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African Review

JUNE 2019

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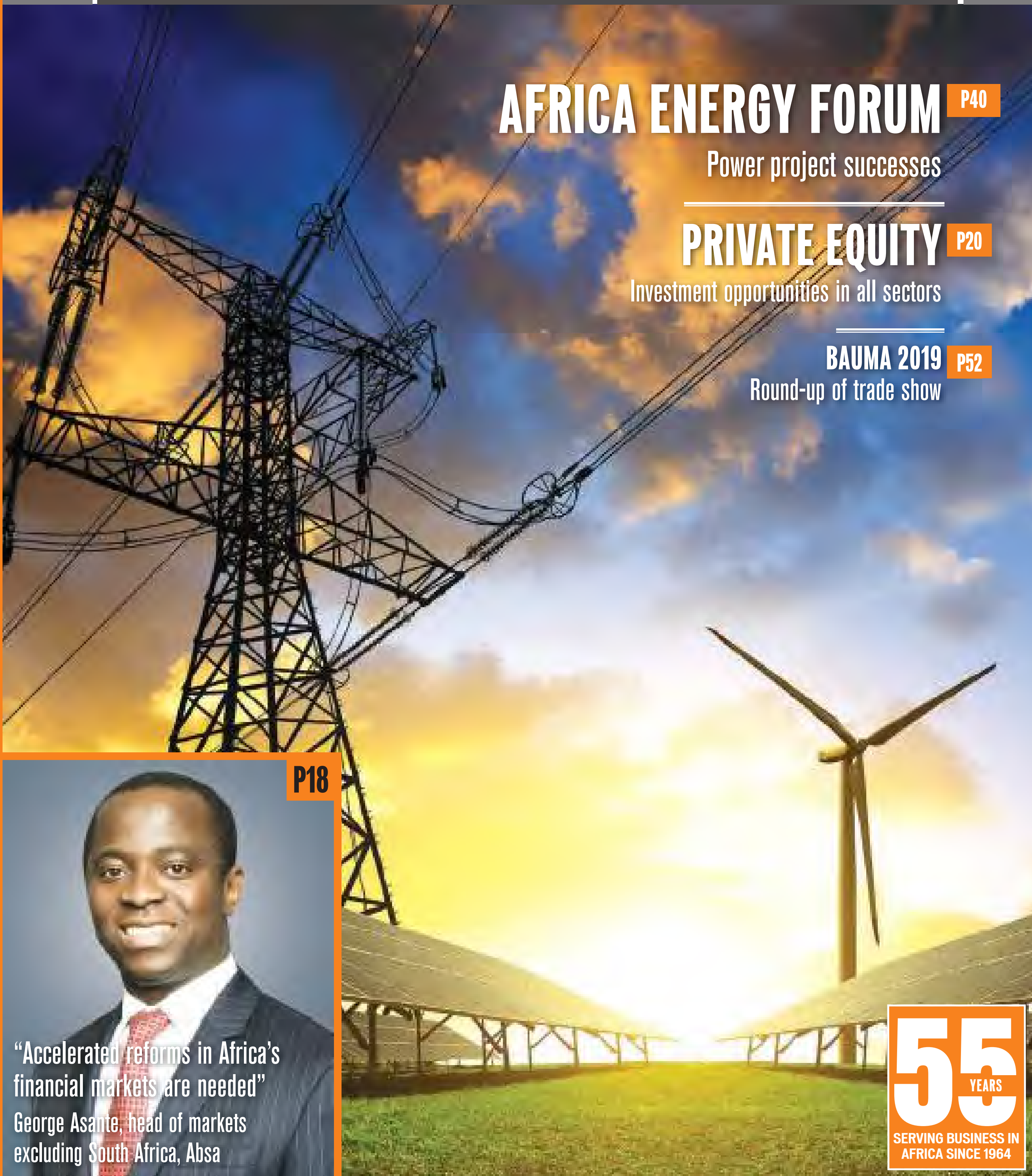

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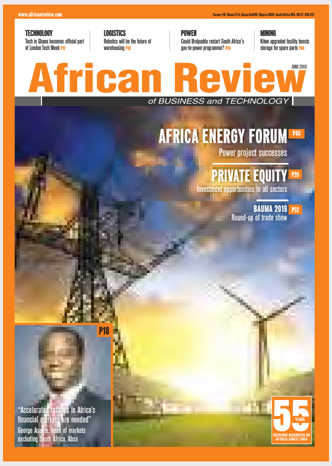
"Accelerated reforms in Africa's financial markets are needed"
George Asante, head of markets excluding South Africa, Absa

55 YEARS
SERVING BUSINESS IN AFRICA SINCE 1964



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Editor's Note

Welcome to the June issue. Major power industry players will be returning to Europe from 11-14 June to the vibrant city of Lisbon for the Africa Energy Forum. We take a look at some of the project successes over the last 18 months, including the Bridge Power LPG Project in Ghana and the Lake Turkana Wind Power Project in Kenya – the largest of its kind in Africa, page 40.

