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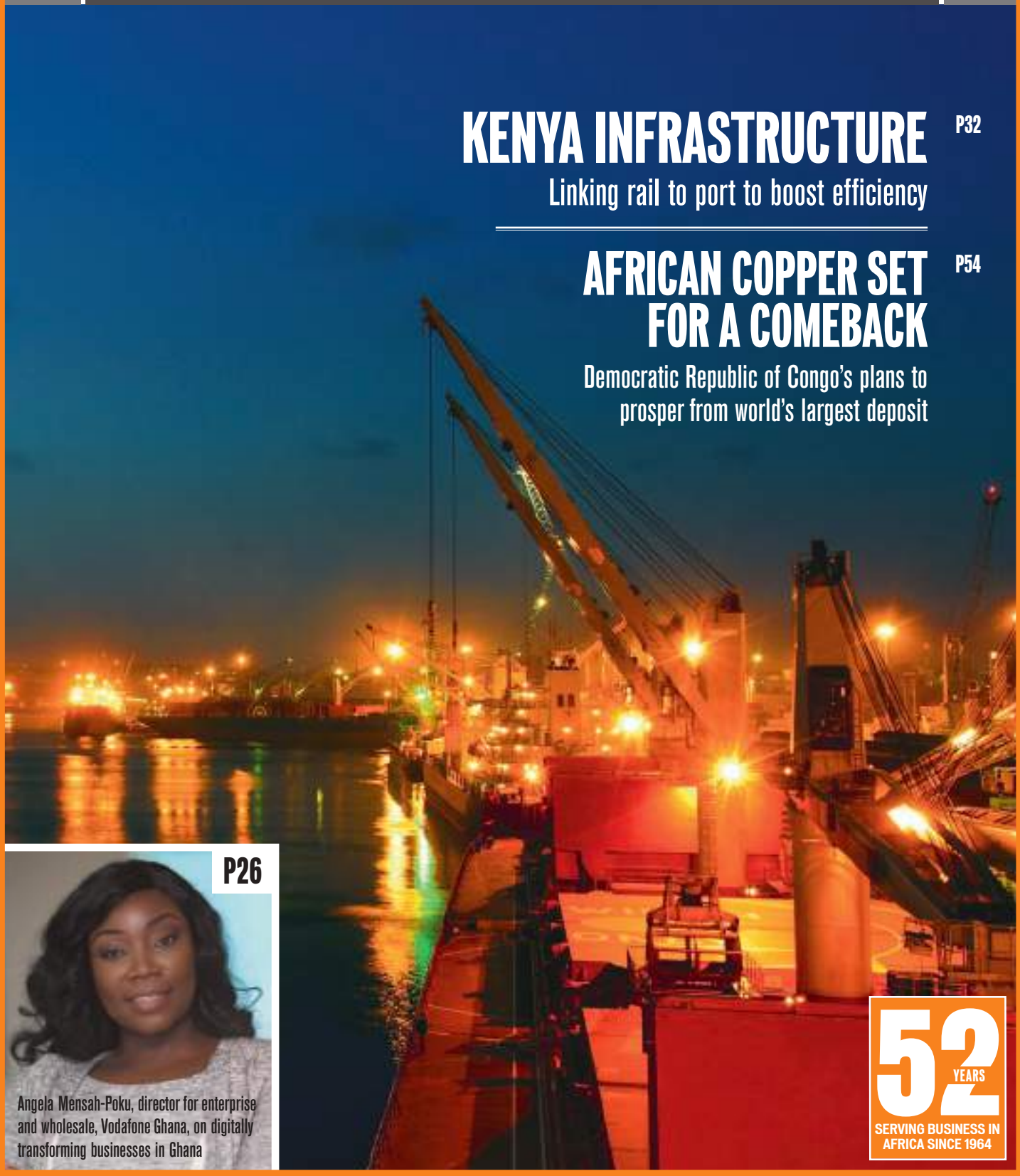

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Editor's Note

Welcome to the March issue of *African Review of Business and Technology*. I'm delighted to take over as editor of this leading African publication. I look forward to engaging with the readers in the days ahead.

In this issue, one of our headline stories, on page 54, is about copper making a comeback after fresh deposits were discovered in the Democratic Republic of Congo. In particular, the Kamoa-Kakula project is whetting investors' appetites after it was ranked the world's largest undeveloped, high-grade copper discovery by international mining consultant Wood Mackenzie.

Kenya's infrastructure revamp is set to turn the nation into a vital intermodal freight hub for markets in East Africa, on page 32, and the Ugandan government's infrastructure programme on page 50 to boost the country's economic and social development are must-read features in this edition.

We hear from Vodafone Ghana's Angela Mensah-Poku on how the company is at the forefront of driving innovation in Ghanaian businesses on page 26, and ACI Africa's secretary general Ali Tounsi tells us on page 20 why it's important for Africa to take its position and capitalise on generating commercial revenue at the continent's airports. In the meantime, please don't hesitate to reach out and introduce yourself so we can take *African Review* to new heights.

Samantha Payne, *Editor*

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Intelligent power service for Algerian hotels

HIMOINSA will supply emergency power for AZHotels chain. (Source: HIMOINSA)

A new hotel chain opening in Algeria this year will enjoy reliable power thanks to an 'intelligent' switching system designed by HIMOINSA.

The power company has designed a complex triple switching system that connects to three different power supply networks to underpin supplies at two large hotels belonging to the AZHotels chain that will open in 2017 in Kharouba and Mostaganem.

The system is capable of optimising the hours of operation of the generator sets to help guarantee emergency electricity supply to the resorts.

"We chose HIMOINSA for this project due to our previous experience with the company," said Enric García, technical manager of Indeco Global, the company in charge of the project.

The complexity of the power project lies in the fact that the hotels are connected to three different electricity supply networks. An enormous switching cabinet will be used to program the equipment for triple switching operations over these three different networks.

There will also be four HDW-750 T5 generator sets in stand-by working in parallel to guarantee the electricity supply of the installation in each hotel, one of which includes a water park.

If one, two or all three of the networks should fail at the same time, the four gensets will switch on in synchronised mode and start running in parallel.

If only one of the networks fails, the two generators with the least operating hours will be switched on. If the power supply failure occurs in more than one network, the four gensets will continue working, totalling 3 MW of power until the electricity supply is re-established.

This equipment includes DSE8610 control devices that monitor the hours of operation of each generator set. The system has been programmed to switch off the equipment that has the most hours of operation, thereby optimising resources.

"We have already worked with HIMOINSA on four hotels in Algeria, with very satisfactory results. This led us to contact them directly for the solution to the rest of the projects," added García.

Algeria has launched a robust development programme for new infrastructure in the services industry to accommodate sustained commercial and business growth in the North African country.

TUNISIA TARGETS 2.5 PER CENT GROWTH IN 2017

Tunisian growth is forecast to almost double this year to 2.5 per cent, up from from 1.3 per cent, according to the International Monetary Fund (IMF).

"The Tunisian economy has remained resilient in a difficult domestic and international environment," it said following a visit to the country. Growth prospects are supported by improved confidence following the successful 'Tunisia 2020' conference last November, the IMF noted, and the adoption of crucial private sector legislation.

Key challenges persist, however, including reducing a massive public sector wage bill, which, as a share of GDP, is among the highest in the world. "The IMF team and the government agree that urgent action is necessary to protect the health of public finances, increase public investment, and accelerate progress with delayed structural reforms," the fund added.

These measures are critical to moving the economy towards faster growth and more jobs, and to ensure that Tunisians benefit from adequate basic services.

MOROCCO REJOINS AFRICAN UNION

Morocco has been formally readmitted to the African Union (AU) after a long hiatus. The kingdom, which quit the AU's predecessor, the Organisation of African Unity, some 33 years ago over recognition of Western Sahara, brings one of Africa's largest economies back into the pan-African entity.

It also raises hopes of a softening of one of Africa's thorniest territorial disputes.

Morocco's King Mohammed VI was cheered as he took his seat for the first time in the Addis Ababa headquarters of the 55-nation AU, one of the few international groups to recognise rival Western Sahara.

Speaking for the first time following the readmission, he said that, "Africa is indispensable to Morocco and Morocco is indispensable to Africa."

For Morocco, a relatively liberalised economy and firm Western ally, readmission to the AU could smooth its entry into fast growing African economies to the south and help reduce its reliance on stagnant European markets to the north.

International partners outside of Africa also welcomed the move. Japan's Ministry of Foreign Affairs noted: "Morocco is an important partner for the stability and prosperity of Africa."

What seems likely is that the readmission will put the Western Sahara dispute back in the spotlight, historically a deeply divisive issue among AU nations.

Morocco considers the territory its own and has controlled much of the land since 1975, when colonial Spain withdrew from Africa.

The return to the AU fold, however, raises hopes that there may be conciliation in the air.

BRIEFS

Economic growth impacted by low oil prices. (Source: Shutterstock)

More labour, social protests

Reform efforts in North Africa are likely to trigger more localised labour and social unrest against governments and businesses, particularly in Algeria, Tunisia and Morocco, consultancy Control Risks Group says in its latest RiskMap 2017 study. "Efforts to reduce government spending in response to low oil prices will continue to affect economic growth and dampen public investment levels across the region," it states.

Tunisia and Italy pact boost electrical power links. (Source: Shutterstock)

Italy's power interconnections

Tunisia and Italy have signed a joint declaration to boost cooperation in a variety of areas including electrical power interconnections, transportation and healthcare. The agreements were signed within the framework of the state visit to Italy by Tunisian President Beji Caid Essebsi.

The bilateral declaration also covers other key areas such as trafficking, illegal migration and working more closely to boost security, as well as a youth exchange programme.

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Mastercard rolls out payments system for Kenya's small firms

MSMEs are set to benefit from the Masterpass QR Service (Source: Atstock Productions / Shutterstock)

Mastercard has set a target of empowering at least 150,000 micro, small and medium sized enterprises (MSMEs) in Kenya during 2017 by giving them access to its Masterpass QR service.

The goal is to unleash business and entrepreneurialism among the region's smaller firms.

Daniel Monehin, division president for sub-Saharan Africa and head of financial inclusion for international markets at Mastercard said MSMEs have traditionally struggled with the cost of installing payment infrastructure such as point-of-sale devices, as well as with issues of security surrounding payment.

Masterpass QR combats these challenges in a simple and user-friendly manner helping to stimulate the economy by digitising a sector previously solely dependent on cash-based transactions.

"Kenyans are entrepreneurial by nature, and there are incredibly exciting business ideas coming from the region," said Monehin. "We want to help these business owners to grow and prosper by delivering solutions that meet the needs of these business owners."

The mobile driven payments solution is being introduced through various financial institutions and other partners in the market from February onwards.

Consumers are guaranteed the security of being able to pay for in-store purchases by scanning the QR (Quick Response) code displayed at the checkout on their smartphones, or by entering a merchant identifier into their phones. Users are able to use the solution at any location where Masterpass QR is accepted, locally and across the continent.

The 150,000 target is part of the the company's global goal of connecting 40 million micro and small merchants to its electronic payments network by the end of 2020.

Masterpass QR is also being rolled out in Nigeria, Ghana, Rwanda, Uganda, and Tanzania and other countries across Africa.

"Kenya is leading the charge in financial inclusion, with the World Bank reporting that 75 per cent of its citizens over the age of 15 having a bank account," added Monehin.

SOMALIA MAKING PROGRESS DESPITE CHALLENGES, SAYS IMF

Somalia continues to make headway despite "a very difficult political environment", the International Monetary Fund (IMF) said in February after concluding its latest Article IV consultations.

It said the government continues to make significant efforts toward restoring key economic and financial institutions and has achieved "important milestones" over the past five years.

But immense challenges remain and Somalia "continues to face weak institutional capacity, fragile security, and complex clan politics which complicate economic reconstruction".

In 2012, the country emerged from nearly two decades of civil war, however, post-war conditions remain tough with widespread poverty and more than half of working-age people unemployed.

DROUGHT EFFECT INCREASES FOOD PRICES

Drought throughout East Africa has sharply curbed harvests and pushed food prices up, according to the latest Food Price Monitoring and Analysis Bulletin (FPMA) from the Food and Agriculture Organisation (FAO).

It says the prices of cereals and other staple foods have increased "to unusually high levels", posing a heavy burden on households in the region.

"Sharply increasing prices are severely constraining food access for large numbers of households with alarming consequences in terms of food insecurity," said Mario Zappacosta, FAO senior economist and coordinator of the Global Information and Early Warning System.

Local prices of maize, sorghum and other cereals are near or at record levels across much of Ethiopia, Kenya, Somalia, South Sudan, Uganda and Tanzania, the findings show.

Somalia's maize and sorghum harvests are estimated to be 75 per cent down from their usual level, and some 6.2 million people, more than half of the country's total population, now face acute food insecurity, with the majority of those most affected living in rural areas.

Inadequate rainfall has likewise put pressure on livestock farmers. Poor livestock conditions due to pasture and water shortages and forcible culls mean animals are command lower prices, leaving pastoralists with even less income to purchase basic foodstuffs.

In Somalia, goat prices are up to 60 per cent lower than a year ago, while in areas of Kenya prices of have declined by up to 30 per cent over the last 12 months.

Kenya declared it a national disaster, calling for aid to counter the effects of the drought. The Kenya Red Cross has estimated around 2.7 million people need food aid after low rainfall in October and November.

BRIEFS

Ethiopia invites Seychelles to invest in tourism industry


Seychelles businesses are invited to invest in Ethiopia's tourism industry. (Source: Shuttlestock)

Ethiopian Prime Minister Haile Mariam Desalegn has invited businesses from Seychelles to invest in the country's tourism industry. It follows bilateral talks and a meeting with Seychelles President Danny Faure. Seychelles is already a leading international tourism destination, supporting a strong a business sector. It also has good connectivity to Ethiopia through the latter's national carrier which has five weekly flights between Victoria and Addis Ababa.

Kenyan data collection firm raises $1.1m


Bamba raised $1.1mn after US cash injection. (Source: Shutterstock)

Boutique market research start-up Bamba has raised $1.1 mn after a first seed investment round, sourcing cash from the US, Europe and across Africa. The Nairobi agency specialises in gathering consumer research from emerging markets and boasts a high profile client list that includes the Aga Khan Foundation and IPSOS. "It's incredible," said co-founder and chief executive Al Ismaili, "we've established a global reach, spanning Uganda, Tanzania, South Africa."

Air Botswana next up in privatisation push

Botswana is to continue with its privatisation efforts this year after putting its national flag carrier Air Botswana up for sale. It follows the sale of a 49 per cent stake in the national telecoms firm in a stock market floatation last year.

Air Botswana aircraft taxiing in Johannesburg, South Africa. (Source: Fedor Selivanov / Shutterstock)

The government hopes to sell-off an equity stake in some of its loss-making state companies in a bid to raise cash and revitalise some of its ailing strategic national assets. The country has more than 30 state-owned enterprises, many of them loss making, in industries ranging from tourism and energy to housing and finance.

The telecoms provider, Botswana Telecommunications Corporation Ltd (BTCL), and the national airline, are among the diamond-rich country's core public enterprises. The government will take heart from the fact that the BTCL initial public offer (IPO) was oversubscribed last year.

This time the offer is more flexible, however. The transport department said in a notice inviting expressions of interest for Air Botswana that it is open to proposals on various forms of privatisation including joint ventures, ownership, franchising and concessions.

Finding a suitor for the airline may yet prove tricky, however. Previous offers from Comair, South Africa's Airlink and Air Mauritius have all fallen through.

Still, Air Botswana has been attempting to get its house in order in the run up to any deal, halving its operating losses to 83mn Pula ($8mn) in the 2016 fiscal year. The company has a five-year turnaround plan to cut costs and halve financial losses, which have been blamed on a large workforce, unprofitable routes and an ageing fleet, consisting of four turbo prop aircraft. It recently discontinued routes to Harare and Lusaka out of the capital, as part of its plans to cut costs by cancelling unprofitable routes.

Air Botswana now runs four domestic routes, plus cargo and air passenger services to Cape Town and Johannesburg from Gaborone, Francistown and the tourism hubs of Maun and Kasane. It is also the ground services provider at Botswana's primary airports.

CAPE TOWN'S PUBLIC TRANSPORT SECTOR MAPPED

Cape Town has become the world's first city to have its entire formal and informally-run public transport networks fully mapped.

The data provides key insight and analytic tools to aid city planning, according to the firm behind it, WhereIsMyTransport, which could yield benefits for cities worldwide.

It says the data will allow developers, transport operators and officials to build solutions - such as journey planning, fare estimation, communications tools and connected digital signage - that improve access to public transport information for all citizens. The mapping project took three weeks to complete, integrating data from both formal and informally-run transport services across the city.

