cylinder variants, we offer customers two reliable high-performance generator sets that impress with their high electrical efficiency and compact design."

Earlier in the year, Kohler launched its new M139 generator canopy, specifically designed for harsh outdoor environments in markets such as Africa.

The M139 integrates powers from 165 kVA to 250 kVA and offers the highest levels of anti-corrosion performance, made from aluminium-zinc coated steel.

The design has also resulted in the removal of certain welds, eliminating water traps that can accelerate the spread of rust.

The canopy can integrate generators for prime and back-up electricity across a broad range of small industry and retail settings. ■



The MWM TCG 3020 V16 generator set.

The future of power systems

With many countries still reliant on diesel as their main source of power generation, Mantrac provides gensets that utilise Cat Dynamic Gas Blending, which reduces fuel costs while growing the bottom line for customers.

Frequent outages, total power shut downs, limited gas distribution pipeline networks and a saturated national grid means that many countries are still reliant on diesel as their main source of power generation.

In fact, some of the countries where Mantrac operates hold some of the world's largest gas reserves. What's more, three territories of Mantrac (Russia, Nigeria, Iraq) are amongst the top 5 gas flaring countries. Hence, the huge potential to provide businesses with 100% gas powered or a combined diesel electric power alternative. Over the past decades, Mantrac has been developing and driving an integrated solution in terms of power systems and gas supply.

Image Credit: Mantrac

Gas power generator proves to be a lucrative investment in terms of productivity, fuel costs and the bottom line.

From diesel to a dual fuel system

Today, Mantrac is at the forefront of technological advancements in Dynamic Gas Blending (DGB) systems. Many businesses that were previously using diesel as their sole source of power generation are now seeking to replace this with cleaner, more cost-effective alternatives - such as natural gas and renewable energies.

Over the last few years, there has been a huge increase in the demand for a reliable gas and dual fuel power solution. Mantrac has answered this by delivering the Dual Fuel kit, designed and built by Caterpillar. It allows customers who have electronic diesel 3512 and 3516 engines to use up to 70% gas substitution - without impacting the performance of the engine.

There are over 1,500 engines currently running across Mantrac territories that are compatible with DGB technology. Two groups of customers can benefit from this technology include land drilling companies that use 3512B/C engines to power their rigs and industrial companies using 3516B diesel engines for electric power purposes to run their business.

Image Credit: Mantrac

Diesel generators fitted with DGB technology can reduce fuel costs by up to 70%.

For a lower cost per kW

Rating from 110eKW to 10,300eKW, Caterpillar gas power generators are designed to deliver power and keep businesses running at the lowest total owning and operating costs.

In addition to uncompromised reliability, safety, performance and savings, 100% gas-powered generator offers several other benefits including:

- High horsepower and low emissions
- Simple robust design for long life of up to 80,000 operating hours
- Up to 4,000 hours extended service interval for minimum maintenance
- Optimised for low energy applications
- State-of-the-art electronic ignition system and engine supervisory system
- Range of fuel sources, including landfill gas, biogas, mines gas, pipeline natural gas
- One safe source and turnkey solution from Mantrac

For all Mantrac customers, gas generators proves to be a lucrative investment in terms of productivity, fuel costs and the bottom line. ■

Learn more at Mantrac's power solutions at www.mantracgroup.com

Africa's future energy mix

Biomass will remain the dominant source of energy in sub-Saharan Africa by 2050, a new DNV report suggests.

In their annual *Energy Transition Outlook 2021* report, DNV highlighted that while global emissions dropped by 6% in 2020 due to Covid-19, they are now sharply on the rise and are predicted to grow for the next three years before starting to decline.

Additionally, while renewables are being added at great speed, they are often used as a supplement rather than a full replacement for thermal power generation. As a result of this, global energy-related CO_2 emissions are likely to be only 9% lower than 2019 emissions in 2030, and only 45% lower by 2050. This means the ambitions to halve GHG emissions by 2030 and to achieve net zero emissions by 2050 (required to limit global warming to 1.5˚C) will not be met and DNV forecasts that global warming will reach 2.3˚C by 2100.

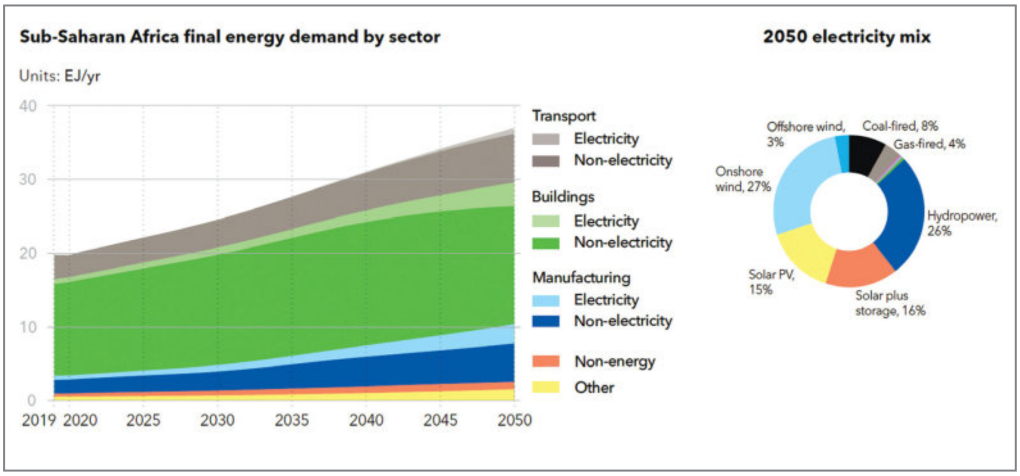


Image Credit: DNV

Electrifying sub-Saharan Africa

As part of the report, DNV conducted a regional report focusing on sub-Saharan Africa, the electrification of which, it noted, is one of the most important global challenges that needs to be met.

In the region, indecisive power-sector reforms, along with unpredictable policy frameworks continue to hinder inflow of private investment. Despite this, in 2020, private sector-led independent power projects accounted for more than 50% of new capacity added and, with the weak financial positions of state-owned utilities and large energy deficiency, a rise in private-sector involvement appears inevitable in the future.

The region, the report continued, has a diversity of natural resources. Nigeria and Angola are the largest oil-producing countries while 88% of the region's coal production is from South Africa. Congo, Ethiopia and Zambia have high hydropower potential while geothermal resources are widely available in East Africa. Across the continent solar and wind resources are in abundance.

Despite these resources and the investment of players such as the World Bank, UNDP and other bi-lateral donors, only 42% of the SSA population has access to electricity and gains in energy access were reversed during the pandemic. The DNV report noted that the region urgently requires power infrastructure, which has so far not kept pace with the population growth. It added that colossal energy deficiencies continue to hamper economic development and industrialisation.

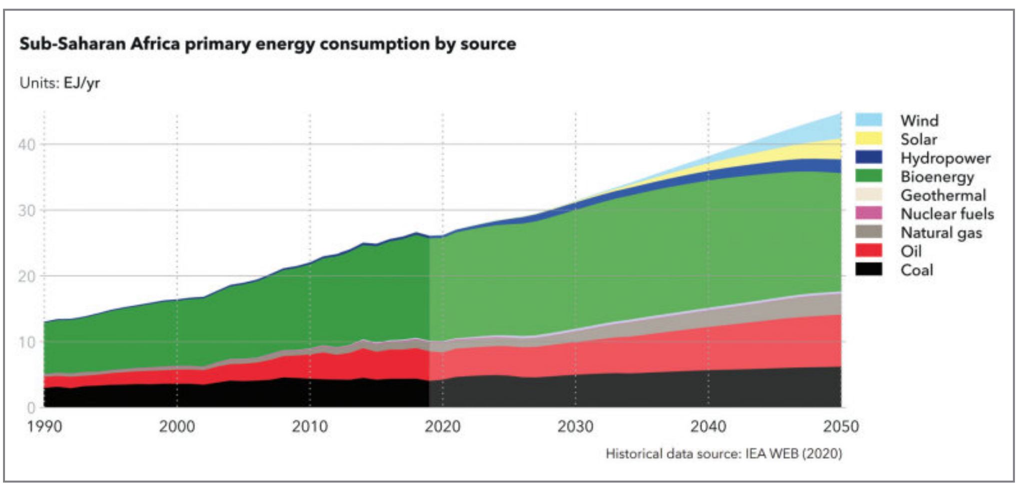


Image Credit: DNV

Renewables in SSA

Electricity's share in SSA's final energy demand will rise from 7% in 2019 to 19% in 2050, according to the report, which is the lowest share of all regions. Within the electricity mix, renewables will dominate in 2050, with hydropower and wind making up 26% and 30% respectively and solar providing 36%.