In our finance section, we look at the continent's soaring demographics providing ample opportunities for private equity investors to support the development of various sectors, notably infrastructure, logistics and technology.

Elsewhere in the issue, organisers of bauma – the world's largest construction trade show – recorded the biggest turnout so far in its history and received positive feedback from visitors and exhibitors alike, page 52.

Finally, tech industry leaders from Ghana will not be missing out on this year's Tech in Ghana event, which will be co-located with Europe's biggest technology festival – London Tech Week on 10 June. We caught up with the event's founder, Akosua Annobil, on why the platform has become integral in connecting stakeholders within the tech industry, page 28.

Samantha Payne, *Editor*

Contents

South Africa signs deal to explore prospective oil reserve in South Sudan

South Africa has agreed to invest US$1bn in exploring South Sudan's energy infrastructure, with state-owned oil company Strategic Fuel Fund (SFF) gaining control of Block B2.

The company will operate the prospective oil reserve alongside the Ministry of Petroleum and Nilepet – the national oil company of the Republic of South Sudan.

South Sudan has gained momentum as a world-class petroleum producing region, whose territory includes a large part of the Cretaceous rift basin which has proven to be petroliferous in Chad and Niger, as well as Sudan. The area currently produces an estimated 160,000bopd, with plans to increase production capacity to 270,000bopd by the end of this year.

Image Credit: South Sudan Ministry of Petroleum

Much of South Sudan's oil blocks are yet to be fully explored and fully assessed.

As a result of this agreement, SFF and Nilepet intend to launch a comprehensive aero gravity survey exploration campaign, as well as undergoing a seismic acquisition and drilling wells. The SFF also intends to invest in the local community through development projects, while ensuring women's empowerment and local content.

"We are bullish about this strategic and unique opportunity into Block B2 with great petroleum potential. It provides South Africa with a chance to further strengthen its energy security while entering one of the top three most lucrative onshore oil and gas markets in Africa," said Hon. Jeff Radebe, South Africa's Energy Minister.

"South Africa has supported peace and economic development in South Sudan since the country's independence, and this is the continuation of long-term cooperation between both our countries and people. Investment is key to guaranteeing the economic progress of South Sudan," he continued.

Last year, South Africa's Department of Energy pledged to invest US$1bn in South Sudan's petroleum industry to secure affordable energy supplies in South Africa. The countries are now in talks to set up a 60,000 bpd refinery to supply oil products to South Sudan, Ethiopia and nearby countries.

This marks South Sudan's second exploration and production sharing agreement since the country gained independence in 2012.

ADP SETS SIGHTS ON BUSINESS PARTNERSHIPS

With a focus on fostering engagement in Africa's business sector, The African Development Bank (ADP) held a Business Opportunity Seminar (BOS) in an attempt to support investment and human development projects across the continent. The two-day seminar utilised dialogue sessions, as well as the bank's financial products business opportunities and programmes available to public and private enterprises.

"The African Development Bank Group has funded 4,391 projects since its inception," began Valerie Dabady, manager for resource mobilisation and partnerships for the banks.

"This includes 1,166 projects in West Africa with total commitments of US$23.5bn. In 2018, the bank's total approvals and disbursements stood at US$8.90bn and US$6.02bn, respectively," she continued.

Dabady also notes a rise in non-sovereign investments from the bank, growing from US$250mn in 2005 to US$2.29bn last year.

LIBERIA SIGNS MOU FOR ZOGOTA IRON DEPOSIT

The Republic of Liberia has signed a Memorandum of Understanding (MOU) with Niron Metals in relation to the passage of iron ore from the large Zogota iron deposit in the Republic of Guinea.

The Government of Guinea has given authorisation for Niron – a private company involved in the investment of industrial metals including nickel, chrome and manganese – to export material from Zogota, in keeping with the Mining Code of the Republic of Guinea 2013.

This comes after discussions between the leaders of the republics of Guinea and Liberia – H.E. President Alpha Condé and H.E. President George Weah – met in Dakar, Senegal, in order to discuss the prospect of economic cooperation between the two countries in April.

"This agreement opens a new chapter and supports the development of a world-class mining and logistics project for the benefit of the people of the Mano River Union," said Molewuleh Gray, chairman of the Liberian National Investment Commission.

"The government will now initiate discussions with the railway and port concessionaire relating to third-party access rights. Thereafter, we anticipate accelerated tripartite discussions to commence," the chairman continued.

"This MOU is an important milestone in our plans to develop the Zogota project. We intend to complete our feasibility study within six months of signing the MOU and continue to work with relevant stakeholders to bring Zogota rapidly into production for the benefit of all," remarked Sir Mick Davis, chairman of Niron.

According to United States Geological Survey production data from 2018, Guinea has the potential to rank among the top producers of iron ore after choosing to mine metal deposits across the country.

BRIEFS

Call for better education to meet tech trends

Image Credit: Flickr/ UNECA

The event took place in Morocco.