The Cape Town dataset is now available for all to see via the company's own platform. The company now plans similar coverage for East London, South Africa and Gaborone, Botswana in March 2017.

ISONDO PRECIOUS METALS FUEL CELL PLANT UNVEILED

The Isondo Precious Metals' (IPM) fuel cell plant has been unveiled by officials in Cape Town, part of South Africa's quest to explore the emerging fuel cells business.

Finishing touches are still being made but the facility is expected to be operational by the third quarter of 2017.

'We are looking to this project to try and create a vibe about the feasibility of fuel cell manufacturing in South Africa," said Malebo Mabitje-Thompson, deputy director general of the Department of Trade and Industry (DTI).

She said fuel cells represent a "strategic sector" and one that the South African government wants to play a role in nurturing.

The IPM plant will offer a world-class semi-commercial plant to manufacture local and international fuel cell component technology.

It will be Africa's first fuel cell component plant, using platinum as a catalyst. Isondo has secured a license from US-based Chemours Technology to assemble components for fuel cells using platinum, which has mainly been used in catalysts to clean up car emissions.

Dr Sakib Khan of IPM said the aim is to produce core fuel cell components for global companies and industries, such as automotives, feeding into the global fuel cell supply chain.

"Apart from allowing IPM to rapidly capture a meaningful slice of a rapidly growing market, the strategy should have another major benefit in helping to overcome the cost impediment that has restricted the growth in demand for fuel cell technology," he said.

IPM is already in discussions with end users, he added, which will result in the first samples produced this year and early 2018 for validation globally.

BRIEFS

Zambia, UK sign solar market pact

Universal energy access aims to be brought forward from 2080 to 2030. (Source: Shuttlestock)

Zambia and the UK have signed an Energy Africa Partnership Agreement to accelerate the expansion of the household solar market in the country.

"We recognise the challenges Zambia is facing with the on-grid energy sector, and the opportunities this presents to unlock the potential of the household solar market," said Bruce Lawson-McDowall of the UK's Department for International Development

President Zuma holds talks with Trump

President Zuma discussed trade and investment issues with Trump.

South African President Jacob Zuma spoke to new US President Donald Trump for the first time on February 13 in a telephone call that focused heavily on trade and investment.

There are around 600 American companies in South Africa and strong bilateral relations between the two countries. During the call, the two presidents reaffirmed their commitment to strengthening trade ties and working together on multilateral issues, especially the quest for peace.

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Francophone financial services training initiative

Training firm MicroSave and The MasterCard Foundation have launched a project - Réseau Helix - to roll-out courses in digital financial services (DFS) across the francophone markets, predominantly in West Africa.

The scheme is expected to benefit over 250 DFS providers and will focus on the West African Economic and Monetary Union (WAEMU) region, the Democratic Republic of the Congo, as well as Madagascar.

A DFS knowledge portal in French will also be launched as the 'go-to' place for DFS information.

According to financial service providers, shifting from cash-based transactions to formal financial services provides huge economic benefits.

Digital financial services in West Africa are growing but are hampered by high levels of inactivity and limited products and services. Providing training and assistance will lead to sustainable and tailored service offerings that unlock the potential of DFS, said MicroSave's director, Graham Wright.

"We are excited to leverage our experience and expand our knowledge in francophone markets," said Wright, adding that the French language courses in West Africa will focus on the specifics of each local market. "That's where we see the opportunity to increase financial inclusion working with regulators, financial institutions, mobile network operators and third party agent network operators".

The new initiative is designed to help educate potential users on the shift to DFS.

MicroSave's Réseau Helix - building on the lessons from The Helix Institute of Digital Finance - will train staff at a range of institutions, plus other interested parties, such as mobile operators and other firms so that they better understand choices and options in planning digital financial services, especially for the unbanked.

"We believe that successful agent networks hold a strong potential to reach large numbers of unbanked individuals in sub-Saharan Africa," said Sumaiya Sajjad of The MasterCard Foundation. "Our partnership with MicroSave to launch Réseau Helix will help a range of financial institutions to build the technical and strategic capacities of their core leadership and staff, enabling them to better meet client needs through agent networks."

UN CONDEMNS CAMEROON INTERNET SUSPENSION

Cameroon has been urged by the UN to restore internet services calling it a breach of freedom of expression.

It follows reports that predominantly English speaking people in the north west and south west regions have been unable to connect to the internet since January 17.

It also comes against a background of widespread protests against government policies which have reportedly marginalised the country's English-speaking population.

UN special rapporteur on freedom of expression, David Kaye, said he was concerned at the "tightening of the space for free speech". He added, "A network shutdown of this scale violates international law. It not only suppresses public debate, but also deprives Cameroonians of access to essential services and basic resources."

SIERRA LEONE HEALTHCARE BOOST

People in Sierra Leone can enjoy better access to healthcare services with the opening of 47 newly constructed and rehabilitated health centres across 11 districts.

The centres will provide a boost for child and maternal health, with some 1.25 million women of child-bearing age and 676,000 children under five set to benefit.

The $4.7 million infrastructure boost was supported by the European Union (EU).

At the inauguration of the new facilities, President Dr Ernest Bai Koroma, said it was a huge boost for local healthcare services and for the people of Sierra Leone.

"When we improve on the health sector, all other things will improve," he said. "Communities should therefore make sure that the drugs are not sold and should be stored safely. We want to thank the EU for this support and also UNICEF for facilitating it."

The centres include upgraded medical stores that will help store free health care and other health and nutrition supplies, new maternity and paediatric wards, and improved staff quarters. All sites are equipped with water storage tanks connected with distribution/supply system, sewage networking and solar power.

"These improvements will contribute greatly towards better delivery services for mothers and babies, an improved supply of medicines, and better living conditions for health workers, all helping to ensure more mothers survive child birth and more children reach their fifth birthday," said UNICEF's Geoff Wiffin.

47 newly constructed health centres will open in 11 districts in Sierra Leone. (Source: Shutterstock)

BRIEFS

Estée Lauder is working with Jumia to sell key brands. (Source: Shutterstock)

Jumia online retail deal for Estée Lauder

Estée Lauder has teamed up with online retailer Jumia to sell key brands Clinique, Estée Lauder and Aramis in Nigeria. "Our consumers do not have regular access to our products, specifically in Lagos and Abuja," said Mario Lazzaroni, The Estée Lauder Companies, sub-Saharan Africa. Juliet Anammah, Jumia Nigeria's chief executive, said beauty enthusiasts can now access the premium products "with the assurance of Jumia's buyer protections".

Dangote set to create 16,000 outgrower rice farmers. (Source: Shutterstock)

Dangote rice outgrower scheme for Nigeria

Dangote Rice Limited is to create jobs for 16,000 outgrower rice farmers in Sokoto, amid plans to make Nigeria self sufficient in rice cultivation.

Aliko Dangote, chairman, said he wanted to support rice cultivation to boost local agriculture and to reduce food imports, which cost the nation over $2 bn annually.

Farmers were presented with rice seeds, fertilisers, nets and agro-chemicals at the signing of the agreement.

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7 - 11
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14 - 15
CARDS & PAYMENTS AFRICA
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20 - 21
AFRICA CEO FORUM
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20 - 24
CEBIT
Hanover, Germany
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21 - 23
SECUREX WEST AFRICA
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28 - 29
POWER & ELECTRICITY WORLD AFRICA
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28 - 29
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28 - 30
AGROFOOD NIGERIA 2017
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UPSTREAM WEST AFRICA SUMMIT 2017
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APRIL

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GREAT VARIETY AT SECUREX SOUTH AFRICA 2017

Securex 2017 has an exciting line-up of exhibitor offerings. Held from 30 May to 1 June at Gallagher Convention Centre in Midrand, South Africa, Securex is Africa's largest security and fire exhibition.

"With almost 25 years' of bringing leading-edge solutions to the market, Securex is the go-to event for anyone involved in residential and commercial security," says Joshua Low, Securex Event Director at Specialised Exhibitions.

Nocturna, specialising in infrared night vision products, will be introducing its latest handheld night vision range. Anviz's SecurityONE is an integration solution designed for small and medium-sized enterprises, incorporating access control, video surveillance and alarm monitoring.

Econz Wireless' wireless timecard GPS with new features to prevent time and attendance fraud by mobile workers, will be available at Securex. Features include 'Alert Supervisor when GPS is turned off' and the ability by the mobile device user to only Clock-in/Out within 100 to 200 m of the job/store/customer GPS coordinates to ensure accurate location.

Mitsubishi Electric will display their 70 Series LED, DLP Seamless video wall cubes. The centrepiece of this projection technology is an integrated, ultra-modern DLPTM chip. The Smart 7 concept design for LED video wall cubes allows for a wide, intensive colour spectrum, optimum energy efficiency with the lowest power consumption and BTU figures in the world and an average service life of 10 years. A live environment setup will be available where visitors can interact with the solutions in real time.

Dahua will showcase its cutting-edge products and video surveillance solutions, including unmanned aerial vehicle, smart building, car parking, mobile and retail solutions.

SALTO's JustIN mobile technology makes it easy and secure to incorporate smartphones as a part of an access control solution. SALTO Mobile means the end of lost key hassles, expenses and waste. The company will also promote its long range identification solution which automatically identifies user flows in any weather conditions without having to present the card on the reader. The product is suitable for car parks, traffic management, free flowing vehicle access control and convenience in general as the carrier is read at a certain distance.

Nocturna will be introducing its latest handheld night vision range

PicoTech's new Kwêbeam outdoor early warning system has been designed with a strong focus on ease of operation, reliable two-way wireless communication with built-in repeater functionality and operation on the less congested 868 MHz frequency band. There is an effective built-in siren in all passive beams, and the system is completely wireless, operating on standard AA alkaline batteries for years.ith increased compression rates, uses up to 50 per cent less storage space, 50 per cent less bandwidth and 50 per cent lower bitrate. The company is also promoting reliable analytics and POS solutions allowing easy integration with IP and AHD technology. The new powerful operating system OSSIA offers an easy interface, new web interface and App.

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INCREASE IN DIGITAL MONEY TRANSFERS INTO TANZANIA

Digitial money transfers from Tanzanian expatriates have grown, according to transfer service company, WorldRemit. With more than 4mn Tanzanian expatriates working around the world, the potential for the inbound digital transaction market is significant. WorldRemit has announced a new record of 10,000 unique transactions for December 2016. The company has recorded a 150 per cent year-on-year growth in 2016, which has been largely attributed to the rapid expansion of Mobile Money accounts as a preferred method for receiving funds from abroad into Tanzania. The biggest senders of funds into Tanzania includes expatriates living and working in the UK, Sweden, Australia, Norway and Canada. Remittances continue to play an important role in the Tanzanian economy. In 2015, the country received a total of US$390mn, according to World Bank figures. This was almost 10 times the amount received in 2010.

Tanzania's economy relies heavily in remittances from abroad. (Source: Kurman/Flickr)

RECORD-BREAKING SOVEREIGN BOND ISSUED BY EGYPT

On 4 February 2017, Egypt closed a US$4bn multi-tranche sovereign bond issuance. This consisted of US$1.75 bn of 6.125 per cent notes, due in 2022; US$1bn of 7.50 per cent notes, due in 2027; and US$1.25bn of 8.50 per cent notes, due in 2047, issued under its US$10bn Global Medium Term Note (GMTN) Programme. The transaction is the largest-ever public bond issuance out of Egypt and Africa, as well as the first triple-tranche bond from the African continent. Egypt was advised by a London-based team from Dechert LLP. The transaction follows the private placement by the Egyptian government to the Central Bank of Egypt of US$4 bn of bonds in November 2016. Dechert also advised Egypt on the establishment of its GMTN programme and the subsequent issuance of US$1.5bn of notes in June 2015, which marked the country's return to the international debt capital markets after a five-year absence.

BAN KI-MOON URGES PRIVATE SECTOR-LED DEVELOPMENT

In his keynote address to the African Finance and Investment Forum (AFIF) in Nairobi, former UN Secretary General Ban Ki-moon said that "social and economic development can only be led by the private sector". He also encouraged young entrepreneurs to form alliances and network with their peers. Additionally, Mr Ban pointed out that government still has an important role to play in terms of creating the right environment for the private sector to operate without restrictions. The AFIF event took place from 13-16 February and gathered more than 200 delegates to discuss how to access finance for the leading economic sectors of Africa, including agriculture, agribusiness, infrastructure, energy, water and healthcare. More than 400 meetings between investors and entrepreneurs took place during the conference.

Ban Ki-Moon outlined his vision for the role of the public and private sectors. (Source: EMRC)

GHANAIAN MINING UNDER THE SPOTLIGHT AT MINING INDABA

Delegates at the Mining Indaba Special Information Session, held in Cape Town on 8 February 2017, saw a preview of some groundbreaking work in Ghana's minerals sector. Findings from a new economic assessment on linkages and domestic procurement in Ghana, conducted jointly by the African Minerals Development Centre (AMDC) and the German Federal Institute for Geosciences and Natural Resources (BGR), were presented at the session. The study was commissioned by Ghana in recognition of the need for upstream domestic supply linkages, diversification of the country's economic structure, stronger involvement of the local business sector, and enhancement of its human resource and technological capabilities in order to sustain value from its mineral resources. One of the possible outcomes from the study is the potential for a national suppliers' development programme, conducted in partnership with the mining industry, local suppliers and government. The session also focused on opportunities in upstream value creation within Africa's mining sector.

STRONG INTEREST IN KENYAN ROAD BUILDING

Ten companies have expressed an interest in constructing a major road linking Nairobi to the Rift Valley, according to a statement released by Kenya's Public Private Partnership Unit (PPPU). As well as building the road, the contract would involve managing the road for 30 years. Reuters reported that Kenya is seeking to increase private investment to maintain the pace of spending on infrastructure projects such as highways and railways while reducing the budget deficit. Kenya is aiming to target a budget deficit of 7 per cent of GDP for the 2017/18 financial year, which is down from 9.6 per cent of GDP this fiscal year. The statement released by the PPPU did not name the 10 interested companies.

Road-building is an essential part of Kenya's ongoing development. (Source: Arts at LSE/Flickr)

TRANSFORMATION MOOTED FOR SOUTH AFRICA'S BOARDS

South African boards are under pressure to transform, ensuring members have the right skills, experience and diversity to be effective, according to a report from PwC, *'Non-executive directors: Practices and fees trends report'*. The report says that the country's boards will need to able to adapt quickly as technology changes, and that more needs to be done in terms of gender diversity. In terms of technology, the report recommends improving digital competency and developing programmes in regard to cyber security and the effective use of artificial intelligence for developing businesses in the long term.

Cyber security needs to be a priority for RSA boards, according to PwC. (Source: Ping auf Linux/Flickr)

"We are excited to partner with CAL Bank, the third largest bank in Ghana based on loans advanced, and a listed company on the Ghana Stock Exchange. The institution has a strong track record of delivering high growth and solid performance and, with the support of Arise, is well positioned to deliver future growth in Ghana, one of Africa's core emerging economies .

DEEPAK MALIK

ARISE, chief executive officer

"President Jacob Zuma's State of the Nation Address for 2017 has wisely put small and medium businesses at the centre of the country's economic growth strategy for the next few years. This is to be welcomed since it is only by unlocking the entrepreneurial energy of the country's business builders that South Africa can reach its full potential.

ANTON VAN HEERDEN

Managing director and executive vice-president, Africa & Middle East, Sage.

"Bank of Ghana's (BOG) monetary policy has been instrumental in mitigating inflationary pressures in 2016. Adequately tight monetary policy will again be important for containing possible further pressures in 2017. We welcome BOG's continued rollout of the Roadmap for the banking sector and look forward to the actions that can strengthen banks' balance sheets and contribute to a gradual reduction of the level of nonperforming loans. We look forward to working closely with the new government in their efforts to design the required policies for restoring macroeconomic stability, high and sustainable growth and job creation.

JOËL TOUJAS-BERNATÉ

IMF mission chief, Ghana

"This award will help me to increase my production by 30 per cent. Aside from the prize, I'm going back home very empowered thanks to the two - day training that we have received. This is the best way EMRC is supporting entrepreneurs."

CHRISTIAN MWIJAGE

managing director of EcoAct (Tanzania) on winning the AFIF Entrepreneurship Award 2017

"The acquisition of Tigo illustrates how an international group such as Wari, born in Africa, is proud to be at the forefront of driving the shift towards an ecosystem that provides social added value and tailored for Senegalese and African customers' needs.

KABIROU MBODJE,

Chief executive, Wari

"At APR Energy, we believe that economies can't grow in the dark. We are proud to provide reliable electricity that allows children to study at night, helps businesses grow, and ensures that health clinics have power to treat those needing care. APR Energy also believes that it's important to work with the communities where we operate to find other ways to make a positive impact in their daily lives, and that's why we are here today."