Biomass will remain the dominant source of energy by 2050, although its share will decrease to 40%, and oil and gas will increase slightly. The largest growth will come from solar PV and wind generation, however, the report added that as electricity's share in the final demand is relatively minor, uptake of these renewables is also lower than in many other regions.

SSA's energy-related CO_2 emissions will dip slightly in the coming years of lower growth after Covid-19 but will then rise, becoming 55% higher in 2050 than today. Emissions from coal, the largest today, will remain so in 2050, while oil and gas emissions will grow slightly. Despite this growth, SSA is expected to remain the region with the lowest emissions, primarily due to its population remaining by far the poorest. ■

DANFOSS SOUTH AFRICA TESTS ENERGY SAVINGS FOR FIXED SCROLL VERSUS INVERTER SCROLL TECHNOLOGY

There is no question that energy efficiency is swiftly becoming a key concern within the refrigeration and air-conditioning sector at a global level.

In addition, power supply constraints in some parts of the world, such as South Africa, are putting an added emphasis on expanding HVAC-R (heating, ventilation, air-conditioning and refrigeration) infrastructure using the same power supply.

Recent European studies by Danfoss estimated that the use of inverter technology could potentially lead to an energy saving of approximately 30% when compared to fixed speed technology. This figure is an average, taking factors into account such as:

- Design criteria
- Ambient temperatures
- Varying load conditions
- Door openings
- Products being stored
- and more.

Danfoss South Africa undertook a local study to measure the potential energy saving that

Image Credit: Danfoss

An Optyma fixed speed unit.

could be expected by using inverter technology. This was done both theoretically and physically, by setting up a practical experimental site in South Africa.

The study showed that a minimum of 30% in electricity savings could be realised in equally sized condensing units, when changing over from fixed speed scroll technology to inverter scroll technology. This saving only increases as cooling circuits are added to the inverter condensing unit.

This could lead to a 40% saving in electricity compared to traditional technologies with the inclusion of the following additional features, normally already incorporated in the evaporator controller:

- Thermostatic expansion to electronically controlled expansion (Danfoss MSS technology specifically)
- Implementing smart defrost cycles, including defrost on demand
- Pulsing of fans during the off cycle, and more.

Aside from electricity savings, further savings and optimisation features to be gained by using this technology include:

- Increased food safety due to accurate suction control, which directly leads to an upsurge in food shelf life
- Reduced sound levels (dB) due to compressor technology and EC fans
- A smaller footprint – one unit to run several cold rooms, as it can adjust to load
- Lower maintenance cost due to fewer components
- Reduced complexity and capital cost on installation.

Cummins highlights its expertise in hydrogen tech

At the 2nd MENA Energy Meet, Alan D. Kneisz, global business development director, Hydrogen and Fuel Cell, Cummins, elucidated the company's energy transition strategy, explaining how Cummins has been expanding its footprint across the world with its hydrogen technology, for a sustainable present and future. Cummins has built a diverse hydrogen technology portfolio and expertise in battery, fuel cell and hydrogen production technologies.

Kneisz shed light on how the demand for fossil fuels might dramatically decrease by 2030, giving rise to hydrogen energy demands, and how the MENA region is poised to become a world leader in fulfilling these. He highlighted the region's potential given the captive markets both locally and in Europe, having large demands of green hydrogen with aggressive decarbonisation targets.

Showcasing the highlights of Cummins' global leadership in electrolysis and fuel cell projects and its green hydrogen ecosystem, the presentation highlights also encapsulated the Cummins product line for both stationary and mobility applications, and the world's most advanced fuel cell modules.

The audience was led through the benefits of the advent of the hydrogen ecosystem, leading to zero emissions, and as a low-cost alternative over CCUS. The focus was also on ease of adoption, achieved easily through zero-emission funding for carbon reduction in cities and with local partnerships. Alan explained how Cummins is well placed to achieve scalability for hydrogen and fuel cells production and deployment in the MENA region, a fact backed by their real-world implementations in commercial applications, which include the world's first large FCEV bus fleet and the world's largest fuel cell project with Alstom.

John Deere introduces new models to sub-Saharan Africa

Since announcing an expansion of its construction equipment into sub-Saharan Africa in March 2021, John Deere has added an additional nine machines to its line-up of 17 machines previously offered on the market.

Along with the 315SL Backhoe Loader, which is suited for operations in confined spaces, the company has added the 310L Backhoe, a more general-purpose machine. The 310L runs a 63 kw engine, four-speed PowerShift transmission, with a digging depth of 4.2 m, loading height of 3.1 m and a bucket capacity of 0.96cu.m.

Image Credit: John Deere

John Deere has introduced an additional nine machines to sub-Saharan Africa.

The 744L Wheel Loader, an addition to the current five models already offered on the market, is designed with the mining and quarry customer in mind. This model runs a 236 kW engine, 3.8 to 5.25 cu.m bucket capacity range and an operating weight of 25.3 tons.

Alongside the John Deere 850J-II Dozer, John Deere has added the 750J-II, also introducing the 950K and 1050K Dozer models. These machines can handle mass excavation and road-building tasks, and are equally adept at fine grading and site development. The dual-path hydrostatic (HST) transmission allows the operator to push a full load through turns without losing material, unlike with torque-converter transmissions.

The company has added the 312GR and 318G Skid Steer to the portfolio. With more than 100 John Deere attachments available, they can service a wider spectrum of applications.

The John Deere 310E and 460E Articulated Dump Trucks (ADTs) are also now available.

John Deere also offers tools for improved fleet management and productivity. JDLink, the John Deere telematics system, allows owners and managers to remotely connect to their machinery to help monitor and track operations and productivity. JDLink is free to users.

BOMAG LAUNCHES NEW SERIES OF COLD PLANERS

BOMAG has launched its new BM/65 series of cold planers. With a CECE operating weight of only 27 tonnes, the BM 2000/65 is the lightest planer currently available in the two-metre class. The special lightweight design and the shorter conveyor belt now make the planers even more flexible to use.

The new generation of planers features numerous innovative details promoting efficiency, ease of operations and work safety.

The front contour's slim design and the position of the operator's platform make it easier to work precisely and safely and enables a tight turning radius of only 1.7 m. The flat rear profile, optimised for visibility, increases safety when manoeuvring. The obscured area behind the machine can be viewed seamlessly with the camera system.

The 640 hp engine complies with Stage V and TIER 4f emission standards and, equipped with the Ion Dust Shield, the BM/65 renders fine dust particles harmless.

ELECTRIC DRILLING RIG INTRODUCED

BAUER Maschinen GmbH has introduced the new eBG – the first electric drilling rig manufactured by Bauer.

The equipment relies on electrical power instead of a diesel engine, so it does not require any fossil fuels, and operates extremely quietly, making it perfect for use in cities.