The Africa Regional Forum on Sustainable Development (ARFSD) saw industry professionals call for an upscaling of African education curricula to meet technological trends. "We need to sharpen our policies for inclusive education that can create real jobs and drive growth at a higher rate than what we are currently experiencing," said Mmboneni Muofhe, deputy director general for Technology Innovation at South Africa's Department of Science and Technology.

Transport in the fast lane for Africa's development

Image Credit: Flickr/ Francisco Anzola

STC-TTIET was attended by 38 member states.

Speaking at the Second Ordinary Session of the African Union Specialised Technical Committee on Transport, Transcontinental Infrastructure, Energy and Tourism (STC-TTIET) in Cairo, Ethiopian transport minister Dagmawit Moges noted investment in the sector was an essential factor in Africa's growth and sustainable development. On the topic, she explained, "If we double our efforts, the revenue they generate will impact our growth and development significantly."

BRAC in action: Microfinance operation opens new bank in Uganda

In an effort to deepen financial inclusion across the continent, development organisation BRAC has transformed its microfinance operation in Uganda into BRAC Uganda Bank Limited.

The company first received the licence as 'BRAC Uganda Bank Limited' back in March, with microfinance activities in Uganda to be carried out under a separate entity – BRAC Uganda Microfinance Limited (BUML).

Image Credit: BRAC

BRAC Uganda Bank Limited hopes to improve financial inclusion across the region.

Three equity partners have acquired 17 per cent of the company as it expands its horizons in Uganda. These partners include German development finance institution DEG, fund manager Equator Capital Partners and Dutch impact-focused investment manager, Triple Jump.

"Becoming a bank is not the end in itself, but a means to an end," said Shameran Abed, the senior director of BRAC's Microfinance and Ultra-Poor Graduation programme. "We are now in a stronger position to not only provide far greater value to the hundreds of thousands of clients that we already serve but to achieve greater financial inclusion in Uganda by serving hundreds of thousands more outside of the formal financial system."

Speaking about the transition from a tier-four microfinance institution to a tier-two regulated Credit Institution, Jimmy Adiga, the CEO of BRAC Uganda Bank Limited, said, "It has been a journey dubbed by the staff of BRAC at all levels as 'a journey where execution meets passion'."

Likewise, Steven van Weede, managing director of Enclude, added, "Our close partnership has enabled us to tailor the transaction process and select the right partners for BRAC in boosting much-needed financial inclusion in Uganda."

Started as a limited relief operation in 1972 in a remote village in Bangladesh, BRAC currently serves more than 200,000 clients in Uganda, with 163 branches across 84 districts countrywide.

In 2002, BRAC began its first international expansion into Afghanistan. The company now has affiliated entities in 13 countries, with a focus on Asia and Africa. The company has been working in Uganda since 2006, striving to advance female empowerment, provide education for children and teenage girls, and address gender-based violence issues.

BUSINESS INVESTMENTS REACH RWANDA

The European Bank (EIB) has paired up with the Bank of Kigali in an attempt to support new business investment across Rwanda. Under the agreement, EIB will provide US$33,081,000 to support investment by Rwandan firms within a range of sectors, including education, agriculture, transport, health, manufacturing and tourism investment. This credit line hopes to accelerate economic growth, create skilled jobs and improve tax revenues across the country, encouraging socio-economic development.

This RWF 30 bn provision will also be matched by Bank of Kigali, totalling US$66,162,000 of private sector investment across Rwanda.

"The new engagement, our largest ever cooperation with the largest commercial bank in Rwanda, will ensure that many Rwandan companies build on their strengths and contribute to sustainable economic development in the heart of Africa," said Ambroise Fayolle, vice president of the EIB.

AN AWARD OF A LIFETIME FOR TEKLE SIGO

Wondimu Tekle Sigo, former state minister for Ethiopia's Ministry of Water, Irrigation and Energy, has recieved a Lifetime Achievement Award at this year's African Power, Energy and Water Industry Awards.

Tekle Sigo has been involved in a range of water and energy projects throughout his extensive career, including working as a site manager on the development of a the 6000MW hydropower Grand Ethiopian Renaissance Dam, which is currently under construction, on the Blue Nile. The project, which is said to be 60 per complete, hopes to help Ethiopia and neighbouring countries through integration; as well as the expansion of a rural electrification programme for more than 6,000 towns and villages in the region, and upgrading the distribution systems of eight cities across the region.

He later served as Ethiopia's Minister of State for the Ministry of Water, Irrigation and Energy for seven years, before becoming a PhD candidate for economics at the Peking University, China.

"I am very proud of this achievement," began the former state minister.

"It has been eight years since we started building biotherm energy into a renewable energy investment and development platform. I dedicate this award to my team because it is very much a team effort. We've built an amazing business and we have expanded into the rest of Africa. For us this is just a great achievement," he continued.

Other finalists for the Lifetime Achievement Award included Abderrahim Jamrani, technical director for Masen; Wim Jonker Klunne, programme director of Energy and Environment Partnership in Southern and East Africa; and president of Enerscan Engineering, Dale Robertson.