GORGUI NDOYE

African business development manager, APR Energy

"As Tigo Tanzania, we are truly excited to introduce a bundle that ensures our customers the autonomy they need. They can use their bundle as they please without worrying about bundle expiration time limits."

WILLIAM MPINGA

Brand manager, Tigo. Mr Mpinga was speaking at a press conference in Dar Es Salaam for the launch of a new bundle that has been given the Swahili name "Bando HaliChachi", which can be translated to mean "bundle that does not expire", to reflect the product's flexibility.

AFRICAN REVIEW / ON THE WEB

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

NATIONAL BANK OF ANGOLA TO CONTINUE CURRENCY TRANSFERS TO COMMERCIAL BANKS

Valter Filipe, governor of the Central Bank, National Bank of Angola (BNA), said at a meeting in Luanda, Angola, that the BNA will continue to transfer currency to commercial banks. The remarks were made at the first meeting of the BNA Advisory Council, according to state newspaper *Jornal de Angola*. "We believe that the major monetary aggregates and tax have been well controlled and this gives a certain stability to the market, which points to better control, both in product prices and inflation itself," said the governor.

CONSTRUCTION OF BIOGAS PLANT IN KENYA BEGINS

Biogas plant in Kenya

Construction has commenced on a biogas plant in Kenya, which is being built by Asticom K Ltd, a national company that provides services in waste recycling. The plant is being constructed on a five acre plot that was donated by a local housing co-operative.

RWANDA RECEIVES GRANT FOR WATER DEVELOPMENTS

Rwanda awarded grant for water development

The Rwandan government has received a US$2.1mn grant from the African Water Facility to supply the development of a 25-year national water and sanitation plan. The grant will fund the designing, financing and implementation of safe drinking water and sanitation projects and infrastructure.

M&A MOVED FROM WEST TO EAST AFRICA IN 2016

Canary Wharf, London, where Clifford Chance is based.

International law firm Clifford Chance has reported that the African merger and acquistion footprint increased in 2016. There was also a noticeable continental deal shift from West to East Africa, where Clifford Chance advised on 50 per cent more deals than in 2015.

New Africa expansion: routes to growing economies

African Review speaks to Anand Kapoor, vice-chairman of diverse conglomerate Midcom Group, about new inroads into Mozambique and Zambia for its Fero brand

Anand Kapoor, founder and vice-chairman, Midcom Group (Source: Midcom Group)

Following the launch of your Fero mobile phones brand, can you update *African Review* on the development of the product to tap the middle segment consumer?

The middle segment consumer audience is substantial in our markets; they are well-read consumers who are conscious of the specifications of the handset that they carry. The mobile phone is not a luxury item anymore but a necessity and hence the consumer looks at various different specs before choosing, especially in the middle segment – is the battery good enough? How good is the camera? Is the phone fast enough? Does it have good internal memory? Is it reliable? And we keep in mind these aspects when designing and testing our phones. Our strategy is to increase our brand visibility as well as our retailer network, making our handsets more available both on and off-line.

How is the business faring and what new product lines have/are you set to launch following the initial 16 models last year?

The response has been fantastic and it gave us the confidence to prepare an even better line up that we are launching now across all our markets. The new portfolio will be hitting the shelves by mid to end of January. We are launching phones with the latest technology and specs for our consumers. We have a new Smartphone with an IRIS Scanner. We are launching a third model in our Royale range of premium smartphones called Royale A1, which comes with a unique voice recognition unlocking system and a 5,000 mAh battery.

All our phones come with Android 6.0 and we are continuously releasing software updates for our older models as well. Detailed product details will be updated on our website (www.ferodevices.com) as and when the products are released but rest assured, we are bringing an exciting range to complement the products we already have.

Which African markets are expected to account for the bulk of your sales?

Nigeria, Kenya and Ghana are the key focus markets but all are important for us. One of our strengths is our reach and distribution width and we believe there is huge potential in markets such as Tanzania and Cameroon that we have yet to fully capitalise on.

The product range is on sale in Kenya, Nigeria, Tanzania, Ivory Coast, Ghana, Uganda, Rwanda, Senegal, DRC, Ghana, Togo and Cameroon, but you are expanding into Mozambique and Zambia. Can you tell us more?

We have made initial in-roads in Mozambique and Zambia whereby we have sent the first few shipments and the response has been very good. Hence we are now in the process of appointing distributors in these markets to ensure a regular supply of Fero mobiles in these two markets. We would similarly be expanding into other markets as well, such as Guinea, Burkina Faso and Somalia through distributors this year.

How have African customers reacted to the launch of the new brand, given your familiarity as distributor?

We have been fortunate as we have had a strong relationship with all the major retailers, wholesalers and independent retailers in our markets. They have been very positive about our brand and supported us. We have focused on ensuring our products are good quality and reliable. We feel we understand the consumer psyche, having been present in the market for so long. Overall, the feedback from the consumer has also been very positive.

Finally, I understand you are expanding your Lato Milk brand of dairy products across Kenya, Uganda, Tanzania, Rwanda and DRC. Can you provide us with some reasons behind the expansion?

Lato Milk is a great project for us and it has quickly become a stand out performer in East Africa. It is an African brand for Africa and hence the consumer has accepted it really well. We provide excellent quality milk in different formats (instant milk powder, liquid milk, low fat milk, and, very soon, flavoured milk) and we are creating value for an entire region and country. With the experience of distribution in our markets, we have made some good headway mentioned above. In Uganda, we already have more than 30 per cent of the market share in terms of milk powder. Our sales are growing month on month in each market and as long as we continue to provide the consumer with good quality dairy products, we will be highly successful. Our key focus markets are Uganda, Kenya, Tanzania, DRC and Rwanda. We will be expanding further into Mozambique, Malawi and certain other feeder markets in the near future. ■

'Generating commercial airport revenue is the future of Africa business', says ACI secretary general

A special commercial forum will be launched at the 57th ACI Africa conference in Livingstone, Zambia, to capitalise on business opportunities for African airports.

Non-aeronautical revenues accounts for an average of 40.4 per cent of global airport revenue, according to the ACI World Economics Report 2015. See the table below for 2014 and 2015 figures for major African airports.

Africa is also expecting strong annual passenger growth of five per cent over the next 20 years, reaching more than 300 million passengers a year. The top 10 fastest-growing markets in percentage terms will be in Africa: Sierra Leone, Guinea, Central African Republic, Benin, Mali, Rwanda, Togo, Uganda, Zambia and Madagascar. All of which are expected to grow by more than eight per cent each year on average over the next 20 years, doubling in size each decade.

Ali Tounsi, ACI Africa's secretary general, said the emergence of the middle class population willing to travel and the stability of the continent have brought increased potential for growth.

"We hope to capitalise on this by bringing our retail stakeholders to the forum; those from the food and beverage, airport advertising, car parking and property and real estate industries. I think this is the future of Africa business and we need to wake up, take our position and not miss out."

"The success and potential of African airports risk being hampered by rules and regulations that directly challenge their ability to generate commercial revenues," an ACI spokesman added, "Creating a platform for the exchange of best practice and know-how will help to counter emerging threats and position the African airports business favourably to realise growth potential." The ACI is made up of 62 members from 48 countries managing 250 airports and 28 business partners.

Rank	City	Country	Airport	Iata Code	Pax 2015	Pax 2014	%
1	Johannesburg	South Africa	OR Tambo International Airport	JNB	20mn	19mn	4.8mn
2	Cairo	Egypt	Cairo International Airport	CAI	16mn	15mn	7.9mn
3	Cape Town	South Africa	Cape Town International Airport	CPT	9.4mn	8.6mn	8.8mn
4	Casablanca	Morocco	Aéroport Mohammed V	CMN	8.2mn	7.9mn	2.6mn
5	Addis Ababa	Ethiopia	Addis Ababa Bole International Airport	ADD	7.7mn	6.9mn	11.7mn
6	Lagos	Nigeria	Murtala Muhammed Airport Two (MMA2)	LOS	6.9mn	7.6mn	-8.9mn
7	Algiers	Algeria	Aéroport d'Alger Houari Boumédiène	ALG	6.9mn	6.5mn	6.6mn
8	Hurghada	Egypt	Hurghada International Airport	HRG	6.8mn	7.2mn	-6.3mn
9	Nairobi	Kenya	Jomo Kenyatta International Airport	NBO	6.5mn	6.4mn	1.5mn
10	Sharm El Sheikh	Egypt	Sharm El Sheikh International Airport	SSH	5.8mn	6.2mn	-7.6mn

Source: ACI World

SOUTH AFRICA, EU TALK TRADE AND INVESTMENT

The South African Embassy to the Federal Republic of Germany has announced that bilateral trade talks between the European Union (EU) and South Africa took place in October 2016. South Africa's Minister of Trade and Industry, Rob Davies, and the Minister of Agriculture, Forestry and Fisheries, Senzeni Zokwana met with the Ambassador of the EU, Dr Marcus Cornaro. The meeting took place in the context of the entry into the Economic Partnership Agreement (EPA) between the EU and the South African Development Community EPA Group. The South African ministers agreed that the EPA marked the strengthening of investment relations between South Africa and the EU. Challenges face dby South Africa's poultry industry were discussed, and the EU and South Africa further committed to outreach activities, analyses of sectors, tackling trade barriers and facilitating trade flows to help businesses take full advantage of the EPA. It was reported that in 2016 bilateral volumes of exports increased for both parties.

ECOBANK LAUNCHES FINTECH CHALLENGE

The leading independent pan-African banking group, Ecobank, has launched Ecobank Fintech Challenge, a competition for African technology start-ups to build and deploy innovative fintech and banking solutions across the continent.

Ecobank is accepting applications from start-ups and developers in 54 African countries.

Twenty finalists of the Fintech Challenge will be invited to an awards ceremony and an innovation fair at Ecobank's headquarters. The top three start-ups at the fair will win cash prizes worth US$10,000, US$7,000, and US$5,000, respectively.

The finalists will also be conferred Ecobank Innovation Fellows and will qualify to explore a once-in-a-lifetime partnership opportunity with Ecobank Group that includes: major start-up funding worth up to US$500,000, multinational product roll-out across Africa for the most commercially viable start-ups, service provider partner deals for start-ups with capabilities to become a pan-African service partner within Ecobank's country operations. Ecobank Innovation Fellows will be granted access to networking and mentoring from a vast global network of technology leaders, fintech experts, investors and management coaches.

Ecobank Group CEO Ade Ayeyemi said, "This is one of the biggest support packages put together by any bank or investor to support Africa's technology start-ups. Fintech is the future of banking; that is why we are opening our doors and vast market infrastructure to support Africa's brightest innovators."

Ecobank Fintech Challenge was designed in partnership with advisory firm, Konfidants, and supported by partners across Africa and the world. Applications for the competition will close on 14 April 2017.

To apply to the competition visit www.ecobankfintech.com

BRIEFS

Botswana's economy will grow by 4.2 per cent this year. (Source: Shutterstock)

Botswana's growth to double

Botswana's economy will grow by nearly double in 2017 compared to lastyear, the country's finance minister, Kenneth Matambo, said.

In his budget speech he said the economy would grow by an estimated 4.2 per cent this year, compared with 2.9 per cent in 2016, as the country shakes off a slump in global commodity prices and electricity shortages. "The optimistic outlook is based on the improvement in the mining sector," Matambo said.

The NEF will become part of the IDC to meet demand for black entrepreneurs. (Source: Shutterstock)

South Africa empowerment boost

In a move to boost inclusive growth, South Africa has announced its National Empowerment Fund (NEF) will become a wholly owned subsidiary of the Industrial Development Corporation (IDC) in order to meet the considerable demand for funding by black entrepreneurs. The IDC said, "This decision is in line with government policy to consolidate South Africa's development finance institutions to provide effective support to black entrepreneurs."

African capital markets activity down


US elections and Brexit blamed for decline in activity on African capital markets. (Source: Shutterstock)

Activity on African capital markets declined significantly in 2016 amid economic uncertainty and global political upheaval, a new PwC report shows.

African equity capital markets (ECM) broke a streak of three successive years of growth, it noted, recording a decline in overall activity of 28 per cent from 2015 in the number of transactions, and 33 per cent from 2015 in terms of capital raised.

PwC cited the US elections and Brexit as factors undermining activity in its 2016 Africa Capital Markets Watch publication.

"Many African economies, in particular those dependent on resources suffered in a low growth environment, significantly reducing ECM activity," said Darrell McGraw, PwC capital markets partner based in Lagos.

He also said a continued lack of clarity around foreign exchange risk in Nigeria further discouraged foreign investment.

There were some bright spots, though, notably with regard to initial public offerings (IPOs).

"Although overall ECM activity decreased in 2016 in terms of both transaction volume and value as compared to 2015, there was a significant increase in ECM activity, particularly IPOs, in the second half of the year, indicating the cautious optimism of issuers and investors as the year progressed," McGraw said.

Overall, US$1.5bn was raised in IPO proceeds in 2016, and while 2016 saw a decrease from the prior year, there has been an overall upward trend in IPO activity over the five year period.

Over the past five years, there have been 110 IPOs raising US$6.5bn by African companies on exchanges worldwide and non-African companies on African exchanges.

'WAEMU SHOWS RESILIENCE'

The medium-term growth outlook for the West African Economic and Monetary Union (WAEMU) is "favourable" but remains subject to "significant downside risks", the International Monetary Fund (IMF) said following a February assessment.

"Real GDP growth is estimated to have reached 6.5 per cent in 2016, underpinned by robust and resilient domestic demand," said IMF mission leader Boileau Loko. Medium-term GDP growth is forecast at around 6 per cent, he added.

Key risks include global uncertainties, slippages in fiscal consolidation plans, sluggish structural reforms and a sustained decline in cocoa prices. WAEMU ministers adopted an ambitious set of regulatory reforms in June 2016 to modernise the financial sector. Important reforms included adopting Basel II and Basel III capital standards.

"Member countries need to stick to their planned fiscal consolidation paths, which include reducing budget deficits to 3 per cent of GDP by 2019, in line with the WAEMU convergence criteria, and fiscal plans for 2017 need to be consistent with that path," said Loko.

"This will require steadfast implementation of reforms to enhance revenue mobilisation, contain current expenditure, improve public financial management, increase public investment efficiency and strengthen debt management to create space for infrastructure investment and social spending."

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has been able to
send me to school

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Transforming lives with mobile money

According to the GSMA, some two billion people globally remain unbanked, with no access to safe and affordable financial services. As the mobile money industry evolves, it offers everyone the chance of financial inclusion.

For many years, eliminating the digital divide for people living in remote regions and isolated communities across the developing world has been the focus of mobile phone operators.

In Africa, reaching out to the millions of people in such unconnected communities has succeeded to the point where today, fewer people than ever across this great continent remain on the wrong side of the digital divide. What this mobile boost to socio-economic development has brought with it are a wealth of mobile services – mobile health, mobile agriculture, mobile weather/news and mobile banking – all now enhancing the lives of people who were previously isolated.

Mobile money empowers society (Photo: GSMA Mobile for Development)

A View from the Top

GSMA's Mobile Money Programme aims to 'accelerate the mobile money ecosystem for the underserved' by supporting industry members of the association whose services and activities are aimed at increasing the availability and uptake of mobile money services for all. The association sees mobile money and mobile banking services as tools of economic empowerment for anyone able to access such services. At the current time, the GSMA says that the global mobile money ecosystem comprises more than 270 live mobile money services, with 30 now having at least one million active customers. Safaricom in Kenya, perhaps the leading pioneer of mobile money, is right up there with the top service providers, with more than 20 million using its MPesa service.

The GSMA also says that in 19 markets around the world mobile money users actually outnumber bank account users. In its 'State of the Industry Report' on mobile money last year, the association said that more than 411 million people, globally, were being 'reached' by mobile money services available in '85 per cent of countries where the vast majority of the population lacks access to a formal financial institution'. It stressed that in reaching this level of success, mobile network operators, like Safaricom and others in Africa, had been instrumental in making this happen.

> "Our aspiration is to create transformative mobile solutions for Kenya and to deepen the use of financial services as they continue to evolve
>
> **BOB COLLYMORE, CEO, SAFARICOM**

What is apparent, however, is that mobile money usage, whether in Africa or elsewhere, is currently dominated by person-to-person transfers and airtime top-ups; for greater progress on financial inclusion to occur the GSMA says the mobile money ecosystem needs to develop well beyond these two uses. When it does, the benefits of new services will reach new customer segments, enabling cost-efficient, secure and reliable payments to and from financially excluded and underserved populations and segments, such as women, farmers, remote health workers and teachers, more than it currently does.

While all this sounds almost philanthropic in reaching out to a deserving though under-privileged populace, it will also mean increased profitability for providers. Rolling out new mobile money and banking services that develop into mature, sustained ecosystems will, according to the association, return healthy profit margins of more than 20 per cent and cash flow margins in excess of 15 per cent for the service providers involved.