"Electrification has entered our standard portfolio in the form of individual products as well as deep drilling technology," said Christian Heinecker, head of the Drilling Equipment division at BAUER Maschinen GmbH.

The new eBG 33 falls in the mid-range segment of the drilling rig series with a drive power of more than 400 kW, covering a wide range of applications on site. Apart from classical Kelly drilling, the eBG 33 can be used for high-performance methods, for example, soil mixing techniques such as cutter soil mixing (CSM) or double-head system drilling.

It is even possible to attach a Bauer trench cutter. The eBG can execute various methods for the construction of excavation pit walls as well as drilling large-diameter foundation piles.

To deliver the same capacity as a conventional Bauer BG with a diesel engine, the eBG 33 was developed using a direct power supply solution. An electric engine was installed instead of the diesel engine, and the power distribution is located where the tank would be. A transformer supplies various voltages for the electric control components.

The advantages of Bauer's award-winning Energy Efficient Power (EEP) system are also fully available for the electrified eBG.

"During project preparation, the total initial expenditure is higher, but the customer can reduce overall operating costs thanks to the highly-efficient electric drive system," said Heinecker.

BRIEFS

Image Credit: Doosan Bobcat

The LVL light tower is ideal for the rental market.

Portable light tower launched

The Portable Power business of Doosan Bobcat has launched the new LVL 50 Hz portable light tower for markets in the Middle East and Africa. Designed for reliability and durability, the LVL light tower - also available as a 60 Hz model - is ideal for the rental market. It has a compact footprint for increased job site mobility and cost-effective transport. Applications include special events, construction sites, emergency and disaster relief, oil and gas drilling, and mining and quarrying.

Image credit: Smith Power Equipment

The Kubota U17-3 excels in tight spaces.

New compact excavator

Smith Power Equipment has introduced the new Kubota U17-3, a 1.7-tonne compact excavator that offers greater power and smooth performance in space-restricted working environments. It replaces the predecessor U15 model. Kubota adopts a three-pump system, which uses three independent pumps for boom, arm and swivel to make the cooperation of bucket, boom and swivel as smooth and efficient as possible. Kubota mini-excavators were introduced to South Africa in 2015, and have proved very popular.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Tunnelling the Ngong Hills

South Africa once boasted Africa's longest railway tunnels - the Hex River tunnels - built in the 19th and 20th centuries. Today, several tunnel projects are underway in Africa, with a recently completed rail project, the Ngong Tunnel, in Kenya. Tim Guest reports.

Work on the Ngong tunnel employed the New Austrian Tunnelling Method (NATM) in its overall approach.

Africa is no stranger when it comes to major tunnel projects. The Hex River tunnel system on the Hexton rail route, from the northern station of Kleinstraat to the platforms of the Hex Valley's De Doorns stop, comprises four tunnels and finally became operational in 1989 over 40 years since latest-generation work began – it's complex history dates back even farther).

The Hex River system includes 30 km of track, 16.8 km of which is underground and included the longest rail-tunnel stretch at 13.5 km until, that is, when that accolade was given to Africa's latest longest single railway tunnel, the 15.5 km Gautrain line between Johannesburg Park Station and Marlboro Portal, which was broken through in September 2009.

Other non-rail tunnel projects include such as the Polihadi diversion tunnels on Phase II of the Lesotho Highlands Water Project mentioned in the September issue of African Review, p30.

SGR's Ngong Tunnel

However, it's the Ngong Tunnel, part of the 120 km Phase 2A of the standard gauge railway (SGR) Project linking Mombasa and Nairobi with the Ugandan border constructed by prime contractor, China Road and Bridge Corporation (CRBC), that is the focus here.

The SGR is owned by Kenyan Railways Corporation (KRC). It's the longest railway tunnel in East Africa at 7.14 km long, comprising three sections along the length of this single-track railway tunnel: one of 4.5 km at a depth of 108m; another 1.64 km stretch and the other, a 1 km stretch at a depth of 46 m. The sections were created using a series of steps in the vertical wall of the

"Africa is no stranger when it comes to major tunnel projects."

excavation to reduce wall height, thereby ensuring stability during construction in a three-bench, seven-step excavation method.

Work on the tunnel was continuous 24/7 shift work and employed the New Austrian Tunnelling Method (NATM) in its overall approach. This sequential excavation method, developed, might be expected, in Austria, is said to have become one of the most popular underground construction methods used worldwide for building road and rail tunnels through hills and mountains, under rivers and other water bodies.

Along the length of the tunnel are side walkways offering refuge access for workers or others if a train approaches when they are in the tunnel. Some 147 refuge caves line the tunnel walls at 30 m intervals and, as well as offering safe havens when needed, this walkway/refuge infrastructure also houses signal and electronics equipment relied on by both trains and the whole network.

Presidential Pressures

President Uhuru Kenyatta visited the tunnel during its construction in 2017 and at that time urged the CCCC, along with his Ministry of Transport, Infrastructure, Housing and Urban Development (MOTIHUD), to ensure all components of the SGR's second phase, including the Ngong Tunnel, were completed on time 'to hasten the realisation of the country's economic goals'.

One of those economic realisations connected to the second phase, apart from the Nairobi to Naivasha rail line, has also included the establishment of an economic zone in Naivasha, intended to incentivise business investments in the country.

Latest Operational Moves

CRBC's holding company, China Communications Construction Company (CCCC), had been contracted to have its subsidiary, Africa Star Railway Operation Company, operate and maintain the line over a 10-year period until 2027. However, it was announced by the government in the spring that the contract with CRBC to run the 480 km line, including the Ngong Tunnel section, would end early and operation would be taken over from Africa Star Railway Operation Company by KRC in May 2022.

Indeed, fuelling, security, and ticketing services are already being handled by KRC. A five-year review point option was exercised in terminating the contract early; it has been reported that the government had become concerned about high running costs of the line being incurred with the Chinese; 2019's operations and maintenance fees alone owed to Africa Star came in at over US$340m. Kenya's parliament made a recommendation in September last year to reduce the huge costs and losses being incurred and it is now expected that, under KRC control, over US$120m will be saved annually in O&M costs.

The move will also ensure that critical SRG positions will be taken over by Kenyans from May next year; most senior posts had, until this decision, been held by Chinese personnel. ■

Nairobi - Naivasha Standard Gauge Railway Project Schematic Plan

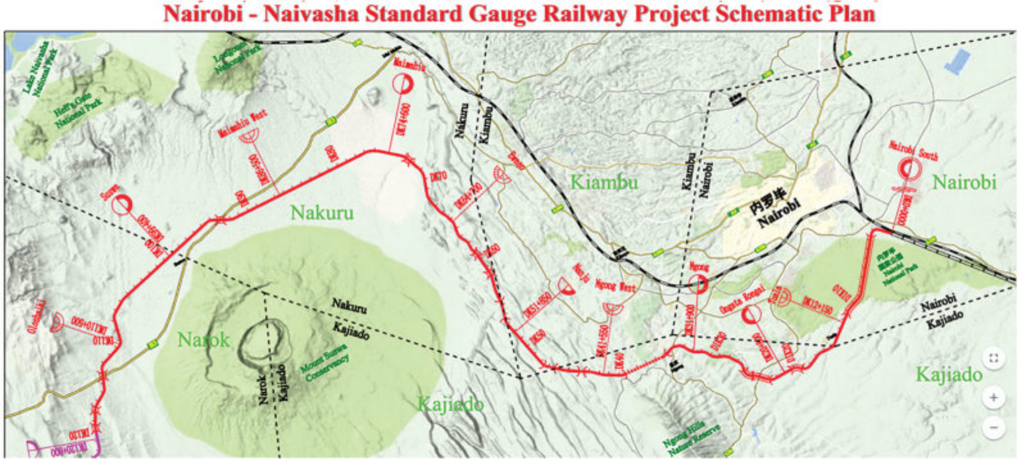


Image Credit: KRC

Schematic of the SGR including, represented by a dotted line, the Ngong Tunnel section.