An Outstanding Contribution Award was also given to Jasandra Kyker, CEO of Biotherm Energy, South Africa.

BRIEFS

Image Credit: Adobe Stock

The event takes place on World Ocean Day.

Blue Economy Forum in Tunis

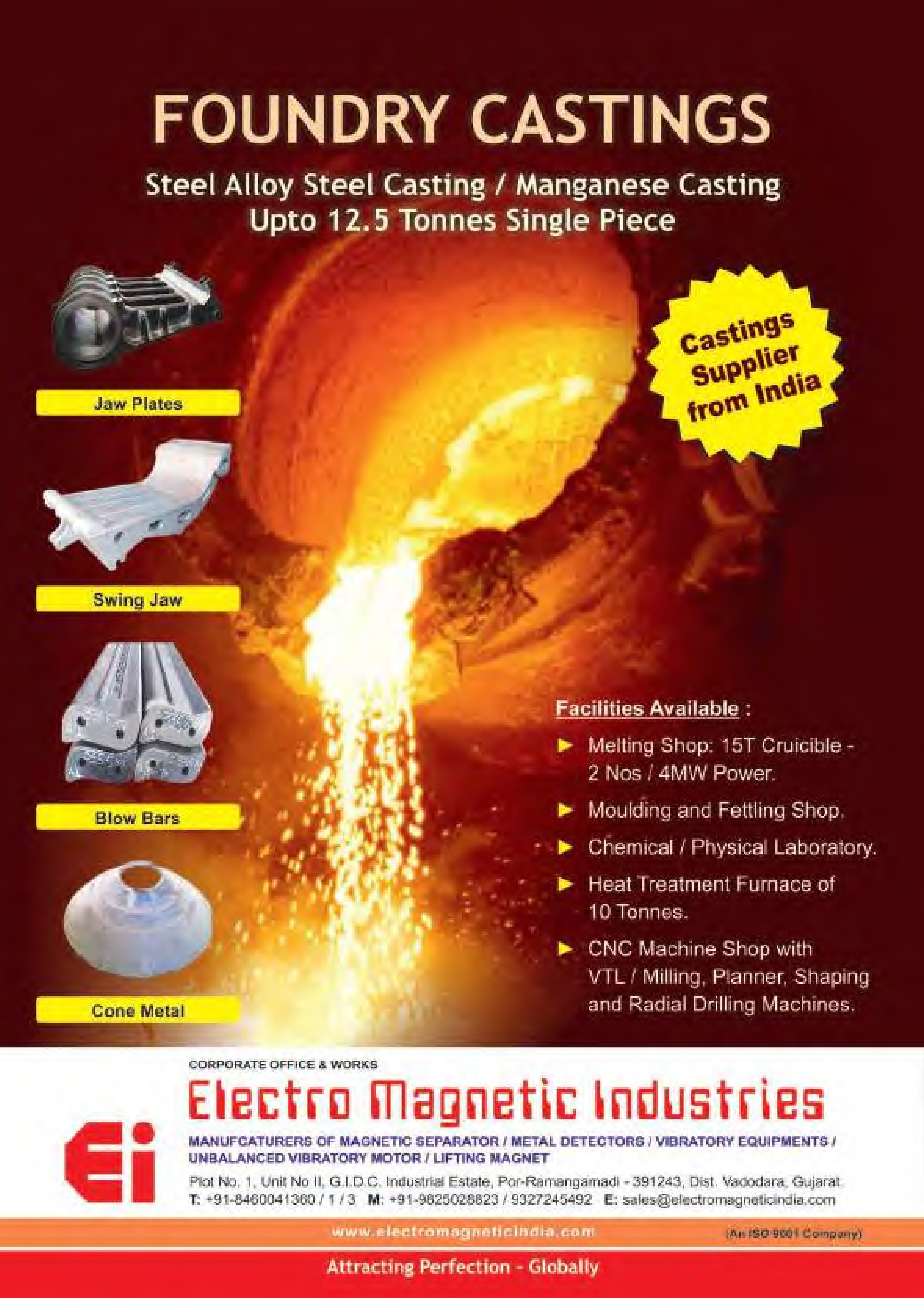
The Africa Blue Economy Form is due to come to Tunis on June 25-26, with the event set to challenge African businesses to place more emphasis on the economic, social and environmental power of the Blue Economy. As 70 per cent of Africa's nations are coastal, research indicates the Blue Economy has potential to be a major source of wealth and prosperity across the continent via fisheries, aquaculture, transport, energy, trade and tourism.

Image Credit: Adobe Stock

The solar power plant is expected to create up to 250 jobs.