Passion for digital finance

MPesa is now the most widely used mobile-phone-based payment and money transfer service / mobile-micro-payment system in the world. It was launched by Kenya's Safaricom back in 2007, but has come a long way since then and despite major changes to its executive management last year, continues to blossom. In a nutshell, Betty Mwangi, original MPesa chief and major driver of the whole service, handed over to Brian Wamatu for a short period, before he handed the reigns of new head of the financial services division over to Ron Webb in the third quarter; it's this division that houses MPesa, now in its tenth year of operation. According to the company, Webb is tasked with creating and growing Safaricom's mobile payments ecosystem to ensure market leadership, while meeting customer requirements.

Echoing the GSMA's views on financial inclusion, Safaricom CEO, Bob Collymore, says, "Ron is passionate about the ability of digital financial services to transform lives through financial inclusion. This vision aligns very closely with our aspiration to create transformative mobile solutions for Kenya and to deepen the use of financial services as they continue to evolve".

And while words about how successful the service are fine to hear, figures shout louder. The company recently revealed that 4.1 billion M-Pesa transactions had been conducted in 2015 almost doubling the 2.8-billion figure for the year before. It was also revealed that the number of MPesa customers stood at 21 million, three million new users having been added in the previous 12-month period.

With similar, though lesser trends being reflected in other markets across Africa and elsewhere, the mMoney ecosystem is set to continue transforming lives, unchecked. ■

Tim Guest

17th Intermodal AFRICA 2017

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1. **Minister Lynne Brown (MP)**
   Minister of Public Enterprises, Ministry of Public Enterprises, South Africa
2. **Siyabonga Gama**
   Chief Executive, Transnet Group, South Africa
3. **Richard Vallihu**
   Chief Executive, Transnet National Ports Authority, South Africa
4. **Mahesh Fakir**
   Chief Executive Officer, The Ports Regulator of South Africa, South Africa
5. **Nozipho Mdawe**
   Secretary General, Ports Management Association of Eastern and Southern Africa (PMAESA), Kenya
6. **Frank Luisman**
   Director, Maritime Transport Business Solutions, Netherlands
7. **Aasim Siddiqui**
   Chairman, All Pakistan Shipping Association (APSA), Pakistan
8. **Wu Di**
   Assistant President, China Harbour Engineering Company Ltd., China
9. **Kees Anton Van Welie**
   Divisional Chief Executive, Grindrod Intermodal, South Africa
10. **James Q. Nganga**
    Infrastructure Director – Northern Corridor, Trade Mark East Africa, Kenya
11. **Nachi Mendelow**
    General Manager – Global Business Development Sub Saharan Africa, WiseTech Global, South Africa
12. **Phumzile Sithole**
    Acting General Manager for Commercial, Transnet Freight Rail, South Africa
13. **Jean Francois Laurent**
    Chief Executive Officer, Port Reunion, Reunion Island
14. **Silvester Kasuku**
    Director General, LAPSSET Corridor Development Authority, Kenya
15. **Lukas Sturn**
    Divisional Manager – Maritime Cranes, Liebherr-Africa (Pty) Ltd, South Africa

HIGHLIGHTED TOPICS

- Repositioning South Africa's maritime role globally and regionally to boost trade and economic growth
- The importance of governance in ensuring competitiveness for South African ports as trade hub of Africa
- African Port PPP outlook: cases in East and West Africa
- New Trade Routes to Africa Under 'One Belt One Road (OBOR) Initiate' of China
- The important roles of development finance institutions (DFIs) in transport and infrastructure development in Africa
- Mobilising private investments in Africa's ports sector
- Enhancing Africa's trade capabilities and competitiveness
- Increasing market access in East Africa – Strategies and challenges
- Facilitating connectivity in Sub-Saharan Africa: Transnet Freight Rail's perspectives
- Port Reunion - Improving regional connectivity
- Roles of LAPSSET Corridor in bridging trade and transport of goods in Sub-Saharan Africa.
- Why competition from new African ports is a good thing – Transnet Port Terminal's experience
- Increasing transhipment traffic through East Africa – KPA's positioning
- Creating value for Eastern and Southern Africa ports: roles of hinterland countries

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Ghana's ecosystem shaping lives at digital speed

Angela Mensah-Poku, Vodafone Ghana director for enterprise and wholesale, talks to African Review about how she is driving innovation in businesses in Ghana.

Vodafone Business Solutions is at the helm of digitally transforming businesses in Ghana; from SoHos (Small Office Home Office) to Small Medium Enterprises (SMEs) and multinational companies.

Vodafone Ghana is the country's second-largest operator offering a high level of customer experience and superior network quality.

"Ghana and Africa does not have to evolve like Europe did in terms of the evolution of technology, we can skip steps and leapfrog into the future," said Angela Mensah-Poku, director for enterprise and wholesale at Vodafone Ghana. "Technology is empowering businesses and people to develop at a rapid rate. My remit is to make sure our clients' businesses run as efficiently as possible by using innovative solutions."

A significant part of her team's work is helping SMEs to become more digitalised in their business operations.

SMEs make up more than 85 per cent of Ghana's GDP. (Source: Vodafone Ghana)

"SMEs make up more than 85 per cent of Ghana's GDP, but the majority of which are not yet digital. We have to look at ways we can get these businesses ready for the future. For example, teaching small business owners on how to act global and be proudly local just by using their mobile phone, Vodafone cash and social media. A dress maker in Sakumono [a suburb near Accra's coastal area] can market her clothes and designs world-wide. This is the power of connectivity, m-commerce and innovation.

Regarding local corporate firms, she helps businesses find out how they can introduce flexible working to boost productivity. "Work is what you do, not where you are," explained Angela. "The use of tablets and access to our Vodafone SuperNet is vital for businesses to perform effectively and freely. Our larger clients – multinationals –

expect the same level of service from us in Ghana as it is in the UK or anywhere where their offices are based across the world, and it's my challenge to provide it to them," said Angela.

Innovation is vital for Vodafone Business Solutions and this is apparent by the rollout of Internet of Things (IOT) by Vodafone Ghana last year. Companies in Ghana are now monitoring fuel usage, fleet and assets, even smart – metering of utilities is taking place here and now, all powered by Vodafone's unique IOT solutions.

Mobile money

The company has launched Vodafone Cash, which works in a similar way to M-Pesa in Kenya.

"We have seen a huge uptake in the number of people that are sending money through their mobile," continues Mensah-Poku. "It allows everyone to become part of the m-commerce ecosystem.

Vodafone Cash and the things you can do with it is a fantastic innovation that is taking over Ghana." Vodafone Cash can be used to pay for university fees, utility bills and even pay workers.

"We have been able to localise services and made it accessible to all. "In Kenya, customers use M-Pesa to give food vouchers to refugees to buy items. It economically empowers the most vulnerable in the society, which in turn, stimulates the economy, who wouldn't want to be part of this movement."

e-learning

Mensah-Poku says Vodafone Foundation is seeking to make an impact on people's lives through providing mobility solutions.

"We have done things like 'instant schools' in Ghana. We feel passionate about bringing a stop to children learning under trees. We therefore make it possible for children to use tablets and gain access either to a local or international teacher so they can be taught in a formal setting, and be able to download their lessons. It's trailblazing.

"Our business also supports digital healthcare, a remote doctor-patient interface, which is huge in Ghana and across the continent. It allows patients to see their doctors without leaving their home.

"The world of technology is transforming the lives of communities, individuals and businesses in Ghana and the call to action is simple, think big , be creative and make an impact, it's a fantastic time to be part of this technological movement taking place in Ghana." ■

> "Technology is empowering businesses and people to develop at a rapid rate"
>
> **ANGELA MENSAH-POKU, VODAFONE GHANA DIRECTOR FOR ENTERPRISE AND WHOLESALE**

Angela Mensah-Poku was a speaker at the Tech in Ghana conference, organised by AB2020, the UK Ghana Chamber of Commerce (UKGCC) and TEDxAccra.

New plant for Acsend Concrete in Zimbabwe

Antony Benesi at a stockyard. (Source: Acsend Concrete Ltd)

A new VIHY Multicast SCV 120 production plant from HawkeyePedershaab ensures Acsend Concrete Ltd continues to supply high quality concrete products to its markets. Acsend Concrete, which commissioned the plant in 2014-2015, says the new machine has significantly enhanced product quality and consistency to product specification.

The VIHY Multicast SCV 120 with its unique vertical vibration system is highly flexible and versatile, enabling Acsend Concrete to introduce new products to the competitive Zimbabwean market.

Antony Benesi, managing director and owner of Acsend Concrete says: "I knew HawkeyePedershaab and its machines from previous experience, so I had no doubt it could supply the equipment I needed. But equally important, they were a very valuable partner and an incredible source of information in the design phase of the whole plant. The company assisted in the design of the batching plant, the design of the building, the logistics inside the building as well as the outside logistics around incoming materials and outgoing products. The cooperation with HawkeyePedershaab has given me a state-of-the-art production plant where we not only are able to supply today's products – but also the products of the future."

Based in Harare, Zimbabwe, Acsend Concrete provides complete precast concrete solutions. It manufactures precast concrete products and has its own fleet of trucks to deliver the products to site.

Senegal's Wari Group on the march after Tigo telephony deal

Wari Group is at the forefront of driving an ecosystem that provides social added value, Martin Clark reports.

Mauricio Ramos, CEO of Millicom. (Source: Millicom)

Emerging markets mobile phone operator Millicom of Luxembourg has signed an agreement for the sale of its Tigo business in Senegal to the local company Wari Group for $129mn.

The transaction, still subject to regulatory approval, will see Senegal's Wari, a leading money transfer firm, take a further step forward as an emerging digital services provider in Africa.

And the company is in buoyant mood as it strengthens its market presence.

"The acquisition of Tigo illustrates how an international group such as Wari, born in Africa, is proud to be at the forefront of driving the shift towards an ecosystem that provides social added value and tailored for Senegalese and African customers' needs," said Wari's chief executive Kabirou Mbodje.

Established only in 2008, it is a major leap forward for the African enterprise. "By pooling the advantages of mobile telephony offered by Tigo and the world of benefits provided by Wari, a leading platform for digital financial services, we combine the expertise, energies and ambitions of our teams and our two groups in order to offer more convenient and affordable services to users," Mbodje said.

That was a view echoed by Millicom's chief executive, Mauricio Ramos, who said he was confident the Wari Group would build on the current strength of Tigo Senegal.

"With the support of the people of Senegal we have been able to empower millions of customers with mobile technology, and to help promote social and financial inclusion across the country," he said.

Millicom is also behind the the Tigo mobile brand in other key markets such as Ghana, Chad, Tanzania and Rwanda, and boasts over 25 million subscribers across Africa.

Financial services

Precisely how the Dakar-based company intends to leverage the Tigo acquisition is another question, however.

While Millicom was an out and out mobile telephony provider, Wari's business and strategic focus has - at least thus far - been notably different.

The Senegalese company has developed an innovative platform that offers easy-to-use mobile, web and card solutions for organisations (institutional, commercial and financial) and customers in Africa and around the world across what is now a global network.

Its platform is available in more than 60 countries, with 500,000 sending outlets worldwide and 45,000 paying points in Africa.

The company has a strong network of merchants and agents in place including around 154 leading banks, plus oil company partners and more than 17 national post offices. Last year, it added Cape Verde to its list of countries served.

Wari's existing product line includes solutions available on mobile and the Internet through its call centre and IVR (Interactive Voice Response), as well as payment cards for the general public, companies and institutions.

It supports a flexible, Africa-friendly payments platform for applications such as water and electricity bill payments, pensions, scholarships and salary payments, TV subscriptions, airtime, lotteries, Wari branded payment cards, remittances and insurance.

The money transfer system accepts all payment means such as cash, bank accounts, vouchers, cards and wallets.

Strategic planning

Should the Tigo deal gain regulatory clearance, it will be intriguing to see how the company synergises the transaction, a major step forward in its aspirations for the local market.

Perhaps there are one or two clues on how it intends to proceed with the brand under its belt in Senegal.

"Wari's objective - for Africa and abroad - is to promote financial and social inclusion for all, inside an open and integrated Wari ecosystem," it stated in the Millicom news release announcing the Tigo deal.

> "We have been able to empower millions of customers with mobile technology and to help promote social and financial inclusion across the country"
>
> MAURICIO RAMOS MILLICOM CEO

With the addition of the cell phone network expanding its reach into the domestic market significantly, expect more of the same - that means continued product and payments innovation, bringing financial services to a far wider pool of people.

It is unclear, however, if Wari will continue to use the Tigo brand, with Millicom continuing to use the name elsewhere in Africa.

For Millicom, it follows the earlier disposal of the Tigo service in the Democratic Republic of Congo to Orange last year for a similar price tag.

In its full-year results statement for 2016, announced on February 8, 2017, Mauricio Ramos said the Senegal transaction was "in line with our aim of focusing our business where we can develop advanced fixed and mobile data services and add material long-term value, while monetising the significant value we have created in other areas."

The company has also said that it is pursuing other possible deals, including in the Ghana market. ■

Martin Clark

Ethiopian water utility delegates visit Yorkshire Water

Representatives from WaterAid Ethiopia and Debre Tabor Water Utility visited Yorkshire Water in the UK to find out how it supplies good quality drinking water and treats waste water.

Manaye Siyoum, head of water, sanitation and hygiene at WaterAid Ethiopia and Zelalem Assefra from Debre Tabor Water Utility in Ethiopia went to Yorkshire Water's clean and waste water treatment works, small community treatment facilities and pumping stations while examining processes that they can apply to operations in Ethiopia, such as protecting the quality of groundwater borehole sources.

Nearly half the population in Ethiopia, 42 million people, does not have access to safe water. Most people in the country make a living through farming and without water they can't grow the crops they need to feed and support their families

Gary Devries at Foxbridge Depot with Manaye Siyoum and Zelelem Assefra. (Source: Yorkshire Water)

Siyoum said, "The visit to Yorkshire Water was wonderful. Yorks They were open to sharing their knowledge and committed to working with WaterAid to making a lasting difference to the people of Ethiopia. We have learned so much and will be looking at how we can develop this learning for utilities in Ethiopia."

"The partnership with Yorkshire Water exceeds our expectations, there is no limit to what we can accomplish together to realise our common vision of seeing everyone everywhere with water, sanitation and hygiene education."

The visit was part of Yorkshire Water's unique 'Big Wish for Ethiopia' campaign that brings together awareness and skills sharing activities for charity WaterAid.

WaterAid is an international organisation whose mission is to transform the lives of the poorest and most marginalised people by improving access to safe water, sanitation and hygiene.

Yorkshire Water was one of the founding members of WaterAid, which was set up in 1981. ■

Diehl Metering supplies port of Dakar with remote reading system

The Port of Dakar is one of the most important ports and industrial sites on the African continent owing to its strategic location. It handles 95 per cent of the commercial traffic of Senegal (80 per cent of exports and nearly 100 per cent of imports). This generates intense activity and remarkable economic vitality, resulting in a high level of water consumption, which needs to be managed.

Diehl Metering and its local partner, 2nd Etablissement, were chosen by the Port of Dakar in 2013 to equip the entire port with water meters. Then, volumetric meter ALTAIR DN40, single-jet meters AQUILA DN60 and DN80, and multi-jet meter CORONA DN15, were installed without radio equipment. In 2015, the water management objectives grew to include new parameters:

- A better understanding of consumption
- Optimisation of the water system
- Daily billing, in particular for ships that berth for two or three days
- Easy access to the data
- Leak detection
- Fighting fraud
- Reducing non-revenue water

Diehl Metering equips the port with water meters. (Source: Diehl Metering)

To meet its objectives, the Port of Dakar installed a Diehl Metering remote-reading system. The solution combined IZAR RC i R4 868 MHz radios, deployed across all the meters, and reception sites equipped with the RDC Premium R4 data concentrator in different parts of the port. This fixed network allows a daily transmission of consumption and alarm information for the entire port. The data is managed directly by the new software IZAR@NET 2 supplied by Diehl Metering. Thanks to the software, configured according to Port of Dakar specifications, the data collected can be analysed. The generated reports are an effective decision-making tool to optimise water consumption and, finally, to realise efficiency and improve profits.

Currently, the Port of Dakar network is set up so many more meters equipped with the IZAR radio can be installed.

Port of Dakar has become a benchmark site for Diehl Metering, the first Smart Metering solution supplier to implement a remote-reading project on the African continent. Diehl Metering can support all types of projects for natural resources management, from meters to systems solutions and data management.

For more information visit www.diehl-metering.com

Ethiopian Airlines announces seven new destinations

Africa's largest airline group, Ethiopian Airlines has announced that it will launch seven new destinations during the first half of 2017 – one of the greatest expansions in the company's history.