> "The New Austrian Tunnelling Method is said to have become one of the most popular underground construction methods used worldwide."

Image Credit: PDU

President Uhuru Kenyatta visited the Ngong Tunnel during its construction and urged that all components of the SGR's second phase were completed on time.

Inside Nachu Tunnel one of the three sections of the Ngong Tunnel.

Image Credit: Kenya Railways

Uganda targets infrastructure development

Uganda is setting the pace in the development of infrastructure, with the construction of several projects making noticeable progress.

Uganda is wasting no effort recouping lost time from the Covid-19 pandemic, progressing in the construction and commissioning of key projects across the country. Most notably, with the country relying on its road network for the movement of more than 90% of its goods and passenger traffic, the government has embarked on the reconstruction of several bridges and roads in order to support private-led growth to enable economic development and poverty reduction.

The Ugandan government has embarked on the reconstruction of several bridges and roads in order to support private-led growth.

Image Credit: Adobe Stock

Mpanga-6 Bridge

The Prime Minister of Uganda, Robinha Nabbanja has commissioned the Mpanga-6 Bridge in Kabambiro sub-county, Kamwenge District. The bridge, fully funded by the government of Uganda, represents a new critical piece of infrastructure to ensure connectivity and mobility so that people can engage in trade and access services.

Construction on the 30-metre bridge was commenced in February 2019 and was completed in December 2020 by Armpass Technical Service, under the supervision of the Uganda National Roads Authority. It now formally handed over to the Kabambiro sub-county community.

With a lifespan of 120 years, the bridge has revolutionised the route, as before it was impassable and a deathtrap to many travellers, according to local residents. Part of a lot of four bridges, the Mpanga-6 Bridge is expected to significantly contribute to the economic development of Uganda.

> "The Mpanga-6 Bridge is expected to significantly contribute to the economic development of Uganda."

Ssezibwa Swamp Crossing

Upon completion, the Ssezibwa Swamp Crossing will connect Nakasongola and Kayunga Districts and is considered to be of great economic importance, since it will ease congestion and traffic on the Gulu highway from Kampala.

Omega Construction was contracted in early 2019 to deliver the project in a period of 18 months but has so far failed to do so despite extending the project twice. Under complaints from district leadership (focused on the use of poor and old equipment), Minister of State for Works, Musa Ecweru tasked the contractors to have the project completed within the next two months. Omega Construction has since promised to have the box culvert in place within this grace period.

Gulu Logistics Hub

The construction and completion of the Gulu Logistics hub is scheduled to be completed on time and will coincide with the rehabilitation of the Tororo-Gulu metre gauge railway line.

The contract for the construction of the access road to the hub has now been awarded and works are awaiting compensation of the project-affected persons.

This hub is designed as a dry port with both rail and truck terminals containing warehouses, container terminals and general lifting equipment. The facility will offer handling and storage services, space for stakeholders dealing with freight transport, and more.

Ecweru commented, "The Gulu Logsitcs hub upon completion is expected to facilitate logistic movement in Uganda through the Northern Region by reducing transport costs, improving effectively in the movement of goods and serving South Sudan as well as DRC."

The project is expected to be commissioned in June 2022.

More to come?

The flurry of construction work around infrastructure in Uganda is set to continue through international investment after an encouraging visit from the Qatar Ambassador to Uganda, Jabor Bin Ali Al-Dosari. The ambassador expressed great interest in bolstering the bilateral relationship between Uganda and Qatar, adding that he is looking into investment opportunities to help benefit the economies of the two nations.

At the conclusion of the meeting, Al-Dosari delivered an invitation to Minister Gen Katumba Wamala to visit him in Qatar in order to identify areas of infrastructure investment in Uganda. ■

Cranes on the continent

As the construction industry recovers from Covid-19, cranes are in hot demand for businesses and new projects across the continent.

Framed by two Liebherr LRT rough-terrain cranes: The first LTM 1230-5.1 in Africa.

Image Credit: Allied Crane Hire

Liebherr has positioned itself to take advantage of the construction boom in Africa by releasing a steady stream of machinery capable of servicing even the most challenging projects.

The company has delivered the first LTM 1230-5.1 mobile crane to Africa, which was supplied to Allied Crane Hire, a company based in Cape Town, South Africa.

This customer bought its first crane 20 years ago and noted that the long telescopic boom of the 230-tonne crane and technical innovations such as VarioBallast, VarioBase and the Liebherr Single Engine Concept were important decision-making criteria. Because of this, the LTM 1230-5.1 has become the latest addition to their fleet.

The engineers at Liebherr-Werk Ehingen GmbH put the multi-award-winning VarioBase support technology at the heart of the structural steel construction when creating the concept for the LTM 1230 5.1. This makes it the first crane to have an asymmetrical support base.

"Thanks to VarioBase, it's now possible to enable really high lifting capacities, especially in the rear working area, over the 8.1 metre wide supports – calculated in real-time by the LICCON controller", explained Erik Benz, head of the mobile and crawler cranes division at Liebherr-Africa.

"This new digitalisation option has a major influence on the structural steel technology, while enhancing customer benefit in the form of increased lifting capacities."

Allied Crane Hire also appreciated the many other technical Liebherr innovations, such as the Single Engine Concept and ECOmode, which reduces fuel consumption and noise emissions.

"Many of our working conditions are really tough – so efficiency is a fundamental requirement for all the machines we operate. The new LTM 1230-5.1 is characterised by high performance, economy and flexibility – thanks to Liebherr's systematic advancement of successful technologies," stated André Engelbrecht, managing director at Allied Crane Hire.

"Crane experts will agree that Liebherr has the best technology in mobile and crawler cranes and is a pioneer in the industry."

SANY in action in Kenya

Elsewhere providers are mobilising their cranes to help construct the most remarkable projects under development across the continent.

In 2012, China National Chemical Engineering Group Corporation Ltd. and Nigeria's Dangote Group signed two contracts worth US$100mn for the construction of key structures of the Dangote Petroleum Refinery.

This facility, covering an area of approximately 2,635 hectares in the Lekki Free Zone near Lagos, is expected to produce 650,000 BPD of crude oil (which will go a long way to solving the country's fundamental oil shortages) and will be Africa's biggest oil refinery and the world's largest single-train facility.

For the construction of the crude oil distillation unit, gasoline desulfurisation unit, hydro cracking unit, naptha hydrotreatment unit, platinum reforming unit, steel structures and underground pipes, SANY was contracted to supply its machines.

For the project, the company has brought into operation 44 crane units which have been working on the site since it began, two years ago.

At the China-Africa Economic and Trade Expo SANY will build on this performance by presenting new products for the African market. Amongst the 15 new machines is a crane which is specially designed to meet the demands posed by the African construction industry, ensuring the company is well suited to feature in the development of notable projects in the future. ■


Image Credit: SANY

44 SANY crane units have been in operation for the project.

Advancing Africa's asphalt industry

Investment in upgrades and new highways will drive African demand for asphalt. Martin Clark

Linnhoff TSD 1500 MobileMix asphalt plants, a popular choice for road contractors in Ethiopia.

Image Credit: Lintec & Linnhoff Asphalt Pte Ltd

Strong investment in roads and infrastructure across Africa is expected to help the asphalt industry as it recovers from the economic headwinds of the past year and a half.

In Ethiopia, Lintec & Linnhoff has been enjoying great success supporting the nation's roads expansion.

In 2018, the Ethiopian government announced an ambitious programme to double the length of the network to 200,000 km, which kick-started a series of new projects.