US$81.3mn boost for Kenya

The UK's foreign secretary Jeremy Hunt has welcomed more than US$82.3mn of British funding for business in Kenya. Of this, US$66mn has been raised for a solar power plant in the region, with prospects to create up to 250 jobs in the process. Construction on the power plant is expected to start soon, with power to come online next year. US$1.5mn will also be put towards the creative industries in Nigeria and Kenya, allowing 540 entrepreneurs to access training in the UK.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Africa to see continued oil & gas investment over next five years – Standard Bank

Africa is likely to experience continued oil and gas investment over the next three to five years as the stabilisation of crude prices, coupled with the continent's rapidly expanding population, lure both major and independent oil producers to one of the world's last remaining energy investment frontiers, says Standard Bank.

A string of successful exploration projects over the last decade has seen the number of African countries with proven oil and gas reserves rise to 28, thanks to new discoveries in Ghana, Niger, Mozambique, Uganda, Kenya, Senegal, Mauritania and South Africa. The investment required to bring these countries on stream will add further impetus to Africa's oil consumption, which at four million barrels a day already significantly exceeds the continent's 2.1 million barrels of daily refinery output, according to Standard Bank.

Image Credit: Standard Bank

Dele Kuti, head of Oil & Gas, Standard Bank Group.

"An expanding population, rapid urbanisation and accelerating economic growth are causing the gap between Africa's demand for gas and petroleum products, and its ability to supply them, to incrementally widen over time," says Dele Kuti, head of Oil and Gas for Standard Bank Group. "This will serve to attract further investment from both major and independent oil producers, which in itself will exert further pressure on the demand side of the equation as the resulting infrastructure investment in refineries, roads, pipelines and housing drives energy consumption."

Africa's oil and gas sector is once again attracting investment from exploration companies and refiners following a prolonged break sparked by a slump in oil prices. An improvement in oil prices, which Kuti says are expected to average between US$60 and US$70 a barrel over the next three to five years, is attracting greater interest in the continent, which will likely see the number of people double to 2.5 billion by 2050, according to UN projections.

In 2018, the International Energy Agency (IEA) projected global energy demand would grow by more than 24 per cent to 2040, requiring more than US$2trn a year in investment to bring new energy supply on stream. Given Africa's burgeoning population and economic growth, it is likely that a portion of this investment will be directed towards the continent's relatively untapped energy market. "All of this investment activity will in turn spur demand for lending, deal structuring and transacting capabilities across the continent," says Kuti. "Institutions with deep knowledge of the continent stand to benefit from those initiatives."

SOUTH AFRICA COMMITTED TO CLEANER COAL

Minister of Energy, Jeff Radebe, assured delegates at the opening of the African Utility Week and POWERGEN Africa in Cape Town of South Africa's commitment to safe and clean energy, but reminded all that the country's coal reserves cannot just be ignored.

The minister acknowledged a paradigm shift is needed to reach the emission reduction targets, but argued this should not be to the detriment of communities. "Our vast coal deposits cannot be sterilised simply because we cannot explore technological innovations to exploit the coal," he said. "The timing of the transition to a low carbon economy, in line with our accession to the Paris Agreement, must be in a manner that is not insensitive to the potential impacts on jobs and local economies."

Radebe also stressed that the capture and storage of carbon along with other cleaner coal technologies remain critical for South Africa to use its coal resources in an environmentally responsible way.

ZIMBABWE FACES POWER CUTS

The Zimbabwe Electricity Transmission and Distribution Company (ZETDC), Zimbabwe's state power utility, has imposed power cuts for up to eight hours daily for households and industries during morning and evening peak periods, because of reduced output at its largest hydro plant and ageing coal-fired generators.

Isaac Kwesu, chief executive of Chamber of Mines, which represents Zimbabwe's biggest mining companies, said critical industries such as mining should be exempt from the black-outs, known locally as load shedding.

"Mining requires electricity for both operations and safety. It will be very costly to have production stoppages, that is why we will be engaging ZETDC to find ways to minimise any costly disruptions due to the electricity cuts," Kwesu told Reuters.

Mining accounted for more than two-thirds of Zimbabwe's US$4.8bn export earnings last year, and any power cuts in the sector will have an impact on production and exports.

Some of the major mines have resorted to directly importing electricity from neighbouring countries such as Mozambique and South Africa, have paid a premium to avoid power cuts, or have invested in power substations. While a number of new projects are looking at alternative resources, such as solar power.

However smaller operations, such as gold mines, are dependent on the national grid.

Zimbabwe, which is producing 969MW daily against peak demand of 2,100MW, is entering its peak winter power demand season, which will lead to increased electricity consumption.

Energy and Power Development Minister Joram Gumbo was reported to have said he was planning to agree an electricity supply deal with Mozambique's power utility Hydro Cahora Bassa last month.

BRIEFS

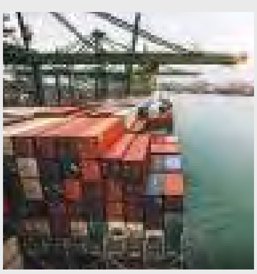

Image Credit: Rhenus Group

The Rhenus business areas. comprise contract logistics, freight logistics and port logistics.