From February to June, Ethiopian Airlines will launch new services to Victoria Falls in Zimbabwe, Antananarivo in Madagascar, Conakry in Guinea, Oslo in Norway, Chengdu in China, Jakarta in Indonesia and Singapore.

With the addition of these airports, Ethiopian Airlines will be flying from Addis Ababa to 98 different international cities across the world.

The Ethiopian Airlines Airbus A350. (Source: Ethiopian Airlines)

Group CEO Tewolde GebreMariam, said, "Africa's share of global aviation is currently the smallest at only around three per cent. As the largest airline group in the continent, we are highly concerned by this low base of air connectivity and are therefore setting record expansion in progress to enable Africans to enjoy safe, reliable and economical air connectivity both within the continent and between the continent and the rest of the world. Looking beyond the current economic slowdown, especially in the oil export-dependent economies of Africa, we firmly believe that the continent will become the magnet for foreign direct investment, trade and tourism, which are the engines of air travel growth. In turn, efficient air connectivity also drives socioeconomic development and we are happy to contribute our share to the 21st Century African Transformation."

In 2016 alone, new flights to Moroni in Comoros, Windhoek in Namibia and Newark, in the United States were launched, as well as to three cities in Ethiopia: Hawassa, Kebridahar and Dembidolo. Ethiopian Airlines is one of the fastest-growing airlines in the world and aims to reach 120 international destinations worldwide by the year 2025.

Ethiopian Airlines commands the majority of the pan-African passenger and cargo network operating the youngest and most modern fleet across five continents, comprising Airbus A350, Boeing 787, Boeing 777-300ER, Boeing 777-200LR, Boeing 777-200 Freighter, and Bombardier Q-400 double cabin. Ethiopian Airlines was the first airline in Africa to own and operate each of these aircraft. The airline is implementing its 15-year strategic plan, Vision 2025, to become Africa's leading aviation group.

A REAL GIANT

The GirderMAX from Faymonville is a girder bridge to transport super heavy loads on public roads.

This huge beam system is suitable for the transport of transformers, gas turbines, generators or any other bulky and heavy load.

Starting from a payload of 330,000lb up to 550,000lb., this heavy haul transport system can be combined with all modular platform trailers from Faymonville: DualMAX, ModulMAX or CombiMAX.

The length of the girder bridge is easily adaptable to the load and to the number of required axle lines. The two sets of main beams with an individual length of approximately 26 feet can be used as overhead suspensions beams with load supporting elements or, in combination with the so-called Z-beams, in a lowered position especially designed for gas-turbine and generator transport.

The whole system can be hydraulically lifted by 6 feet and 6 inches and the patented widening system can change the width within seconds from approximately 9 feet to 26 feet.

The GirderMAX will be a boon for large load transportation. (Source: Faymonville)

ESKOM ROTEK INDUSTRIES PLACES HUGE ORDER FOR MODULAR TRAILERS

Eskom Rotek Industries has purchased 128 SCHEUERLE-KAMAG K25 H, making this the biggest order of K25 H modular trailers the TII Group has ever obtained from the African continent.

The vehicles will support the Eskom Rotek Industries Logistics Services fleet, offering road transport, material handling, warehousing and logistics services to move electricity generation, transmission, distribution and building equipment to and from site.

Eskom Rotek Industries has a rich history of electricity maintenance support spanning more than a century. Based in Rosherville in the south of Johannesburg, the company has a number of smaller regional and project site offices.

Operations are grouped around bulk material services, turbo generation services, construction services, logistics services, and transformer and switchgear services.

"Continuously expanding our business opportunities is part of our growth strategy. Our new modular transporters will enable us to move extremely heavy loads for mega projects and equipment that exceed the prescribed dimensions and mass permissible on South African roads faster, safer and easier," said Sitsabo Kuhlase, general manager logistics services at Eskom Rotek Industries.

The SCHEUERLE KAMAG K25 is a modular platform trailer with which a wide range of transport assignments can be covered.

The vehicle is used as a trailer, semi-trailer or self-propelled transporter and has set new standards in its segment, claims the company.

It states SCHEUERLE-KAMAG K25 H SP and SPE vehicles are a cost-effective addition to create self-propelled transport units together with other K25 H vehicles. Their advantage is not only found in the low and robust construction but also in the sophisticated and ingenious control technology.

Ajanthas Kumaratha, area manager sales at TII Sales, said, "The African markets are promising and of great interest to us. Also, we are now finding a high degree of professionalism and strategic development among the major players."

L eft to right: Rainer Sasse, TII Sales, Wiseman Musekiwa, Eskom Rotek Industries, Friedrich Messer, SCHEUERLE, Dr. Axel Müller, TII Group, Sitsabo Kuhlase, Eskom Rotek Industries and Ajanthas Kumarathas, TII Sales after the purchase of the first trailers. (Source: TII Group)

Kenya boosts intermodal freight with infrastructure revamp

Massive upgrades to the transport infrastructure could transform the country well beyond recognition, writes Nnamdi Anyadike

Kenya is developing into a key regional intermodal lynchpin with road, rail and port routes linking it to markets in East Africa as well as to European and Arabian Gulf freight hubs.

And in the coming years, massive upgrades to its transport infrastructure could transform it – and the wider East African region's freight sector – well beyond recognition.

The transformation hinges on the Development Bank of South Africa-backed US$24bn Lamu Port-South Sudan-Ethiopia-Transport Corridor (LAPSSET) infrastructure project. According to Kenya's transport cabinet secretary, James Macharia key components of the project, including commissioning of the first three berths will be completed by next March.

LAPSSET, which brings together Kenya, Ethiopia and South Sudan, starts with a new 32-berth port in Lamu and interregional highways from Lamu to Juba, South Sudan and to Addis Ababa, Ethiopia.

The completion of the first three berths will pave the way for the beginning of port services in Lamu. By 2030, Lamu port traffic is forecast by the Kenya Ports Authority, the state agency which manages all the port installations in Kenya, to hit 23.9 mn tonnes per year.


Kenya SGR project: Mombasa Port terminal station

In addition to the work underway at Lamu Port, a three-phase project to construct a second container terminal with a capacity to handle over 1.5 mn 20-foot equivalent units (TEUs) at the port of Mombasa is also well advanced. The project is part of the Mombasa Port Area Development Project and is being funded by the Japan International Cooperation Agency and the Kenyan government. The first phase was constructed at a cost of US$289.8mn and was commissioned last September by President Uhuru Kenyatta. According to government data, it has already boosted the Kenya Ports Authority's container handling capacity by 50 per cent, from 1.1 mn to 1.65 mn TEUs. Construction of phase two is projected to cost US$260.7mn and will start once the government receives funds from the Japanese government.

In order to ease congestion at Mombasa, the Kenyan government is undertaking an ambitious road building programme. This will facilitate the transportation of cargo from the port destined for Nairobi and also Uganda, Rwanda, Burundi, South Sudan and the Democratic Republic of Congo (DRC).

Last November, the final mile of the Kenya-Ethiopia highway was completed. The key freight transport corridor runs from Mombasa to Addis Ababa and is described by Kenya's infrastructure principal secretary, John Mosonik, as "a critical milestone for Kenya".

The One Stop Border Post on the border between the two countries at Moyale will improve freight transportation by reducing the number of passport and customs controls from two to one.

Meanwhile, Kenya and its neighbours are also undergoing an unprecedented programme of railway modernisation. For years, there has been talk of an East African Railway Master Plan to serve the East African Community (EAC). However, until recently little action had been taken. Now though, activity is underway in Djibouti, Ethiopia and Kenya that will transform rail in the region. Last November, civil works on the 472 km Standard Gauge Railway (SGR) line from Mombasa to Nairobi was completed and the first six out of 56 locomotives from China have been received. The railway is being funded by China Exim Bank. The Kenyan President will commission

> "You cannot directly compare costs between the Uganda SGR, the Kenyan or Ethiopian one. It's like comparing apples and oranges because of many different factors on the ground."
>
> **KASINGYE YAMUGAMBI, SENIOR CIVIL ENGINEER IN CHARGE OF DESIGN**

the railway on 1 June although, aside from the civil works, the line is not scheduled to be fully completed until December. But when finished, the effect of the railway on cargo transportation between Mombasa and Nairobi will be huge. Irungu Nyakera, transport principal secretary, says that up to about 22 mn tonnes per year of freight will be able to be transported on the line in a journey time of four hours rather than two days.

But hopes of an eventual link-up of the various SGR systems that are being built in Kenya, Ethiopia, Djibouti and eventually Uganda, will depend on the achievement of cost reductions and the creation of more synergies within the region than there are at present. If and when Uganda's SGR is built, it will be powered by electrical trains. Kenya, however, is sticking with diesel engines while Ethiopia's SGR is driven by a mixture of diesel and electrical engines.

There are also complaints about the widely differing cost structures for all three. According to some estimates East Africa's entire 1,740 km (1,081 miles) SGR project is on track to cost approximately US$14bn, four times the original estimate. The Ethiopia-Djibouti line, which opened in October, cost US$3.4bn for 656 km; Kenya's 472 km stretch is costing US$3.4bn, while the Ugandan leg of 273 km will cost US$2.3bn. With Kenya's SGR project on course to be US$1.7mn more per km than Ethiopia's, critics in Nairobi are arguing that the government is not getting good value for money. There are also concerns about the expected poor performance of the Kenyan system. The average speed of Kenya's SGR freight will be no higher than 80 km/h. By comparison, Ethiopia's part electrified railway will operate at speeds of up to 120 km/h.

Construction of the Ugandan leg is not expected to fully commence until after Kenya starts construction of the Naivasha-Kisumu-Malaba stretch. In the meantime, Ugandan officials are going ahead with land compensation and securing project funding. But, as in Kenya, critics in Uganda are questioning the high cost.

Explaining the cost structure, Kasingye Kyamugambi, senior civil engineer in charge of design, told local media, "You cannot directly compare costs between the Uganda SGR, the Kenyan or Ethiopian one. It is like comparing apples and oranges because of the many different factors at play on the ground." The Malaba-Kampala project will go through a number of major urban centres. This will require the construction of viaducts to avoid disrupting traffic, therefore adding to the Ugandan project's overall cost. The Ugandan line also requires the construction of a 1 km bridge across the River Nile, which alone will cost US$300mn.

Nonetheless, the various ports, rail and road expansions are improving the prospects for East Africa. Spedag Interfreight Kenya has received a grant from the Logistics Innovation for Trade Challenge Fund to develop the Malaba Railway Yard into an intermodal cargo transfer facility, capable of handling, storing and consolidating cargo from rail to road and vice versa. The aim is to reduce logistics costs and enhance cross-loading services to East African community enterprises using the Northern Corridor route.

Heinz Mueller, managing director of Spedag Interfreight, said, "The common user facility will be operated at competitive rates, 20 per cent below the standard freight handling charges, resulting in a significant reduction in logistics costs. The facility will reduce the transit time of rail-bound cargo and road transport costs for cargo from Mombasa to South Sudan, DRC, Rwanda and northern Uganda by 20 per cent.

"Further benefits from this initiative include moving more freight from road onto rail, thereby reducing pressure on the road network. The project will also provide an opportunity for small and medium trucking enterprises to provide short-haul capacity to and from the facility." ■

New Copperbelt International Airport to open in 2020 and ease congestion

The US$397mn airport, situated 13 km from Ndola, is expected to handle 8,000 mt of cargo annually and allievate pressure on Zambia's road network.

A site has been identified in Ndola where Copperbelt International Airport will be constructed at a cost of US$397mn. It will be constructed 13 km west of Ndola, the headquarters of the Copperbelt in Dola Hill along the Ndola-Mufulira Road, and will have capacity to handle 8,000 mt of cargo annually.

Similar to other international airports, it will fall under the supervision of the state-run Zambia Airports Corporation Limited (ZACL). Other international airports under ZACL are Kenneth Kaunda Airport in Zambia's capital city of Lusaka, Mfuwe near South Luangwa Game Park, Simon Mwansa Kapwepwe in Ndola and Harry Mwaanga Nkumbula in Livingstone, the 'tourist capital'.

Copperbelt International Airport will have three aerobridges and a cargo terminal. These facilities are not part of Simon Mwansa Kapwepwe International Airport, which is currently servicing Ndola and the rest of the Copperbelt.

Some of the 20,000 take-offs from Copperbelt International Airport will involve cargo aircraft, most likely to and from Europe, South Africa, East Africa, China, the rest of Asia and North Africa.

In a statement, ZACL spokesman, Mweembe Sikaulu, said that the construction of the new airport is expected to start later this year and is due for completion within three years.

"Currently the international airport in Ndola is not handling cargo," she added. "Only Kenneth Kaunda International Airport in Lusaka is handling cargo meant for the Copperbelt."

An artist's impression of the new Copperbelt International Airport (Source: Zambia Airports Corporation Limited)

There are often delays in transporting cargo to the Copperbelt due to the intermodal system. The Lusaka to the Copperbelt highway is heavily congested, partly because of cargo movements from Lusaka and from more mines opening in the North-Western Province.

One design element of the Copperbelt International Airport is that it will have access roads to Luanshya, Kitwe and Mufulira, and will also improve the air-road intermodal transport from Ndola to these three Copperbelt towns.

The facilities at Copperbelt International Airport have been designed by China's AVIC International Holding Limited, which will also construct the new aerodrome.

Simon Mwansa Kapwepwe International Airport does not have enough space to enlarge its terminal buildings and extend its 2.5 km concrete parallel runways.

Over the years, residential properties have been allowed to be developed by Ndola City Council around the airport.

Experts have also indicated that today's wide-body aircraft requires longer runways, preferably, more than 3 km long.

> "Only Kenneth Kaunda International Airport in Lusaka is handling cargo meant for the Copperbelt"
>
> **MWEEMBE SIKAULU, ZACL SPOKESMAN**

The US$40mn multi-seed cooking oil plant in Ndola, owned by Global Industries, and the Chambishi Multi-Facility Economic Zone, where China is mining cobalt and processing several base metals, will benefit from aircargo transport.

The Copperbelt International Airport will have a maintenance hangar, a facility that is not part of the Simon Mwansa Kapwepwe International Airport.

This means that there will be Maintenance, Repair and Overhaul (MRO) business, which would be a new development in Ndola. Aircraft spares will then be transported directly to Ndola from Europe, China or the United States. Zambia's MRO nose-dived following the 1994 liquidation of state-run Zambia Airways.

Finally, Copperbelt International Airport will incorporate Smart Airport Systems (SAS) in line with ZACL's other airports, such as using a Flight Information Display System. SAS enhances efficiency and effectiveness in airport operations while providing safety and security to passengers and airline operators.

Another SAS feature at Copperbelt International Airport will be the security alarm system used to monitor and manage intrusions. And CCTV will provide surveillance inside and outside of the airport.

In conclusion, the plan for Copperbelt International Airport will enhance security, improve cargo transportation to the Copperbelt and track goods using advanced information systems. ■

Humphrey Nkonde

Propak East Africa to be biggest packaging exhibition in Kenya

Propak East Africa is set to be the biggest exhibition in the Kenyan packaging, printing and plastics sector.

There will be more than 100 exhibitors attending from 21 countries showcasing working machinery, components, raw materials and solutions.

Alongside the exhibition is the Propak Conference on the theme of 'Proving the efficiency of packaging, printing and processing in East Africa'.

The conference will feature 15 sessions from local and international speakers. Topics include consumer and economic trends; the East African packaging market today; compliance, sustainability, waste and many more.

There will be speakers from the Kenya Bureau of Standards, Coca-Cola Beverages Africa, Deloitte East Africa, Tetra Pak, General Printers Limited, and local associations among others.

In speaking about the event, Joseph Nyongesa from the Institute of Packaging Professionals of Kenya said, "IOPPK is committed to developing globally competitive packaging to meet the requirements of an industrialising local and regional market. Propak East Africa provides a forum where industrial players get the necessary practical exposure to choose appropriate technologies to advance their agendas.

"Africa Agenda 2063 is committed to industrialise Africa, feed Africa and improve quality of life. Propak East Africa will go a long way in moving the region towards these goals," Mr Nyongesa added.

Propak East Africa, which has run since 2014 and originates from Propak Africa which runs in Johannesburg, welcomes more than 500 international exhibitors and more than 16,000 visitors. The event is also run in Cape Town and Lagos, Nigeria, all of which are the market leaders. The organisers, Montgomery ECO East Africa, are also the largest Kenyan based exhibition organisers with a history of running exhibitions in the region for 27 years.

Propak East Africa will be open from 10am on the 7th March at the KICC and will run for three days. Both the exhibition and conference are free to attend upon registration and there is free parking for participants to the exhibitors. ■

www.propakeastafrica.com

Renewable power generation is as cheap as fossil fuels, says Lloyd's Register report

Renewable power generation solutions are as cost effective as fossil fuels, says Lloyd's Register.