It also prompted contractors to look for fast and efficient construction technology to support their road building activities, with several turning to Linnhoff TSD 1500 MobileMix asphalt mixing plants.

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

Lee Yen Meng, chief executive of Lintec & Linnhoff Asphalt Pte Ltd, said the Linnhoff TSD 1500 MobileMix asphalt plant offers a perfect balance of performance, reliability, and return on investment for owners, with minimal maintenance.

"More importantly for Ethiopia, they are easy to mobilise thanks to an innovative design that focuses on conformity to standard road transportation regulations. Ethiopia is a landlocked country, so customers really appreciate the versatility, ease, and efficiency of relocating the TSD 1500 from one project site to another."

> "Strong investment in roads and infrastructure across Africa is expected to help the asphalt industry."

The asphalt plants boast a rated production capacity of 120 tonnes per hour (at 3% moisture content), while the built-in chassis provides fast mobilisation, making it ideal for short-term projects or work in remote locations.

Some of the road projects that feature Linnhoff TSD 1500 MobileMix asphalt plants include:

- The 59 km Ginchi-Shikute Road and the 60km Shikute-Chulute Road in the Oromia region, valued at around US$40mn
- The 84 km Alem Ketema-Degolo Road Upgrade, valued at around US$28.6mn
- The Turmi-Omo Road, which will connect the Omo Kuraz Sugar Project with Turmi, expediting sugar production at the factory and increasing tourist inflow to the Omo Valley, valued at around US$18m
- And the 17 km Maichew-Mehoni Road as well as the 20 km Harar-Jijiga Road

Best practice

As well as responding to the needs of clients, industry innovation continues, drawing on the use of data to improve standards, products and performance.

In South Africa, a major operating system software upgrade is enabling AECI Much Asphalt to identify and standardise best practice across its multiple manufacturing facilities.

This includes modernisation of the database to enable the generation of live plant reports that can be used to confirm the integrity

of the asphalt and evaluate consistency across 15 separate sites.

Data from the plants, as well as weighbridges and laboratories, can be produced and interpreted on the same platform to link all aspects of the production process from design through to distribution for each plant.

The data includes the date and time of the batch, the recipe used, and measurements such as rate of production, bitumen tank temperature logging, bitumen and fuel level readings, as well as cold feed outputs.

"The benefit to our customers will be our ability to deliver a better-quality product on spec and on time," said Colin Brooks, group plant technical manager. "As we improve and standardise the best practices across all plants, we will also see an improvement in our energy usage, which will help to reduce our carbon footprint."

Brooks says that further upgrades are planned to enable live tracking of stock usage, which will assist in achieving quick and efficient stock management, with the system fully automated by the end of 2021.

AECI Much Asphalt, southern Africa's largest commercial asphalt manufacturer, is taking other steps to bolster its eco credentials.

In April, it forged a partnership with Origin Materials of the US, a leading carbon-negative materials company, to create a novel low-carbon bitumen.

Central to this will be Origin Materials' patented technology platform, which turns inexpensive, sustainable wood residues into cost-advantaged, carbon-negative materials that reduce the need for fossil resources.

The move reflects growing interest more broadly in improving the industry's environmental footprint. ■

In Ethiopia, Lintec & Linnhoff has been enjoying great success supporting the nation's roads expansion.

Image Credit: Lintec & Linnhoff Asphalt Pte Ltd

Wirtgen at 60: A success story of people and machines

This year, Wirtgen celebrates its 60th birthday. The group's innovative products and technologies have now been shaping road construction for six decades and are synonymous with efficient and cost-effective construction methods.

In addition to Wirtgen cold milling machines — which are found on virtually every road rehabilitation construction site — the machine manufacturer also produces technologically leading recyclers, soil stabilisers, slipform pavers and surface miners.

And it's a familiar face right across Africa's roads and construction sector, as it continues to shape the industry today with its groundbreaking solutions.

The current milestone in cold milling technology is the company's F series of large milling machines. With this range of high-performance machines, Wirtgen is setting new standards in terms of efficiency and resource friendliness, as well as in the digital documentation and evaluation of milling construction sites. As was the case when Wirtgen made the revolutionary switch from hot milling to cold milling in the 1970s, the company is once again taking a major evolutionary step in road construction.

The era of cold milling began in 1979 when the Wirtgen SF 3800 C completed its first milling operation on the A3 carriageway between Frankfurt and Cologne.

Image Credit: Wirtgen

Mobile and versatile Blend concrete mixing plants

Blend Plants, a company specialized in manufacturing automated mobile plants for the production of concrete, cold asphalt and recycled material, produces around 130 plants a year, distributed all over the world.

Since 2007, Africa has become one of Blend's major commercial stakeholders and, today, the company has dealers and clients all over the continent in countries such as Egypt, Ethiopia, Congo Kinshasa, Ghana and Uganda with recent openings in Burkina Faso, Mali and Niger. Recently the CEO of Blend, Paolo Biglieri, became the vice president of Confindustria Assafrica & Mediterraneo, the Italian private association for industry, in order to connect the Italian industrial sector with the growing African economy.

Blend machines are known for their versatility and implementation of new technology. Automation in the production process is fundamental to Blend Plants, while innovation remains an important feature of business. Maintaining such standards is the result of many years of experience combined with the attention to construction aspects in order to understand the clients' needs and to offer tools to improve the quality, efficiency and profitability of their work.

The A240 plant

Blend Plants is always looking to improve its machines and design new models. Among the most innovative products designed by Blend, the mobile A240 plant is the most revolutionary proposed in the last few years. This high output plant has changed the production in large work sites and in the recycling process. The A240, in fact, represents a truly mobile plant, easy to transport on a standard low loader truck, fast to set up and simple to operate.

Variable speed belt conveyors transfer the aggregates from the hoppers to the twin shaft intensive mixer. Dosing of cement and additives is by weight (negative weighing, to give greater accuracy and reliability) and dosing of water, emulsion and other additives is electronically controlled by the onboard PLC. GPS and remote control systems allow customers to have complete management information regarding production and stock levels at all times.

E-series range ensures zero waste

Another Blend product which has a high market demand is the E-series range of mobile plants, with four models differing in size and aggregate capacity: E015, E025, E050 and Seventy.

Thanks to the internal structure which stocks raw materials in separate compartments, there is no waste of material, and only the necessary is mixed in small or large quantities. By changing the recipe it is possible to mix different qualities of concrete with the same load.

This Blend plant is used for mixing cold asphalt in Congo.

Image Credit: Blend Plants

The compactness and mobility of Blend plants allow them to operate even in the most remote or difficult to reach construction sites.

E-series plants are available with a wide range of optional equipment, and can be coupled with Blend's well-designed range of horizontal cement silos. All models can be installed on truck, rail wagon or fixed or hydraulic supports for greater autonomy and safety.

One main feature of Blend Plants is to satisfy the client's requirements, hence each plant is a unique tailor-made piece.

The last E-series optional recently presented is an upgrade of the Seventy model, renamed Seventy.2 due to the introduction of a continuous double twin shaft paddle mixer. The Seventy.2 offers larger production outputs and can mix "difficult" materials due to its more powerful mixer: all the compactness of Seventy together with the power of A240!

Furthermore this year Blend developed a new control panel for an even easier and intuitive use of the plants by the operators. The new panel allows a remote control from the client's head office and also a remote assistance by Blend technicians as well as the traditional Blend system of precise weighing of materials and the accurate recipe control.

Each Blend plant can produce different types of concrete, cold asphalt and mix 100% of recycled aggregates. Together with Betonblock molds, a Dutch brand, Blend machine represents a smart solution to use recycled material from construction waste, for the production of modular concrete blocks.