Rhenus Group takes over WNL

Logistics services provider The Rhenus Group has taken over South African freight forwarding and logistics specialist, World Net Logistics (WNL). "The takeover of World Net Logistics marks an important step for us in establishing a network in South Africa and other African countries. WNL's presence in Asia and Europe also strengthens our global network with additional intercontinental connections," said Tobias Bartz, a Rhenus board member.

New A330-900 for Air Mauritius

Image Credit: Airbus

The A330neo.

Air Mauritius has taken delivery of its first A330-900 Airbus, on lease from ALC. The national carrier of the Republic of Mauritius is the first A330neo operator based in the southern hemisphere.
The aircraft will contain 28 business class seats and 260 economy class seats. The carrier will deploy the aircraft on routes connecting Mauritius to Europe, India and South East Asian routes, and on regional destinations including Johannesburg, Antananarivo and Reunion Island.

BBOXX introduces micro-grid solution in Togo

BBOXX, a next-gen utility, has launched its new concept called 'Tomorrow's Connected Community' in Togo, with an aim to unlock economic potential of entire communities in developing countries through access to energy.

The concept is being rolled out in the rural village of Sikpé Afidégnon in Togo, following its inauguration by Faure Gnassingbé, President of the Republic of Togo.

The entire village, comprised of 300 houses and 4,000 people in the south of the country, is to be powered by solar electricity including streetlights, households, schools and small shops. Additionally, the community can access other utility products and services such as clean cooking solutions, internet services and water pumps.


Image Credit: BBOXX

The project is run on the company's solar home systems to power households and SMEs.

The project is run on a micro-grid developed by General Electric to meet higher energy consumption needs, as well as BBOXX's solar home systems to power households and SMEs. The services operate through BBOXX Pulse, the company's digital management platform, which manages customer service and product maintenance using data and predictive analytics.

Mansoor Hamayun, CEO and co-founder of BBOXX, commented that the project aims to deliver a decentralised and digitalised future in the developing world at scale.

This is in line with the company's target to manage rapid urbanisation and meet United Nations Sustainable Development Goal (SDG) 11 to create sustainable cities and communities, Hamayun added.

Cina Lawson, minister of postal affairs and digital economy in Togo, said, "In Sikpé, we are powering a mobile tower with clean and low-cost energy. As a result, inhabitants now have access to electricity to improve their everyday lives and to boost economic activity."

"By harnessing the Internet of Things, this project will be managed automatically and remotely, offering an excellent quality of service to the community. This demonstrates the crucial role played by technological innovation in economic development," Lawson stressed.

"Our ambition is to increase the electrification rate of Togo to 50 per cent in 2020, 75 per cent in 2025 and 100 per cent by 2030," remarked Marc Ably-Bidamon, minister of mines and energy in Togo.

AFDB APPROVES US$15MN INVESTMENT PACKAGE FOR INFRACREDIT

The African Development Bank (AfDB) has approved a US$15mn investment package to Infrastructure Credit Guarantee Company (InfraCredit), to support infrastructure financing through the domestic debt capital markets in Nigeria.

The investment package to InfraCredit is comprised of a subordinated loan of US$10mn and a risk sharing facility of up to US$5mn. This intervention is set to promote local currency infrastructure financing and further development of the domestic capital market.

Through this intervention, the AfDB aims to stimulate local currency financing across diverse infrastructure transactions, improving economic diversification, promoting more equitable growth and strengthening local value chains and financial markets in Nigeria.

CÔTE D'IVOIRE SEEKS AFDB'S SUPPORT FOR TOURISM EXPANSION PLAN

Siandou Fofana, Minister of Tourism in Côte d'Ivoire, has presented a strategy document to the African Development Bank (AfDB), which aims to make the country Africa's fifth biggest tourism destination from 2025.

The document entitled 'Sublime Côte d'Ivoire', was presented to Pierre Guislainthe, vice-president of AfDB responsible for private sector, infrastructure and industrialisation.

"One of these is the 'Abidjan Business City,' which will be a central point for holding conventions in Côte d'Ivoire. We do not currently have a conference centre and we do not have a hall with the capacity to accommodate 5,000 people. There is, therefore, a need to move quickly in that regard," he said.

"We will also have a 'beautiful beach for all,' with a 550-km coastline that has yet to be exploited. In addition, we will build a 100 ha leisure park to be a place of entertainment for the sub-region, and develop press trips and seven flagship tourist areas," Fofana added.

Projects envisaged under the strategy include strengthening of the tourism code, establishing additional tourist attractions with a land reserve of 6,000 ha, the creation of a bank of tourism sector projects and redesigning of a tourism 'one-stop shop.'

The government plans to strengthen security and healthcare, develop the aviation sector and increase airport passenger flow to three million, and train and certify 230,000 sector professionals.

"All this will drive employment, and our intention is to create 375,000 new jobs. From 2025, we plan to welcome four to five million tourists to make this sector the fourth economic pillar of the country and to make Côte d'Ivoire the fifth biggest tourism power on the continent and the joint leader in African business tourism," commented Fofana.