It was among the main findings in The Lloyd's Register *Technology Radar - Low Carbon* paper, which examined the outlook for renewables, nuclear, grid and infrastructure, and energy storage.

The research sought the opinions of leaders across the sector, as well as from 600 professionals and experts around the world – from utilities and distributors through to operators and equipment manufacturers.

The report found renewable energy is becoming more cost-effective. (Source: warrenski/Flickr)

Respondents were asked to rate a number of technologies in terms of their potential impact, the amount of time it would take for these technologies to hit the market, and how likely they are to be adopted once they do. Respondents were also asked to reflect on the pace and success of innovation in their sector - and what they see as the major drivers and blockers.

Key findings included: low carbon generation technologies being cost-competitive. Seventy per cent of renewables respondents say that renewables are now reaching cost parity with fossil fuels; and solar cell technology is likely to have a major impact soon.

Electrical technologies will transform storage, rather than mechanical storage or chemical technology innovations, the report also found. Additionally, supercapacitors will rapidly speed up charging times for large batteries, which will have the greatest impact on storage.

"We are very encouraged by the findings, which highlight not only a growing optimism across the industry, but a vigorous and intelligent debate about the pathways to decarbonisation," says Alasdair Buchanan, energy director of Lloyd's Register.

KENYA TO HOST RENEWABLE ENERGY SUMMIT

As the country looks to shore up its own electricity supplies, Kenya will be the focus in April for a new regional renewable energy summit.

Delegates from across Kenya, Ethiopia, Burundi, South Sudan, Tanzania, Rwanda and Uganda will gather in Nairobi on 4-5 April 2016 to discuss the future of green energy in eastern Africa.

The African Renewable Energy Leaders' Summit reflects a growing interest in green energy across the continent.

Kenya's Ministry of Energy and Petroleum forecasts US$52bn worth of investments will be needed to meet the nation's power demand by 2030. Much of this will come from renewable sources, crucial to enhancing Kenya's competitiveness and socioeconomic transformation.

"Having adequate power from renewable sources will enhance the competitiveness of Kenya," said Eng. Isaac Kiva, director of renewable energy at the Kenyan Ministry of Energy and Petroleum.

Trigeneration with gas engines in Africa

Trigeneration can be used either in synchronisation with the local electricity grid, or alternatively in island mode, where a whole factory's operation is reliably supported by the generating set, writes Alex Marshall, Group Marketing and Compliance Director from Clarke Energy.

Clarke Energy service engineers at a facility in South Africa. (Source: Clarke Energy)

Trigeneration takes energy efficient cogeneration technology to the next level.

Cogeneration, or combined cooling, heat and power (CCHP) is typically a form of localised power generation where, along with electricity, heat is recovered from a generating set for use in boilers or as hot water. This provides much higher levels of fuel efficiency – more than 90 per cent compared to 40-50 per cent for electricity generation alone.

Trigeneration or CCHP is where a proportion of the heat from the generating set is used in an absorption chiller. Absorption chillers are able to convert this heat to cold water, which, in turn, can be used in refrigeration systems, air conditioning or other forms of cooling plant. Absorption chillers provide an economical and environmental alternative to conventional refrigeration. Combining low emission power generation equipment with absorption chillers enables maximum total fuel efficiency, elimination of harmful refrigerants and reduced overall air emissions.

There are a number of different configurations of CCHP units from which you can get refrigeration. These include operations using hot water, steam or direct heat via combustion. Compression-type refrigeration machines can either be driven directly or with electrical power.

There are a number of associated benefits for using trigeneration technology including increased energy efficiency, reduced operational costs and less atmospheric emissions than using other dirtier fuels than gas. Standardisation of design using engines such as GE's Jenbacher platform can deliver smaller scalable footprints fitting into tight spaces in existing plants.

Combining a CCHP plant with an absorption refrigeration system allows utilisation of seasonal excess heat for cooling. The hot water from the cooling circuit of the plant serves as drive energy for the absorption chiller. The hot exhaust gas from the gas engine can also be used as an energy source for steam generation, for example for a highly efficient, double-effect steam chiller. Up to 80 per cent of the thermal output of the cogeneration plant is thereby converted to chilled water. In this way, the year round capacity utilisation and the overall efficiency of the cogeneration plant can be increased significantly.

> "For factories involved in the processing of food, drinks or other perishable goods, trigeneration technology can help improve energy efficiency"
>
> **ALEX MARSHALL, GROUP MARKETING AND COMPLIANCE DIRECTOR, CLARKE ENERGY**

Using trigeneration in larger offices is a natural fit for the technology. Offices in Africa typically have significant needs for cooling. Approximately 150-170kW of cold output is required per 1,000m2 of office space. Deploying a gas-fuelled trigeneration plant to satisfy both the local electrical load and cooling load is a logical choice. If surplus electricity

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is generated, then the ability to export this to the natural grid is beneficial.

For factories processing food, drinks or other perishable goods, trigeneration technology can help improve energy efficiency and provide the core power generation for the operation of the plant.

ISLAND MODE

Trigeneration can be used either in synchronisation with the local electricity grid, or alternatively in island mode, where a factory's whole operation is reliably supported by the generating set. This is particularly important in countries with an unreliable national electricity grid such as Nigeria. Almost all Nigerian factories operate with island mode power generation. Diageo's Guinness Ogba brewery power plant in Lagos, Nigeria was one of Africa's first gas-fuelled trigeneration plants. Built in three phases, adding on boilers operating on the engine exhaust gas, then absorption chillers also fed directly by engine exhaust gas, it led the way for sustainable low carbon technology on the continent.

Guinness Obga brewery engine house, Lagos, (Source: Clarke Energy)

Data centres are a particular area of potential for future development. These processing and storage centres for electronic data currently consume around three per cent of the world's electricity. This figure is set to triple over the next decade. Data centres in hot countries such as those in Africa will need some of the greatest levels of cooling to support the cooling of the circuits for optimal performance.

A key global reference for this technology is Citibank's data centre in London that cut its energy use by deploying combined cooling and power technology. With the growing availability of gas in Africa in locations such as Johannesburg, Lagos and Dar es Salaam, gas-based trigeneration technology can support the growth of data centres in these regions.

In summary, gas engine-based trigeneration is a proven, successful technology internationally for delivering cost and carbon savings.

Currently gas supplies are restricted to certain parts of the African continent, but, as this availability grows, the potential to use trigeneration technology will increase further. Growing industries, particularly in the data centre sector provide the most exciting opportunities. ■

Rental power continues to meet Africa's energy needs

While the International Monetary Fund predicts growth for Africa in the long term, energy supply often struggles to meet demand.

With Africa's economy growing steadily, demand for power remains one of the continent's toughest but most predictable challenges. That is because the availability of energy is typically far from predictable in many locations.

For decades, this has driven demand for rental power units to plug gaps in national electricity systems or to supply critical, reliable energy for key industrial sites, factories and large mines.

Major suppliers such as Energyst, FG Wilson, Clarke Energy, and Caterpillar, have long underpinned these energy supply gaps, supported by a vast international network of resellers, engineers and maintenance teams.

Often, the main trigger of demand in this niche area is power cuts.

While economists predict good things ahead for Africa long term - the International Monetary Fund (IMF) projects growth for sub-Saharan Africa to rise to 3.7 per cent by 2018 - little has changed with energy too often in short supply.

In Kenya, recently, drought has forced officials to crank up costly thermal-based generation from mobile power stations, with hydro supplies unable to meet demand. Like many other African countries, Kenya's power system has long been plagued by erratic rains, undermining essential hydro electric production.

It has come at a cost for Kenya though, with an expected increase in the fuel cost levy because of the use of extra diesel. The cost hike and the decline of hydro output has the potential for disrupting economic growth, the Kenya Association of Manufacturers has said.

Energyst's 12 MW rental power solution powering copper mine. (Source: Energyst)

Critical systems integrity

This general energy backdrop has, however, provided a market conducive for the rental power business in supporting critical infrastructure and specific industrial projects.

The fuel types commonly used include diesel, gas and others, while the main user categories include utilities, oil and gas, construction, mining and manufacturing.

In areas where reliable electricity is needed, this remains a major feature even in well-served energy markets, such as South Africa.

Gensets are routinely deployed to support major sporting events, such as South Africa's recent test match cricket series against Sri Lanka.

The same is true in North Africa where highly specific applications also demand guaranteed power.

Morocco's financial aspirations, in fact, could hinge on the availability of reliable power from one leading provider, Himoinsa. Casablanca's Finance Centre (CFC) - which aspires to be the country's Wall Street - is to use two HDW-750 T5 generator sets to guarantee the supply of electricity to its CFC Tower, the first building in a new financial district.

The twin gensets will be able to supply up to 1.3MW of standby power if needed to prevent interruptions. The 26 floors of the tower will contain offices and the headquarters of banks and financial institutions for whom any type of power cut could entail huge losses.

The project was completed by Morenergy for Africa, Himoinsa's Moroccan distributor, and Cegelec, the company in charge of the CFC tower project.

The gensets incorporate a DS8610 control unit that allows them to work in parallel. Also, to comply with the French NFE37312_61940 standard, an additional control unit was included so that, in the event of a failure in the main control unit, at least one of the generators will keep running.

Large-scale industrial demand

Africa's mining industry continues to support growth for genset makers and suppliers.

Genser Energy recently completed a major project to provide additional electricity for Ghana's gold mining sector. The independent power producer acquired three MARS 100 turbine generation sets, manufactured by Solar Turbines USA, a Caterpillar company, for use on two new mines for Gold Fields.

Until 2016, Genser Energy had three power plants in operation serving industrial customers, including Unilever, but has now raised this to seven this year, running a mix of liquid and gas fuels, in response to demand and the much-publicised travails of Ghana's domestic power sector.

South African-based Zest Energy was also asked to supply a large plant to support remote mining operations on one of the world's largest finds of high grade graphite, the Balama deposit in Mozambique. The mine is located west of Pemba in northern Mozambique. Although it does have access to power from the grid, this needs extra support for an adequate and stable supply for the plant.

The Balama power plant began producing electricity this year, with an initial capacity of 12.5 MW powered by seven 2,200KW diesel generators. Capacity will later be expanded to 11 generators.

Diesel for the plant is fed into the system via a 30,000 litre fuel tank, linked to a bulk storage system, with a duplex fuel filtration and circulation system.

Until Africa's power systems can deliver guaranteed electricity to support such flagship projects, special events and other applications, then the demand for rental services is here to stay. ■

Martin Clark

Aksa Energy continues to grow in Africa

Mali is the latest African country to have a Heavy Fuel Oil power plant from Aksa Energy installed in 2017.

Hamitabat Electric Power Plant, one of the largest power plants in Turkey. (Source: Shutterstock)

Turkey's largest independent power producer Aksa Energy is building a Heavy Fuel Oil (HFO) power plant with 40 MW installed capacity in Mali. Aksa Energy hopes it will be in operation later this year.

The company is also constructing a 370 MW HFO power plant in Ghana and a 120 MW HFO power plant in Madagascar.

"We have begun the construction of our HFO power plant in Madagascar and it will become operational in 2017," says Aksa Energy's CEO and board member Cüneyt Uygun.

"We also aim to make our plant operational in Mali in the first half of 2017. This third project in Africa will be an important step towards implementing our company's strategy of expanding overseas."

Africa has become the new focal point for Aksa Energy with its growing need for energy in recent years.

Venturing into overseas markets due to the surplus in Turkey's energy sector, Aksa Energy says it can deliver fast-track solutions for energy needs in African countries through its investments. The continent is also an attractive focus for investment for Aksa Energy because of its rich energy resources.

"The energy need in Africa is increasing every year," continues Uygun. "Our power plants in Ghana, Madagascar and Mali will help to solve the energy-related problems in Africa which, in fact, has full potential for growth.

"We offer five, twenty and three years of sales guarantee for power to be generated in the Republics of Ghana, Madagascar and Mali, respectively."

For the construction of these three power plants, Aksa Energy will utilise existing equipment in its portfolio, which will considerably reduce the amount of investment and shorten the time required for putting the power plants into operation.

Pursuant to the agreements, the power plants will operate at high capacity utilisation rates.

Power from the plants in Ghana and Madagascar will be sold in US dollars, while the plant in Mali will sell in euros. This will reduce the company's foreign exchange risk.

Aksa Energy has over 2,000 MW of installed capacity in Turkey through 16 power plants comprising wind, natural gas, hydroelectricity, fuel-oil and lignite (brown coal).

> "Ghana, Madagascar and Mali will help solve the energy-related problems in Africa"
>
> **CUNEYT UYGUN, CEO, AKSA ENERGY**

For more information about Aksa Energy visit www.aksaenerji.com ■

Bomag machines make an impact in South Africa

Workers using the Bomag paver BF 800 P. (Source: BELL)

The Kwa Mhlanga Group, known for developing townships in South Africa, has acquired seven Bomag BMP 8500 multipurpose compactors.

The remote controlled machines are well-suited for work on trenches and sewer line construction, or wherever there is a need for mobility and manoeuvrability.

Francois Bakkes, director of operations of the Kwa Mhlanga Group, said, "Working in deep trenches as our staff sometimes are forced to, we are always aware of possible cave-ins and this remote operated Bomag compactor allows the operator to stand above the trench out of possible harm's way and have a much better view of where the machine works."

The BMP 8500 has enabled the Group' to reduce its tamper fleet and make the company subsequent cost savings.

"Innovations like using remotely controlled Bomag compactors inspired us to seek gaps in the civil engineering market where we were sure we could make a difference through mechanisation," explained Bakkes.

One such area was in road construction, in particular in the work done between kerb stones. Kerb stones are typically laid once the sub-base course of the road has been completed. The upper levels of the road are laid afterwards which can uproot or damage the kerb stones. To counteract this, the Group acquired the Bomag paver BF 800 P. "With the Bomag paver and a mobile aggregate batching plant to feed it, we can now effectively lay over 1,000 tonnes of base material on a new road in under a day and do it efficiently without damaging the kerb stones at the edge."

NEW DATES FOR CONMIN WEST AFRICA EXHIBITION

The ConMin West Africa Exhibition and the National Mining Summit will take place on 13-15 June instead of April following the planned closure of Abuja's airport in March.

The exhibition is expected to attract more than 150 companies exhibiting products from the west African mining and construction sectors.

Taking place at the International Conference Centre in Abuja, it will act as a platform for key regional and international stakeholders to discuss business opportunities, display leading technologies and equipment in both the construction and mining sectors.

The National Mining Summit, which runs alongside ConMin West Africa, will see top level representatives from the Nigerian government and the country's mining industry discuss policy and industry developments and address issues, including challenges to funding, inadequate geological data and skilled labour.

The mineral and mining sector has been voted as a relevant platform for job creation, poverty alleviation and wealth creation.

The summit also will host 'lessons learned' sessions from operators from African nations advanced in mineral sector development.

For more information visit www.conminwestafrica.com

LATEST MARINI ASPHALT TO BE USED AT HO CITY AIRPORT GHANA

A new airport in Ho City is part of efforts to open up the Volta region in Ghana for economic development.

The Volta region is one of the most populous regions of Ghana. Farming, fishing and tourism are the main economic activities prevalent in the area.

This new airport will not only connect Ho with other cities like Takoradi, Accra, Tamale, but will also serve as a key fuelling station for international flights.

The project includes a new 1,600 metre long and 45 metre wide runway, a taxiway, an apron and two aircraft parking bases.

For this project the Ghanaian construction company AMANDI chose the Marini latest generation asphalt plant Be Tower 2000 P. This batching plant, with an hourly capacity of 160 t/h, has been able to supply high quality hot mix asphalt for the airport runway and ancillary roads, producing more than 1,000 tonnes per day.

It is manufactured by Italian company Marini, which is a world leader in the production of asphalt plants.

Marini asphalt plant Be Tower 2000 P will produce more than 1,000 tonnes per day. (Source: Marini)

Despite its size and capacity, this modular asphalt plant, which was made in Marini Italy, is easy to transport, erect and put into operation, says the company.

The official inauguration of Ho Airport runway took place in November 2016. Ghana's president, Nana Akufo-Addo, arrived in style by helicopter.

New Volvo G-Series haulers take off in Africa

Since the relaunch of the Volvo G-Series haulers in April last year, Volvo CE's order intake for articulated haulers in Africa has more than doubled.

The A60H. (Source: Volvo)

In 2016 Volvo Construction Equipment (Volvo CE) relaunched its ever-popular G-Series articulated haulers with a whole host of productivity-enhancing updates, while also adding a brand-new model to the range.

The new 45-ton capacity A45G joined the A25G, A30G, A35G and A40G in offering high reliability and productivity to customers engaged in quarrying, open cast mining and earthmoving operations across Africa.