Blend Plants is a constantly growing company; its goal is to improve year after year by providing innovative solutions to meet the needs of the present. ■

More information can be found on Blend Plants' website: https://blendplants.com/

Blend E050 mounted on truck for the production of concrete

Image Credit: Blend Plants

Schneider Electric partners with AVEVA for Vale mining operations

Image Credit: Schneider Electric

Vale is improving safety, sustainability and efficiency of its mining operations with technology from AVEVA and Schneider Electric.

Schneider Electric, one of the leading providers in the digital transformation of energy management and automation, and AVEVA, a global leader in industrial software, are unifying Vale mining operations to improve safety and sustainability.

The combination of AVEVA and Schneider Electric software, technology and mining domain expertise is providing Vale with the ability to integrate, centralise and remotely monitor operations across its Mariana and Itabira complexes.

Vale ranks among the top five largest mining companies in the world. The world's leading producer of iron ore, pellets and nickel employs a global workforce of more than 170,000 people in 38 countries.

Through the partnership, Vale is set to unify operations across multiple sites and upgrade its old system to one capable of remotely controlling all the diverse technologies operating across each mining facility.

"The collaboration between our companies has created something much greater than the sum of its parts," said Gilberto da Cunha Vieira, electrical and automation engineer leader, Vale.

Schneider Electric deployed EcoStruxure Control Expert – Asset Link, combining AVEVA System Platform and Schneider Modicon M580, to provide visibility and unify operations for Vale. The technology enables data to be integrated directly into the system, so Vale's managers have granular insights without having to manually transfer any intelligence. By bringing this data together, Vale can now create a master operations center and remotely manage everything. This greatly improves operational efficiency and means less people are onsite, providing a significant boost to safety.

"Mining operations are data-rich environments where digital transformation can drive sustainability and productivity gains for improved asset utilisation and enhanced value optimisation," commented Marc Ramsay, vice-president, global strategic partners, AVEVA. "Together with Schneider Electric EcoStruxure, AVEVA System Platform supports Vale in realising the mines of the future through contextualised operations built on a collaborative, standards-based foundation that unifies people, processes and assets across all of Vale's facilities for continuous operational improvement and real-time decision assistance."

AFRITIN MINING PROVIDES QUARTERLY PRODUCTION UPDATE

AfriTin Mining Limited (ATM), an African tin mining company with its flagship asset, the Uis Tin Mine (Uis) in Namibia, has provided a quarterly production update for Q2 of the 2022 Financial Year.

Tin concentrate production for Q2 totalled 185 tonnes, exceeding the target of 180 tonnes for the third consecutive quarter. Other highlights included a strong operational performance, supported by a 9.9% increase in processing plant throughput and a 10.2% improvement in tin recovery, and the implementation of Uis Phase 1 expansion project, which is projected to increase tin concentrate production by 67%.

Anthony Viljoen, CEO of ATM, commented, "During the quarter we commenced the early implementation work and long lead item ordering for the Uis expansion programme which will see the processing plant produce 67% more tin concentrate."

ARCELORMITTAL SIGNS LANDMARK AGREEMENT WITH GOVERNMENT OF LIBERIA

The Government of the Republic of Liberia and ArcelorMittal, global steel company, have signed an amendment to the mineral development agreement (MDA) with an aim to significantly ramp up production of premium iron ore, generating significant new jobs and wider economic benefits for Liberia.

The expansion project – which encompasses processing, rail and port facilities – will be one of the largest mining projects in West Africa. The capital required to finalise the project is expected to be approximately US$0.8bn, as it is effectively a brownfield expansion.

The expansion project includes the construction of a new concentration plant and the substantial expansion of mining operations, with the first concentrate expected in late 2023, ramping up to 15 million tonnes per annum (mtpa). Under the agreement the company will have reservation for expansion for at least up to 30 mt. Other users may be allowed to invest for additional rail capacity.

As the largest foreign investor in Liberia, ArcelorMittal Liberia has invested more than US$1.7bn in the country over the past 15 years. More than 2,000 jobs are expected to be created during the construction phase, with Liberians envisaged to fill the majority of the roles created.

ArcelorMittal operates a vocational training centre and provides two-year residential certificate training in mechanical and electrical trades. As part of the expansion, ArcelorMittal Liberia has also launched a training and development programme for high potential Liberian employees who will gain on the job experience and knowledge in ArcelorMittal Mining operations globally.

BRIEFS

Evoquip celebrates five years of crushing

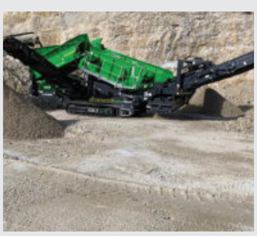


Image Credit: Evoquip

Colt 1600, powerscreen crushing and screening.

EvoQuip, a compact crushing and screening, has celebrated five successful years in business via a virtual hour-long celebration attended by almost 100 distributors around the world.
Launched at Hillhead in 2016 to bring a simplified range of equipment to the crushing and screening industry, EvoQuip has grown from strength to strength to become one of the top three compact crushing and screening brands in the world.

Multotec adopts a number of sustainability initiatives

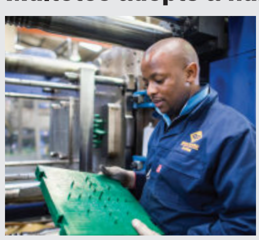


Image Credit: Multotec

Multotec recently had its SABS certification.

Sustainability has become a key driver for leading minerals processing equipment specialist Multotec, promoted by its efforts in range of environmental, social and governance (ESG) initiatives.
Johan Robbertse, group financial director at Multotec, highlighted that its 'Our Multotec Way' guides the culture and vision of the business in various aspects of sustainability. This approach reflects in the way that the company nurtures its people and conserves energy and water resources.

TOMRA equipment deployed at the Letseng Mine.

Image Credit: TOMRA

Sensor-based technology to drive green mining evolution

Africa's mines have been tasked with improving their eco footprint as climate change concerns come into focus. TOMRA is a company that can help. ATR speaks to Albert du Preez, head of TOMRA Mining, about the opportunities and challenges ahead.

Image Credit: TOMRA

Albert du Preez, head of TOMRA Mining.

TOMRA, a world-renowned sorting company, creates sensor-based solutions for optimal resource productivity working across various fields, from mining to food and recycling.

In the mining sector, it's an enticing prospect, especially in the climate change era.

The company's products are already helping operators to enhance their sustainability credentials through improved processing, removing valuable materials from waste and boosting recovery rates. This leads to improved unit costs, up to 50% lower energy consumption, and a reduction in the overall water usage of 3-4M³/T.

"The moment you do that you really start to reduce the footprint of your entire downstream processing system," Albert du Preez, head of TOMRA Mining, told ATR in an interview.

The diamonds sector has been among the first to embrace sensor-based technology over the past 25 years, as has the industrial minerals sector (phosphate, limestone, quartz).

Serving Africa

TOMRA's client list now extends right across Africa, from Lesotho to Sierra Leone, and its sensors are being used in a wide variety of mines and locations.

They include Lucara Diamonds' Karowe mine in Botswana, where the company's X-Ray Transmission (XRT) equipment recovered the Lesedi La Rona — the world's largest gem-quality diamond discovered in over 100 years — back in 2015.

There are now 16 TOMRA XRT sorters operating at the mine, each capable of treating up to 150 tons per hour in over 8,000 hours per year.

TOMRA's state-of-the-art XRT machines are the key revenue driver for TOMRA Mining, but the company also offers other sensor-based sorting technologies including laser, colour, Near-Infrared (NIR) and electromagnetic (EM).

Altogether, TOMRA now has over 100,000 installations in over 80 markets worldwide, says du Preez.