BRIEFS

Nigeria to double manufacturing by 2025


Image Credit: blickpixel/Pixabay

Nigeria is seeking international partners to invest in manufacturing.

Nigeria has announced plans to set up production hubs across the country in partnership with regional aid banks to double manufacturing output to 20 per cent of GDP by 2025. The government has set up Nigeria SEZ Investment Company to finance industrial parks in special economic zones (SEZ) in Lagos, Abia and Katsina. Nigeria is raising capital of US$250mn for Nigeria SEZ Investment Company and seeks US$500mn over four years.

EU to support rebuilding Liberian economy


Image Credit: David Rosen/Flickr

EU supports Liberia's efforts to protect human rights and promote women empowerment.

The European Union (EU) has pledged to support the resuscitation of Liberia's economy to foster better living conditions for the citizens. Ambassador Hélène Cavé reiterated that the EU will support the developmental activities in Liberia to strengthen infrastructural development in the country. She further noted that the EU is committed to support Liberia's efforts to protect human rights and promote women empowerment.

Orange selects ENGIE to operate one of the largest data centres in West Africa


Image Credit: Adobe Stock

Engie will operate and maintain Orange Services Group's data centre.

ENGIE has been selected for the operation and maintenance of the Orange Services Group's data centre in Abidjan, for a five-year contract that is due to start in early June.

This data centre of the latest generation, built by the Orange Service Group (GOS), is one of the few data centres existing in West Africa, complying with the Level IV classification.

According to this classification, it has the required redundancies to ensure continuity of service in all circumstances. It received the award of Best Data Centre from Africa at the 2017 "Datacloud Congress" in Monaco.

The scope of the contract includes preventive maintenance of the multi-technical lots of the data centre buildings, including the electrical substations, high voltage, cooling and air conditioning, Central Management Technology, fire alarm systems, security and control, video surveillance and access control.

This contract demonstrates ENGIE's ambition to accelerate its development in energy services in West and Central Africa and to become one of the leaders in energy efficiency, installation and maintenance services in Africa.

Built on the Free Zone of Grand-Bassam, located 40km from Abidjan, the economic capital of Côte d'Ivoire, the building has a floor area of 1,450sq m including a 420sq m computer room. This next-generation data centre has a power capacity of 1.3MW and a design which is oriented towards reliability and energy optimisation of data storage. The centre represents a strategic infrastructure for Orange in West Africa and primarily hosts Orange's service platforms of its Middle East to Africa subsidiaries, and it is also a colocation space for B to B customers' needs in this region.

BRINGING MORE CONNECTIVITY ACROSS AFRICA

The Africa Geospatial Data and Internet Conference 2019 will be held from 22-24 October, bringing together stakeholders from across Africa to set the agenda on Africa's digital future, leveraging geospatial, open data, ICTs and internet technologies in Africa. It aims to bring a greater connectivity across the continent to the geospatial and Internet world. The event will include an exhibition, showcasing state-of-the-art technologies, products and application solutions from leading companies, startups, academic / research institutions, entrepreneurs and related organisations.

Last month, Andre Laperriere, executive director of the GODAN Initiative (Global Open Data for Agriculture and Nutrition), was in Ghana at a series of meetings with Ministers and representatives from the public and private sector as part of GODAN's efforts to support common Open Data and Agricultural policy in Eastern Africa. GODAN is a network of partners from more than 115 countries worldwide.

DANGOTE NAMED AMONG GREAT GLOBAL LEADERS

Aliko Dangote has been rated 11th of the 50 World's Greatest Leaders for 2019.

The rating, carried out by the Fortune Magazine, an American multinational business magazine headquartered in New York City, USA was released recently and focused mainly on the businesses run by the people and how they have used it to impact their society positively.

The magazine said the world's greatest leaders, both men and women, are transforming the world and inspiring others to do so in business, government, philanthropy and the arts.

"These thinkers, speakers, and doers make bold choices and take big risks – and move others to do the same," the magazine declared.

This is the first time Fortune magazine is recognising and including Aliko Dangote in the annual ranking. Specifically, Dangote, having popped up in the magazine's radar, earned nomination after being adjudged as having used business to acquire wealth and who is now converting his wealth into impactful philanthropy through his Aliko Dangote Foundation.

The top 10 greatest men and women, according to Fortune are: Bill and Melinda Gates, Jacinda Ardem (Prime Minister, New Zealand), Robert Mueller (special counsel, Department of Justice), Pony Ma (founder and CEO, Tencent), Satya Nadella (CEO, Microsoft), Greta Thunberg (student and climate activist, Sweden), Margrethe Vestager (commissioner for Competition, European Union), Anna Nimiriano (editor-in-chief, Juba Monitor), Jose Andres (chef/founder, World Central Kitchen), and Dough McMillon and Lisa Woods (CEO; senior director, Strategy and Design for US Benefits, Walmart).