"We listened to what our customers needed and updated the G-Series accordingly," says Ilkay Fidan, business director for Africa at Volvo CE. "In particular, we saw a real demand for higher capacity haulers."

As well as the addition of the A45G, this demand also prompted Volvo CE to develop the A60H, the construction equipment industry's first true 60-ton capacity articulated hauler. The Volvo A60H offers greater traction than rigid trucks of a similar capacity and, therefore, higher driving speeds in severe off-t

Some important deals have already been signed in Africa, and are due for delivery in the next few months. Various other prospects are also in the pipeline. "We believe the A60H is going to be a unique key for opening new doors and meeting new customers in Africa," Fidan adds.

The A45G has also been met with enthusiasm from African customers – especially in West Africa and South Africa – and now, along with the A40G, is Volvo CE's best-selling articulated hauler on the continent. Since the updated range was officially unveiled at the 2016 Bauma exhibition in Munich, Germany, Volvo CE's order intake for articulated haulers in Africa has more than doubled. The company's share of the African articulated hauler market has also increased by almost five percentage points.

A healthy order book and growing market share underline the anecdotal feedback we have received from customers about how much they appreciate the new models. This also reinforces our long-term belief in the African market, especially now that commodity prices are starting to increase again," Fidan says.

> "We listened to what our customers needed and updated the G-Series accordingly"
>
> **ILKAY FIDAN, BUSINESS DIRECTOR FOR AFRICA AT VOLVO CE**

Industry-leading design

According to Fidan, the low cost per ton, durability, ease of service and quality support from the Volvo dealer network are the main contributors to the Volvo G-Series haulers' success in Africa.

Powered by the renowned Volvo Stage II engines in Africa, which range from 234 kW (318 hp) on the A25G to 347 kW (445 hp) on the A45G, the G-Series delivers excellent fuel efficiency without compromising on power or performance, providing significant improvements in fuel economy compared to the models they replace. The Volvo engine's lower idle speed delivers an additional fuel saving for the most efficient machine, claims the company.

Each machine is optimised for


The front view of A60H. (Source: Volvo)

The A60H at work. (Source: Volvo)

> Volvo CE has come a long way since its original 10-ton articulated hauler
>
> **LKAY FIDAN, BUSINESS DIRECTOR FOR AFRICA AT VOLVO CE**

fuel efficiency relative to its individual payload capabilities, so more can be moved for less. Dynamic and predictive gear selection adjusts to operating conditions, for improved comfort and fuel efficiency.

Engineered to increase uptime, thanks to their heavy-duty front and rear frames, hitch and wet disc brakes, the G-Series benefits from Volvo's proven durability and the support of an extensive array of maintenance options, meaning never needing to worry about getting the job done.

Able to work in all seasons, terrains and applications, several body building and chassis options are available.

The G-Series' unbeatable off-road performance is thanks to matched Volvo drivetrain, Automatic Traction Control, including 100 per cent differential locks, all terrain bogie and hydro mechanical steering. When going downhill, retarders and the Dynamic Volvo Engine Brake ensure safety and productivity are maintained, explains the company. The G-Series' dump support system and load and dump brake also help operators stay in control at all times for extra productivity and safety.

Knowledge is power

"Our dealer and customers in South Africa are using the CareTrack telematics system efficiently to plan preventative maintenance and ensure high machine availability. CareTrack, together with MATRIS (Machine Tracking and Information System), has also been providing customers with useful data about site design and machine usage to boost the productivity and profitability of their operations even further," Fidan says.

"Volvo CE has come a long way since its original 10-ton articulated hauler was launched in 1966 and the latest G-Series is the culmination of 50 years of trusted Volvo engineering and innovation. As the originator of this product category, we are committed to developing and launching market-leading products that will help our customers to achieve their business goals – in Africa or wherever they may be in the world," he concludes. ■


The A60H. (Source: Volvo)

CAT set to debut eight new machines at CONEXPO

Conexpo is set to return to Las Vegas to showcase the latest innovative construction solutions and equipment. Taking place at the Las Vegas Convention Center from March 7 to 11, it will be attended by key industry players.

Caterpillar will be displaying eight new machines, including the M317F wheeled excavator with a compact radius designed to boost productivity in confined areas.

The updated 390F and 336F XE crawler excavators, with what the company says the industry's only payload system for accurate truck loading, will also be on show.

In total, Cat will be exhibiting more than 40 machines including the new model, the 986k wheeled loader, promising lower cost per tonne in earthmoving and aggregates operations, and the 950 GC wheeled loader.

GOMACO will be launching its GP4 slipform paver that is able to pave widths of up to 12.2m and has a smart telescoping frame and pivot arms, including extreme steering capabilities.

JLG will also debut nine new products which will be shown in the boom, scissor and telehandler categories. It will show a variety of its best-selling products; the 400S, the SkyTrak 10054 telehandler and the 1932R electric scissor lift.

The Manitou Group will introduce more than 24 new equipment models: nine new Gehl models in the skid loader, track loader, articulated loader, excavator and telescopic handler product lines; seven new Mustang models in the skid loader, track loader, articulated loader and excavator product lines; and more than five new Manitou models in the rotating telescopic handler, heavy duty telescopic handler and construction telescopic handler product lines.

"The Manitou Group is dedicated to the development of innovative products designed for the specific needs of the construction and rental markets," said Dan Miller, CEO Manitou Americas, Inc. and president of the Manitou Group compact equipment division. "The number of new equipment offerings we have to unveil at [CONEXPO] illustrate this dedication to providing relevant machines for these markets. The group has also increased its resources that focus on customer and aftermarket support to ensure our customers receive an excellent level of support during the entire life cycle of their Manitou, Gehl, and Mustang equipment."

Solar-powered roadways, the first-ever 3D printed excavator and drones will be other must-see exhibitions at the event. ■

The Big 5 Construct North Africa to support Moroccan industry

The Big 5 is the largest and most influential portfolio of construction industry events spanning the Middle East, India, Asia and Africa.

The launch of the Big 5 Construct North Africa will take place from 25 to 27 April at the Parc Des Expostions de l'Office des Changes Casablanca. The event is aimed at supporting the Moroccan construction industry by showcasing the latest technology and providing networking opportunities.

"The Big 5 Construct North Africa in Morocco will promote long-term growth opportunities, and development of the Moroccan construction industry, along with creating new export partnerships for local Moroccan companies," said Andy Pert, portfolio exhibitions director. "By sharing global best practices and innovative ideas, beyond providing networking, business and learning opportunities through our internationally recognised Continued Professional Development (CPD) workshops, we are confident The Big 5 will support the Moroccan economy by catering to the needs of local manufacturers and construction professionals."

Organised by DMG events Middle East, Asia and Africa with its network of over 300,000 suppliers and buyers of construction products from 120 countries, The Big 5 is the largest, most influential and renowned portfolio of construction industry events spanning the Middle East, India, South East Asia and Africa.

In 2016, it connected over 35,600 exhibitors, 195,500 visitors, 1000 speakers and 20,000 conference and summit attendees.

Moroccan companies Mall Zellij, Chaoui Bois, Vicaima Africa, Le Comptoir and Patmas Afrique have announced their participation to The Big 5 Construct North Africa 2017. "The event will facilitate future regional and global distribution opportunities by welcoming construction players from around the globe, ultimately supporting Moroccan exports," said Pert.

Big 5 Construct North Africa will promote growth opportunities. (Source: DMG Events)

This growing participation along with The Big 5 portfolio's track record of success in supporting the construction industry is driving its geographical expansion. The first show in the African continent, The Big 5 Construct East Africa 2016, which took place in Kenya in partnership with the National Construction Authority (NCA) and with the support of the Kenyan Government, is the latest example of the brand's ability to help local construction industries grow.

"The world renowned Big 5 show brought a wealth of knowledge and experience in construction materials and technologies to Kenya." says executive director of the NCA, Arch. Daniel O. Manduku.

Private as well as foreign direct investments are deemed necessary to address the current financing challenges of the construction industry in Morocco, whose output value is expected to rise at a compound annual growth rate of 4.07 per cent in the next four years. Real estate accounts for the largest share of foreign direct investment, at 38.6 per cent in 2016, according to the Moroccan Investment Development Agency, and around 20 per cent of developers in Morocco conduct business as part of a joint venture, many involving Gulf countries, the Oxford Business Group reports.

Dubai Exports confirmed that it will take part in the show with a delegation of buyers with the aim of establishing new partnerships with local manufacturers. Also, the Developers & Builders Alliance (DBA), the American Institute of Architects (AIA), the Royal Institute of Chartered Surveyors (RICS) and the Kenya Federation of Master Builders (KFMB) are just some of the associations supporting The Big 5 Construct North Africa 2017.

Thousands of products for the Moroccan construction industry will be showcased at the event. The Casablanca-based exhibitor Mall Zellij revealed it will launch a set of new ceramic tiles never before seen in the country.

"We sincerely believe that this event will have a positive impact on introducing Mall Zellij as a specialised importer of well-known brands of tiles from Europe," General Manager, Youssef Senhaji, stated. "We look forward to establishing new contacts with professionals and introducing our large range of products dedicated to projects, professionals as well as end users at The Big 5 Construct North Africa."

The event will offer an extensive educational programme.

"Since 2010, DMG events has placed an increasing emphasis on certified education in the form of conferences, seminars and workshops supporting thousands of professionals develop their carriers through Continued Professional Development (CPD). The Big 5 Construct North Africa 2017 will be no exception," added Pert. ■

> "By sharing global best practices and innovative ideas, The Big 5 will support the Moroccan economy"
>
> **ANDY PERT, DMG PORTFOLIO EXHIBITIONS DIRECTOR**

For more information visit www.thebig5constructnorthafrica.com

Uganda's transport infrastructure prioritised for driving economic development

The Ugandan government is committed to investing in the country's infrastructure to boost economic and social development, Geoffrey Muleme writes.

A section of the Kampala-Entebbe Expressway under construction. (Source: UNRA)

The Uganda government says over the last decade it has prioritised transport infrastructure as a critical component to drive the country's economic and social development.

The medium-term development goal is to become a middle income country by 2020. This means attaining a per capita GDP of US$1,033 while the economy is expected to accelerate gradually to six per cent by 2019.

The World Bank forecast the Ugandan economy to grow at around four to five per cent this year, similar to the average attained over the past five years. It noted that to become a middle-income country by 2020, the economy will have to grow by a minimum of ten per cent.

"Infrastructure is highly associated with connecting people to jobs, education and health services among others. With quality infrastructure in place, the country will be able to supply goods and services to both domestic and external markets. Infrastructure facilitates interaction and generates the knowledge and solutions that foster long-term growth," according to the latest Background to the Budget publication by the Ministry of Finance. The report stated for fiscal year 2016/17, the government has been upgrading numerous gravel national roads to bitumen standard while maintaining a number of national, district, urban and community access roads.

"The share of the unpaved national road network from fair to good condition increased from 64 per cent in 2011 to 70 per cent in 2015/16 while paved roads improved from 74 per cent in 2011 to 80 per cent in 2015/16 with a medium target of 85 per cent," it outlined. It added that in regard to the implementation of road projects, the government is committed to constructing a total of 16 road projects, continuing with 18 road projects, and beginning the construction of 28 road projects and the procurement of contractors for six road projects.

> "Infrastructure is highly associated with connecting people to jobs, education and health services"
>
> **MINISTRY OF FINANCE PUBLICATION**

The Background to the Budget stated during the 2016/17 financial year, the government will tarmac a total of 400 km of gravel national roads and reconstruct 250 km of old paved roads. Forty nine roads will also be constructed and 27 road designs will be completed.

Larger-scale projects include the Kampala-Bombo Expressway (35km), Kampala Flyover, Nakasero-KNB VVIP Express Route (5km) and the Kampala-Busunju Expressway (55km).

The Kampala-Mpigi Expressway (35km) will be built with funding from the African Development Bank, The Kampala-Jinja (77km) road and the Kampala Southern Bypass (18km) will be constructed as part of a private-public partnership. The Kabwoja-Buhuka road (43km) and Karugutu-Ntoronko (55km) section will also be completed.

According to the Uganda National Roads Authority (UNRA),the body in charge of preparing and maintaining the national roads network, the national road network was estimated at 10,000 km by June 2009. The government then added another 10,000 km the next month, doubling it to 20,000 kim.

UNRA senior management taking measurements of Moroto Town roads with district leaders. (Source: UNRA)

The UNRA says to date about 5,000 km of paved roads have been covered and more roads are lined up.

UNRA, however, points out in order to keep the roads that have been constructed lasting longer, there is need for ongoing maintenance and a preventative strategy to be put in place.

Some of the maintenance activities the UNRA carries out include crack sealing/resealing, pothole repairs, ditch maintenance, culvert maintenance and replacement hard shoulder repair and washout repair.

It is a also responsible for road sign maintenance, road marking, bridge maintenance and repairs.

"Given that only 19 per cent of the national road network is paved with the rest being gravel roads and the available resources not matching road development needs, the most optimal solution is to adopt cheaper road construction techniques with scheduled future preventative maintenance to safeguard the life of the roads," the UNRA says.

"The roads sector faces huge challenges, including ambitious demands such as better, quicker and cheaper production, construction and maintenance. In an effort to

Section of the Kampala-Entebbe expressway. (Source: UNRA)

minimise downtime of roads for maintenance activities, the overall quality of the construction has to be upgraded, " it added.

The government says while resources will continue to be provided to facilitate the completion of the ongoing projects, the government will also prioritise proper maintenance and sustainability of completed road projects totalling more than 480 km for periodic maintenance .

Ruti-Mwizi-Kabuyanda-Kikagati (67km) and Nyakabirizi-Burere-Nsiika (45km) roads were both completed by March 2016.

While inspecting the road network and getting first-hand experience of the roads in the remote Karamoja region in north eastern Uganda recently, the executive director of UNRA, Allen Kagina urged the local people to own the roads and productively be part of the project as they struggle to improve their livelihoods and get value for their money as taxpayers.

"I am very happy to be on the road than in my office in Kampala. Our mandate is not to sit in Kampala and make directives. Our job will be more visible on the road than in offices," Kagina said.

She has previously said that at the beginning of the 2016/17 financial year at least 385 km paved and restored roads would be added to the network.

Ongoing major road developments

• Kampala-Expressway with a spur to Munyonyo	51 km
• Mpigi-Kanoni	65 km
• Kampala Northern By-pass	17 km
• Kanoni-Sembabule-Villa Maria	110 km
• Mukono-Kayunga-Njeru	94 km
• Pakwach-Nebbi	54 km
• Olwiyo-Gulu	70 km
• Ntungamo-Mirama hills	37 km
• Musita-Mayuge-Lumino-Busia/Majanji	104 km
• Namunsi-Sironko-Muyembe	32 km

"While the government road development programme has been growing, medium-term expenditure framework ceiling for UNRA has been the same," she told local media, adding that "contracts will be signed for projects when funding is available and for other roads we shall continue either updating or working on the designs."

The Uganda National Roads Authority was allocated UGX 1.7 trillion (about US$ 500 mn) in the 2016/17 national budget and the roads development budget (mainly construction of new highways) is allocated approximately 90 per cent of all funding provided.

Kagina warns the successful implementation of the entire programme of new roads will depend on the financing available in subsequent years. The World Bank, the African Development Bank, the Islamic Development Bank and the European Union have also played a key role in financing a number of road projects in the country contributing about 40 per cent to the road's development budget.

The African Development Bank is set to spend more than US$400mn in funding construction work on Kigumba-Masindi-Hoima to Kyenjojo road (200km) in western Uganda while the World Bank is also interested in funding the Kampala-Mpigi Expressway a project that will cost about US$150mn.

The Islamic Development Bank (IDB) will spend about US$300 mn in the construction of Tirinyi-Palisa-Kamonkoli road in north eastern Uganda and Muyembe-Nakapiripit road.

It will also inject about US$70mn for the upgrading of the Masaka-Bukakata road to tarmac in southern Uganda.

The Japanese government will also fund the construction of flyovers at the Clock Tower in Kampala to ease traffic congestion in the city and the project is expected to cost about US$150 mn. ■

Gakara mine back in business after US$8m listing on London Stock Exchange


Preparing sampling lines. (Source: Rainbow Earths)

Rainbow Rare Earths raised US$8mn on the London Stock Exchange to restart the largest scale rare earth mining project of its kind in Burundi.

The company will be sell 5,000 tpa of produced concentrate to German multinational firm, thyssenkrupp Raw Materials, before the end of 2017 and, in due course aims to invest in capital equipment to enable them to yield up to 10,000 tn per year.

"Our project boasts an in-situ grade in the range of 47 to 67 per cent TREO, making it one of the highest grade REE projects globally," he said.