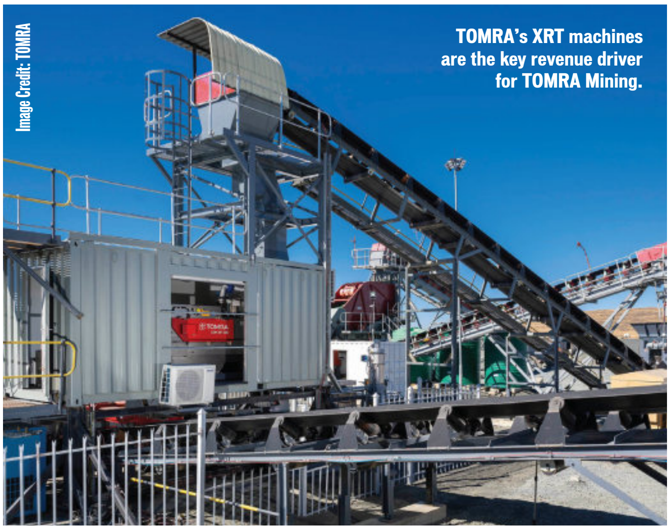
And there is plenty more room for growth, as operators worldwide seek to simultaneously improve mine economics and raise their sustainability profile.

Last year, TOMRA opened a new Johannesburg headquarters to support its thriving business in Africa and meet this growing demand. And with the new Final Recovery XRT sorter, TOMRA is the only manufacturer able to offer diamond mining companies a complete sorting solution, from pre-concentration to concentration all the way to final recovery.

> "We want to enable mining to become sustainable and environmentally-friendly, and to truly add value within the industry."
>
> ALBERT DU PREEZ, HEAD OF TOMRA MINING

"We are passionate about leading the resource revolution," says du Preez. "We want to enable mining to become sustainable and environmentally-friendly, and to truly add value within the industry."

At the same time, ethical mining remains an overarching concern. "We are very prudent in terms of only doing business with companies that are deemed appropriate to do business with from a corporate governance perspective," he adds. "Our end customers are truly important to us."



TOMRA's XRT machines are the key revenue driver for TOMRA Mining.

Adapting to the modern era

According to du Preez, there is a way in which the mining industry can square up to many of the challenges it faces in the modern era, notably around environmental concerns.

"The mining industry is maybe seen as contentious, potentially unsustainable, or 'dirty', but like anything in the world if you give it enough attention, you can change things to be far more sustainable."

The notion of the circular economy is integral to the thought process at TOMRA, reusing materials where possible to capture value and soften any impact on the planet, using sensor-based technology and new, disruptive technologies as enablers.

Crucially, it believes that technology can drive both the economic and environmental case.

"With sensor-based technology you can do both. You can definitely reduce your unit costs of producing your raw materials and, at the same time, significantly improving sustainability and reducing the impact on the environment."

Africa is leading the shift towards sustainability, being less risk averse compared to much of the mining sector globally, so that it is often more willing to embrace new ideas and technology.

"In Africa, we actually see people being a bit more innovative, a bit more open minded because of the challenges they face. They see that, often, sensor-based sorting can solve challenges that traditional unit processes cannot overcome."

Looking ahead, du Preez can see further potential in the volumes of data generated from its sensors, as digitalisation of the mining industry expands.

This data can flag up valuable mine information — anything from particle size distribution and throughput to percentage waste on product in the feed — that can have a material bearing on costs and productivity.

This kind of data can now be pulled into the TOMRA Insight cloud-based system and processed into actionable information made available to clients.

"The world is going digital and is going in the direction of data. So from a TOMRA perspective, the amount of data that we generate is of real worth." ■

ASPASA joins global cooperation on mine training

Due to dwindling skills in the area of surface mining, members of the Global Aggregate Information Network (GAIN) have signed a global cooperation agreement in order to pool and share information for training purposes.

South Africa's surface mining industry association, ASPASA, is a long serving member of the network and has indicated its willingness to work with similar bodies in Europe, Americas, Asia, Australia and elsewhere to share information for training purposes.

According to ASPASA director, Nico Pienaar, a wealth of information already exists across the globe and by sharing and working together mining organisations can learn from each other and customise training material that has been developed in other regions.

"For example, India has developed virtual reality training in subjects such as hazard avoidance, brake management, operation productivity, fuel efficiency, site safety procedures and many more. The idea is that this type of training will be made available to GAIN members at a modest cost. Similarly, material may be made available from New Zealand, Malaysia, China, USA or anywhere such organisations are active and members of GAIN," Pienaar stated.

"We can also learn and develop training based on the finding of counterparts across the globe


By sharing and working together mining organisations can learn from each other and customise training material that has been developed in other regions.

such as Europe. Here studies show that new skills are required in areas like treatment of construction and demolition waste — recycled aggregates, assessment of biodiversity and environmental management during operations, restoration of active and closed sites, operation and maintenance of new (electrified) machines, renewable energy (wind turbines, solar panels), etc."

Pienaar continued, "Working together we are better equipped to develop much needed training material more quickly and this allows us to respond to emerging requirements more quickly. Like similar organisations belonging to the GAIN network, ASPASA also has a wealth of information and infrastructure that may assist miners in other parts of the world."

He adds that the association has a dedicated education and training committee and that they will work with other GAIN members, as well as local training providers, to source and develop material for the local market. ASPASA is also able to assist local career seekers and employees of its member companies to identify career paths and find suitable training and qualifications to achieve career goals.

Terex Trucks rebrands as market rebounds

Articulated hauler specialist Terex Trucks has rebranded as Rokbak, in line with its new vision for the future.

A Rokbak hauler in the new colours.

Image Credit: Rokbak

At a digital launch event it was announced that Rokbak is the new name for Terex Trucks, with the company adding that the new brand represents the continuation of its strong hauling heritage with a future-focused vision.

Paul Douglas, managing director of Rokbak, commented, "Seven years ago, we became a member of the Volvo Group, which allowed us to make major improvements in every part of our business. Millions of pounds have been invested in improving our products, modernising our facilities, expanding our network, and developing our people. It has been a process of continual evolution. That's why we feel it's right to recognise this evolution with a new brand name to launch an exciting new chapter in our history."

A firm foundation

With their foundation in the predecessor models from Terex Trucks, the 28-tonne payload RA30 and 38-tonne payload RA40 from Rokbak have been designed with a focus on productivity and efficiency and, as part of the new brand launch, the machines now come in Rokbak colours and livery.

While maintaining the experienced design, craft and precision that are synonymous with the company's haulers, the RA30 and RA40 deliver better fuel economy, lower emissions, improved safety, and greater durability.

"We're very excited to reveal our new brand, and of course our haulers are the shop window," continued Douglas. "We're still the same skilled, experienced and passionate team, committed to making rock-solid haulers every day. But we also have a clear vision for where we want to go and who we want to be."

As part of the Volvo Group, Rokbak has focused on developing four key areas: product design, sustainability, safety, and people.

In product design, the company has introduced Stage V engines for better fuel efficiency and operation for customers. Other improvements include a new transmission on the 28-tonne (30.9-ton) machine, the introduction of the Haul Track telematics, and a stronger focus on operator wellbeing and safety. In terms of sustainability, the company's manufacturing plant has shifted to 100% renewable energy, as well as operating within science-based targets and ISO standards, along with targeting CO_2 emission reductions.

> "We're still the same skilled, experienced, and passionate team, committed to making rock-solid haulers every day."
>
> PAUL DOUGLAS, MANAGING DIRECTOR OF ROKBAK

Changes in processes at the factory have seen a stronger concentration on maintaining employee safety, while simultaneously delivering high standards and low downtime. For the company's people at the heart of Rokbak, there is a continual focus on professional development, keeping the team at the forefront of skill and expertise.

A rejuvenated market

This re-brand signifies the company's intent to take advantage of the continent's burgeoning mining industry which is rebounding after the difficulties incurred by the global pandemic.

This has most recently been exemplified in South Africa, a key market for Rokbak. The Department of Statistics of South Africa (DSSA) have announced mining production in the country increased by 10.3% year-on-year in July 2021 with the largest positive contributors coming from iron ore, PGMs, chromium ore and gold. Additionaly, mineral sales at current prices also increased, jumping by 32.6% year-on-year in the month. ■

KAL TIRE PARTNER PITCREW AI TO ENHANCE MINE SAFETY

Leading mining tire supply and management partner, Kal Tire's Mining Tire Group, and computer vision specialist Pitcrew AI, have formed an agreement that will bring mines autonomous detection of hot tires, tire separations and other tire and mechanical damage any time, anywhere and without the vehicle needing to stop.

With inspection anomalies automatically transmitted into TOMS, Kal Tire's proprietary Tire Operations Management System, the integration between Pitcrew and TOMS enables action and decision-making that will further enhance fleet productivity and safety.

The automated inspection stations monitor front and rear tires of mining trucks passing by. The AI software searches the thermal imaging video footage for anomalies such as hot spots, belt edge and tread separations and other mechanical problems. These findings are reported into TOMS. The system then automates inspection work orders as part of a self-reinforcing feedback loop and then schedules tire change work as necessary.

Image Credit: Kal Tire

Kal Tire & Pitcrew AI team up to bring autonomous tire inspections to mines.

With the system demonstrating proven success operating in hot weather regions in Western Australia, Kal Tire has worked with Pitcrew to develop a cold weather version capable of withstanding temperatures of -45C°.

With a range of customers showing definitive interest in the system, Kal Tire and Pitcrew expect to extend the number of automated inspection stations operating across Kal Tire serviced sites using TOMS in 2022.

"We knew if we wanted to give customers the ability to make better operational decisions – and be a part of the future of autonomous mining – we'd need to add external telematics to the mix," commented Dan Allan, senior vice president, Kal Tire's Mining Tire Group.

Condra recover ore with underground jib crane

Condra has designed and manufactured a very large jib crane for bulk recovery underground of ore spilled at an unnamed mine.

Delivered last week, the five-tonne crane has a lifting height of nine metres, a slewing radius of five metres, and is equipped with an orange-peel grab and electromagnet combination that allows bulk ore to be gathered, lifted and positioned, while simultaneously separating out the iron ore within it by means of the electromagnet.

After installation and commissioning at surface level for trials, the crane will play a key role in a prototype ore recovery process.

Ore spilled along the conveyor lines will first be recovered by small articulated loaders which will place it on dump trucks for depositing in a purpose-built pit. The jib crane will then retrieve the ore from the pit by means of a combined grabbing, magnetising, lifting, slewing and travel functionality, depositing the ore into a feed hopper from where a secondary conveyor belt will transport it to re-join the main ore stream on its way to the crushing plant.

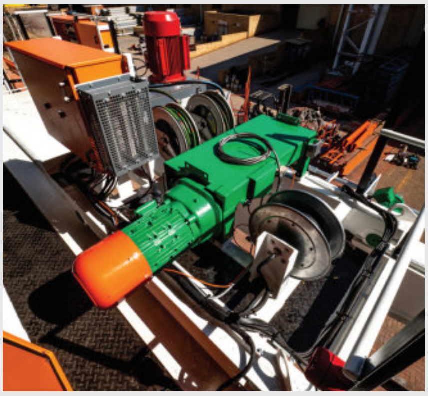


Image Credit: Condra

Final assembly of the crab at the top of the jib crane.

The Condra jib crane is the key to this solution, and has been designed and built to withstand a harsh underground working environment with minimal maintenance. It comprises a pillar-supported double-girder beam topped by the crab-mounted hoist, an arrangement that maximises the grab's lifting height and optimises productivity in the execution of a repetitive but complex lifting task within the spilled ore recovery process.

The crab itself is jam-packed with equipment, holding not only the five-tonne variable-speed-drive hoist, but also the hydraulic power pack, two hydraulic hose reels serving the opening and closing functions of the orange-peel grab, and the cable-reeling drum serving the electromagnet.

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Driving growth through technology and business communications solutions

Digital transformation is well underway in the East Africa region, with Kenya specifically at the forefront of the emerging technology innovation landscape on the continent, says Ivy Njeru, account executive at Infobip Kenya.

This trend is largely due to the government's heavy investment in the country's broadband sector, with no less than four undersea fibre optic cables now landing off the coast of Kenya. This, in turn, has driven widespread fixed and mobile internet penetration in the country to a level of 85.2% of the population.

Additionally, Kenya recently became the second country on the continent to launch a 5G network. The initial rollout covers four towns and is expected to grow to nine over the next year. It is expected that the launch of 5G services will be a boost for technology adoption and innovation among local businesses.

Fundamentally, the adoption of 5G technology will transform the way people live and work, with faster connectivity speeds supporting the rollout of better services and innovative solutions that are likely to span various industries and business sectors. For example, this technology will enable the establishment of smart cities, smart homes, smart agriculture, as well as connected healthcare and vehicles.

New ways to communicate

There is no doubt that Kenya's growing internet penetration has also significantly changed the way in which people communicate. The availability of high-speed connectivity has seen an increasing number of people using chat apps to communicate, rather than relying on traditional voice calls. This has also invariably led to an uptake of social media and messaging platforms as a means of communication between brands and consumers and will require businesses to deliver an enhanced customer experience (CX).

> "There is no doubt that Kenya's growing internet penetration has significantly changed the way in which people communicate."
>
> **IVY NJERU, ACCOUNT EXECUTIVE AT INFOBIP KENYA**

One of the biggest benefits of 5G connectivity is the delivery of high-speed internet, which allows for better quality of video streaming and rich media sharing, enabling an improved CX. It is therefore important that companies continue to invest in technology that drives customer engagement.

However, in order to develop successful communication strategies, organisations must be aware of the fact that customer communication preferences have changed, with people expecting to interact with brands anytime, anywhere, and over any device. To remain relevant, brands must be able to deliver highly personalised and meaningful content over their customers' preferred channels.

To do this effectively, organisations must know their customers and ensure that they are able to connect with them on whichever channel they may choose to use. For example, if a customer is mostly using WhatsApp as their preferred channel of communication, they will most likely want their bank to also be available on this platform.

Boosting the economy

Robust connectivity and digital technology will also boost the country's economy by driving competitiveness and eCommerce. It will provide economic growth too by facilitating innovation that will see companies able to introduce new products and services faster than ever before.

Most companies in Kenya are increasingly taking advantage of the high connectivity rate across the region to keep up with digital customer expectations. This practice is set to gather further momentum and lead not only to increased operational efficiency, but also help brands differentiate, as they leverage smart and connected devices to create new services aligned with brand promises.

Digital transformation of this type will positively impact productivity too with more streamlined approaches and automation. Technologies such as Machine Learning, AI and IoT all thrive on 5G and will enable companies to replace costly and cumbersome manual processes. Many conversations will be able to take place using chatbots for example, which further increase efficiencies for customer-facing businesses, while customers will delight in the speed of response and resolution to queries.

Image Credit: Infobip Kenya

Ivy Njeru, account executive at Infobip Kenya.

Moreover, robust connectivity and digital technology is also key for obtaining business intelligence that will ultimately accelerate and drive revenue growth as more information on customer trends, intent and preferences will be available in the market. Businesses will be able to innovate around the availability of this data and deliver better products and services, thus leading to more growth.

As digital transformation continues to advance across the African continent, digital platforms are fast becoming the preferred channels to accessing products and services for a growing number of people.

Mobile operators are doing their part in upgrading infrastructure and deploying 5G. Therefore, investing in the right technology and communication solutions today will form the bedrock for Kenya's future economic success. ■