The Gakara basket has magnet rare earths, such as neodymium and praseodymium, used as vital components in motors, generators, wind turbines and electric vehicles, and are in high demand across the world.

"We believe that now is an optimal time for Rainbow to produce REE concentrate," Eales continued. "Beyond the extremely high-grade ore and low-capital expenditure associated with the initial development of the project, the company also benefits from strong support for the development of Gakara, both from the Burundi government and the local community, together with our offtake partner, tk Raw Materials. We are confident that we have a strong foundation from which to establish and scale a rare earth production company in East Africa.

He said the company held public meetings, alongside NGO representatives, where it explained its plans to the community.

"The support we have had from the local people in the mining area has been superb,"added Eales. "More than 90 per cent of the employees in the Gakara project will be Burundian. There is no other large scale mining project like this in the country."

Rainbow Rare Earths has been active in the country since 2011 after it received its first exploration licence and its mining licence four years later.

MINES SHOULD NOT BE POWER COMPANIES, SAYS APR ENERGY AFRICA

One of the themes of the recent 2017 Mining Indaba revolved around power supply to mines on the continent, says Colm Quinn, APR Energy Africa spokesperson. With official power distribution grids only covering around 40 per cent of Africa, a number of mining operations are responsible for their own power generation. Mines located near their national power grids do not always enjoy access to reliable electricity.

In some parts of Africa, ageing infrastructure causes unexpected outages. In other parts of the continent, such as hydropower-reliant countries in drought-stricken Sub-Saharan Africa, utilities have been forced to cut power to mines to ensure adequate electric supplies for residential customers. In Zambia, for example, the government cut power supplies to some of the larger mines in the region by between 20 per cent and 40 per cent. In response, many mining companies are looking to become self-reliant when it comes to power generation. The problem here is that mining - not power generation - is their core competency.

AFC INVESTS $205MN IN GUINEA-CONAKRY'S BAUXITE

An international consortium including Africa Finance Corporation (AFC) is set to invest in Alufer Mining Limited to fund the development of Guinea-Conakry's high grade bauxite reserves.

The US$205 mn deal will be one of the largest foreign investments in the country since the 2014 Ebola crisis.

Once complete, the project will increase production levels in line with global demand, which at present outpaces supply. Currently, there is a greater than 6 per cent annum five-year growth forecast for aluminium consumption, primarily driven by Chinese demand.

These shifts in supply and demand dynamics create an opportunity to ship high grade bauxite ore from Guinea to markets such as China on economically attractive terms, therefore boosting Guinea's GDP. At present, Guinea has a trade deficit ratio of c.20:1 with China.

Oliver Andrews, chief investment officer of AFC, said, "Mining exports have historically played a crucial role in Guinea's economy, accounting for up to a quarter of Guinea's exports.

"As global demand for aluminium increases, AFC is proud to be the sole private sector African investor in the Bel Air Mine, developing a world class mine that adheres to best practise environmental principles. We are also encouraged to see that Alufer has been working with the local community to develop sustainable projects which assist in the provision of drinking water, as well as development of local infrastructure and job creation".

AFC is experienced in building and developing African economies that have suffered conflict and crisis. It was instrumental in the re-construction of Côte d'Ivoire after the country's civil war through investments such as the Henri Konan Bridge.

BRIEFS


A mining truck in South Africa. (Source: Francisco Anzola/Flickr)

African Mining Vision progress

One year on from its inception at the 2016 Mining Indaba, the African Mining Vision (AMV) has been adopted by all 54 African Union member states. The AMV was launched with the aim of ensuring mining actitivites across the continent contribute to economic transformation and benefit all African citizens. Buy-in from the private sector, as well as governments, is an important focus of the AMV and this was discussed widely at the 2017 Mining Indaba, held in Cape Town in February 2017.


Gold is on the up for Calendonai. (Source: Alex Borland)

Caledonia: gold production up

Caledonia Mining Corporation has announced record quarterly and annual production from its 49 per cent-owned subsdiary, the Blanket Gold Mine in Zimbabwe. Approximately 13,591 ounces of gold were produced in Q4 2016, a new quarterly production record, up 18 per cent on Q4 2015. Total gold production from the mine for 2016 was approximately 50,351 ounces, a new annual production record and a 17.6 per cent increase on 2015's annual production.

World's largest copper deposit found in Democratic Republic of Congo

The Kamoa-Kakula project is attracting investors as copper prices soar, Amalia Illgner reports.

Copper production is commonly used by financial analysts as a barometer of economic strength. The versatile metal has even earned the moniker "Dr Copper" for its ability to give a realistic prognosis of economic vitality. And two African countries are among the world's top 10 producers: the Democratic Republic of Congo (DRC) and Zambia. In recent times, African copper production has contracted due to tumbling copper prices, but now with prices at a 20-month high and fresh deposit discoveries, African copper is set for a comeback.

And the one project that has set industry analysts' and investors' tongues wagging is the Kamoa-Kakula project in the DRC. A joint venture between Vancouver-based Ivanhoe Mines Ltd, the Chinese Zijin Mining Group, and the government of the DRC, it has been independently ranked as the world's largest undeveloped, high-grade copper discovery by international mining consultant Wood Mackenzie.

Logging at Kakula. (Source: Ivanhoe Mines Ltd)

The Kamoa deposit is flat, shallow and extremely high-grade. The resource extends 21km north-south and more than 10km west-east and has an "indicated resource" of 752m tonnes at 2.67 per cent mineral grade. "Kamoa is so incredible, not just because of its size and grade but because of where it's located, just 25km west of Kolwezi, the major mining hub on the Congolese copperbelt, and this huge deposit was so close to this mining district but never discovered because the usual surface indicators of copper were not there, and early explorers overlooked the area," says George Gilchrist, resource manager exploration Ivanhoe Mines.

Further south the exploration continues at Kakula, a deposit that "ticks all the boxes" being flat, shallow, thick–up to 17m in places - and an even higher grade than at Kamoa. "Kakula is unique, we'll drill a hole and it will have high grade mineralisation, it will have a siltstone at the base and we'll move over 200m away and it looks almost identical, then another 200m away and again it's almost identical, the continuity is remarkable", says Gilchrist. Furthermore it is a sulfite deposit, which means it produces a very clean, high quality concentrate.

"It's absolutely game-changing. It's the highest-grade, largest deposit discovered in Africa and potentially in the world", says Marc Farren, Ivanhoe's executive vice president of operations. He believes a key challenge will be for the mine to "manage strategic supply gaps in the future".

Paul Benjamin, research director of copper markets at Wood Mackenzie, says: "Given Ivanhoe's strong track record and the backing from Chinese partners, we regard

> "It's the largest deposit discovered in Africa and potentially in the world"
>
> MARC FARREN, IVANHOE EXECUTIVE VICE PRESIDENT OF OPERATIONS

Kamoa-Kakula as one of our 'projects to watch' in 2017".

Future plans

At the end of 2016, Ivanhoe released plans which included two initial scenarios for development of the high-grade copper deposits. The first is a single four million tonne per annum (mtpa) mine at the Kakula Deposit, in the southerly portion of the project's discovery area. This option has an estimated average annual production rate of 216,000 tonnes of copper at a mine-site cash cost of US$0.37/lb copper for the first 10 years of operations and peak copper production of 262,000 tonnes by year three.

The alternative scenario is a two-phase sequential expansion of production to 8 mtpa from the proposed Kakula mine, plus the Kansoko Mine at the adjacent Kamoa Deposit. Under this alternative, the Preliminary Economic Assessment (PEA) envisages US$1.0bn in capital costs and an average annual production rate of 292,000 tonnes of copper at a mine-site cash cost of US$0.42/lb copper during the first 10 years of operations, and peak production of 370,000 tonnes by year seven.


Underground mucking operations. (Source: Ivanhoe Mines Ltd)

Paul Benjamin is awaiting "more details" regarding how Ivanhoe intends to proceed as the company evaluates its options. He expects the company will need to see a stable regulatory environment before they proceed with significant investment. One particular regulation that causes him to pause is the proposed Zambian import tax on copper concentrates. "Kamoa will probably be looking to export concentrate [to Zambia] initially before building a smelter".

Experts will also be watching the power supply and infrastructure for the project. Benjamin believes that Ivanhoe is intending to secure power by upgrading existing hydro-electric power plants and is keen to see how the copperbelt's infrastructure copes. "They will still be competing with other mines for space on an overstretched transport infrastructure for bringing in supplies and exporting production."

And looking to the future, Benjamin forecasts "gentle" copper demand growth over the medium and long term, while supply remains "geologically constrained".

He believes that any mining company that can build capacity in the near term will benefit from capital expenditure savings as equipment suppliers and engineering, procurement, construction and management contractors compete for business.

"Any new mine that enters production around the end of this decade will enjoy healthy copper prices as the market tightens", he concludes. ■

EXPANDING THE UTILITY OF ACCESS CRANES

With the launch of an access platform that can be used for both smaller lifting tasks and as a crane, lifting solutions manufacturer, PALFINGER, has widened the utility of access cranes. PALFINGER's Jumbo class NX access platforms are now equipped with a practical crane mode that have a lifting capacity of up to 900 kg. Crane mode makes the access platform more flexible and versatile.

"This means that an additional crane is not required at the construction site for simple lifting tasks," says Dominic Ulrich, technical director at PALFINGER Platforms, explaining the benefit for users. For instance, crane mode can be used to lift tools up to the assembly site. Another typical use for crane mode is to transport air conditioning units or antennae onto the roof of a house for installation.

In the crane mode, the Jumbo class NX can lift up to 900 kg of weight. (Photo: PALFINGER)

According to the company, the crane mode, which is available as an option with the access platform, is well thought out and simple to operate. The lifting capacity can be fully utilised even when the access platform is extended to its maximum range. In concrete terms, with the P 570 access platform, loads of up to 900kg can be transported up to 38.3m. As soon as crane mode is activated, a crane, which is in compliance with Standard EN 13000 for mobile cranes, emerges from the access platform. The system's cable winch has a lifting capacity of up to 460 kg and its measuring equipment prevents overloading.

The Jumbo class NX offers a high degree of flexibility combined with outstanding performance, clains the company. With special profile structures and lightweight materials, the design ensures that this series has a low dead weight. This allows more tools, working accessories and material to be transported on the vehicle.

ALTERNATING BETWEEN TWO GENERATOR SETS

The Inmesol R&D department has developed a new programme option for the DSE334 control module that enables any pair of remote-start generator sets to work in a dual mutual stand-by mode.

This programme option is ideal for typical generator set rental applications, such as construction, events, shows, as well as telecommunication systems located in remote places where there are no mains available.

Using a single generator when a constant, uninterrupted power supply is needed has a number of disadvantages. These include the loss of supply when the proper functioning of the genset is disrupted, reduced life of the generators owing to continued use and the interruption to supply during maintenance.

According to Inmesol, all these issues can be resolved by using a control panel with transfer switch and a DSE334 control module connected to both generator sets.

The new programme available on the DSE334 control panel enables the alternate use of both generator sets according to a time period scheduled and, if one of them fails, the other one automatically starts working and quickly replaces it. With this system, maintenance services can be carried out without prolonged interruption to the electric supply and the useful life of the generators extended.

The programme can be used on any two gensets that have a control panel, external signal start, preheat resistance and a battery charger. Each charger will keep the battery on the stand-by generator charged with the power generated by the working genset.

Remotely operated heat trace monitoring system launched

Thermon Group Holdings has announced the launch of the TraceNet TCM2 Dual Circuit Control and Monitoring Unit, which makes it possible to remotely maintain heat trace circuits that play a critical role in industrial processing facilities. The latest addition to the TraceNet family of remotely-operated heating control and monitoring systems, the new TraceNet TCM2 is in response to customers looking for a cost-effective solution to address single and dual heat trace circuit requirements.

The TraceNet TCM2 can be operated locally, by remote control or networked via wireless or hard-wire to a computer or distributed control system (DCS) in the facility's control room. The system continuously monitors every set point, including temperature, current- and ground-leakage current. It then reports locally and transmits key data remotely to the control room. For example, should the temperature or electrical current be too low or high, or should high ground leakage current be detected, the TCM2 unit senses it, and reports it. The operator can review each circuit for temperature, ground current, heater current, the frequency at which it is performing, and alarm status.

"Small instrumentation systems in remote locations require high reliability with accurate communications capabilities. They are located far from the larger primary heat trace systems, yet still require them to maintain the proper operating temperature. What sets the TCM2 apart is that it is compact, modular, and, in contrast with the larger controllers that can control hundreds of heat trace circuits, it is specifically designed to handle one-, two- or three-phase electrical heating circuits," said Tony Williams, global product manager, control and monitoring systems at Thermon. He added that its compact size and modular design make it easy to transport and assemble and allows it to be used in confined spaces.

The system can be operated locally, by remote control or networked via wireless or hard-wire to a computer or distributed control system. (Photo: Thermon)

MOBILE CONNECTIVITY FOR INFRASTRUCTURE DEVELOPMENT

Connectivity can play a major role in improving Africa's infrastructure problems. According to Paul Marshall, co-founder of Eseye, a global cellular machine-to-machine connectivity provider for Internet of Things devices, Africa is a prime example of how connectivity is allowing opportunities of mobile-enabled utility services to be delivered in the most remote locations.

One of the major obstacles in accessing infrastructure in the continent is the fact that majority of the population does not have access to financial and banking services. Mobile connectivity is playing a major role in mitigating this gap. With the expansion of the mobile network, it has become the continent's only universal utility service. According to a world bank report, more than double the population in sub-Saharan Africa has access to mobile phone access compared with access to paved roads. This means that more people have access to mobile money enabled utility services.

In Africa, many businesses seek to utilise the mobile network to deliver utility services. Marshall points out that one such business delivering utilities in innovative ways is M-KOPA. The company offers solar-power home systems for low income and rural residents without electricity. M-KOPA has provided electricity to more than 400,000 homes across Kenya, Tanzania and Uganda. The payment for the solar system is carried out through a rent-to-buy model, all through mobile money.

M-KOPA has provided electricity to more than 400,000 homes. (Source: M-Kopa)

The M-Kopa 4 is available to customers for a deposit of US$30 followed by 365 daily payments of 50 cents after which it is theirs. Each 8W solar panel comes with two light bulbs, a torch, a mobile phone charger and a radio.

M-Kopa also offers the bundling of power provision with the sales of electronic appliances – it has a plan that includes a digital TV. This enables low-income customers to conveniently acquire household devices using the same rent-to-buy model. Upon completion of the initial one-year payment plan, customers can also get more cost-effective financing for a range of products. These include more lights, solar TVs, energy-efficient cooking stoves, internet-enabled smartphones, and water storage tanks.

By utilising the mobile network, M-KOPA is overcoming the infrastructure hurdle posed by Africa's 'unbanked' people who would have not had access to finance services and delivering utilities.

Innovations such as these are allowing mobile connectivity to have a wider impact and provide access to infrastructure and economic development.

GEMALTO RELEASES DEVICE MANAGEMENT SOLUTION TO BOOST LTE ADOPTION

Gemalto has launched the latest version of its LinqUs Device Management platform, which is designed to help mobile operators provide subscribers with a simple journey to LTE (long-term evolution). The platform offers operators real-time identification and automatic over-the-air configuration of their subscribers' 4G devices, as well as instant promotion of targeted tariff plans and special offers.

The main benefits of the solution include increased 4G adoption and usage, faster return on investment in LTE networks and improved subscriber retention. It provides real-time insight and analysis of subscriber devices and data usage, and aims to make LTE adoption more effective through personalised offers and loyalty programmes for customers.

This latest version of Device Management reflects the growing popularity of LTE-capable devices. These are expected to make up 72 per cent of global smartphone shipments by 2020, according to '*CCS Insight – Market Forecast, Mobile Phones Worldwide, 2016-2020*'.

Complexity of the LTE band fragmentation needs to be addressed by operators and this solution assists in this regard through its capacity to detect LTE frequency bands supported by devices.

Gemalto is aiming to improve user experience and help operators retain customers in Africa.

This, in turn, helps ensure usage uptake via promotion to the right devices and users, and addresses the multi-device phenomenon by identifying such devices and building loyalty campaigns to incentivise subscribers to stay with the same operator network. This may prove a very attractive feature in the highly competitive mobile network marketplace.

"Our Device Management platform already has an extensive presence in the Middle East and Africa where we have 38 per cent of our customer references for this field-proven solution," said Sherry Zameer, Senior Vice President for Africa at Gemalto. "The launch of the advanced version will further support our mobile operator customers in the region in their LTE migration and data-boosting strategy."

Gemalto aims to capitalise on the fragmented nature of the mobile phone handset market in the Middle East and Africa. This new platform has been built around a unique database of more than 170,000 device references from more than 1,500 device manufacturers with full GSMA specification.

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