Upcoming Events Calendar 2019

JUNE

10
TECH IN GHANA
London, UK
www.techinghanaconference.com

11 - 13
AFRICAN CONSTRUCTION EXPO
Johannesburg, South Africa
www.africanconstructionexpo.com

11 - 14
AFRICAN ENERGY FORUM
Lisbon, Portugal
www.africa-energy-forum.com

19 - 20
AFRICA RAIL
Johannesburg, South Africa
www.terrapinn.com/exhibition/africa-rail

JULY

4 - 6
BUILDEXPO
Nairobi, Kenya
www.expogr.com/buildexpokenya

10 - 11
WEST AFRICA COM
Dakar, Senegal
tmt.knect365.com/west-africa-com

9 - 11
IFAT AFRICA
Johannesburg, South Africa
www.ifat-africa.com

9 - 11
OIL & GAS EXPO
Nairobi, Kenya
www.expogr.com/kenyaoil

SEPTEMBER

9 - 12
WORLD ENERGY CONGRESS
Abu Dhabi, UAE
www.wec24.org

17 - 19
PROPAK WEST AFRICA
Lagos, Nigeria
www.propakwestafrica.com

NOVEMBER

5 - 8
ECOMONDO
Rimini, Italy
en.ecomondo.com

12 - 14
AFRICACOM
Cape Town, South Africa
tmt.knect365.com/africacom

Tech in Ghana joins London Tech Week - London's biggest industry festival

Tech in Ghana will host its fifth conference in the UK on Monday 10 June, as an official part of London Tech Week (LTW) 2019.

Ghanaian tech companies including Zeepay, Farmerline, BlueSPACE and eCampus are set to participate in the upcoming edition of our flagship event held twice a year in Accra and London; bringing together founders, government officials, investors, and industry stakeholders since its launch in 2017.

For the first time, the conference will be staged as part of London Tech Week (10-14 June) at Addleshaw Goddard LLP offices in London – Europe's leading technology and startup festival providing a platform for creating partnerships across multiple events taking place in the City, attracting more than 50,000 delegates worldwide.

In line with Tech in Ghana's 2019 theme, *Connecting Our Global Networks: People, Opportunities and Industries*, TIG founder Akosua Annobil said, "Placing this year's Tech in Ghana event into the heart of London's biggest global technology festival was a very deliberate decision as it provides a valuable opportunity for exposure and collaboration for participants beyond our conference."

In a new format, Tech in Ghana London 2019 will feature just one panel session focused on digital financial inclusion, moderated by former Head of Research for Ecobank UK, Dr Tedd George, and featuring Vodafone Ghana, WorldRemit, Zeepay and BlueSPACE Africa.


Tech in Ghana will be taking place on 10 June.

Other features include insightful presentations from speakers such as Gideon Brefo, co-founder and head of Operations of Kumasi-based startup hub hapaSpace; Kenechi Okeleke, lead analyst for GSMA Intelligence; and Cecil Nutakor, founder of online mobile learning platform eCampus.

A variety of sessions focused on tech topics such as blockchain, social commerce, knowledge and skills exchange, and digital trade will make up the second half of the day to encourage meaningful networking and valuable opportunities for collaboration, ahead of a networking drinks reception.

Breakouts will be hosted by representatives from the Accra Digital Centre, MyTicketGH, Enza Capital, KudiGo, On Point Property Management and more from Ghana and the UK.

Tech in Ghana London supporters and partners include the Ghana High Commission UK, Ghana Investment Promotion Centre, Tech London Advocates, Invest in Africa, Apps Africa and African Review magazine.

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

ABDUL LATIF JAMEEL ENERGY SIGNS WATER DEALS IN EGYPT AND BAHRAIN

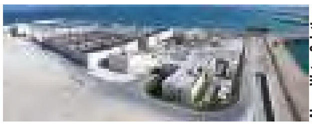

Image Credit: Almar Water Solutions

These investments are in line with Abdul Latif Jameel Energy's expansion plan to own and operate water assets in the region and beyond.

Almar Water Solutions, a water solutions unit of Saudi Arabia-based Abdul Latif Jameel Energy, has signed two water infrastructure project development agreements in Egypt and Bahrain.

In the first agreement, Almar Water Solutions has formed a joint venture (JV) with HA Utilities (HAU), part of Hassan Allam Holding (HAH), to provide sustainable water infrastructure to municipal and industrial clients in Egypt.

The JV is expected to work on developing water and wastewater management, build-own-transfer (BOT) and build-own-operate (BOO) business model projects in Egypt. It intends to take an active role as a special purpose vehicle (SPV) investor and an operation and maintenance (O&M) supplier. It further focuses on pursuing new greenfield projects and exploring acquisitions of brownfield assets and O&M service companies.

In a second deal, Almar Water Solutions has acquired Mubadala Infrastructure Partners' water investment in Muharraq STP Company (MSC) in Bahrain.

MSC builds, owns and operates a 100,000 cu/m per day wastewater treatment plant and sewer conveyance system in Bahrain. The conveyance system includes the first 16.5-km deep gravity sewer trunk pipeline in the GCC region and a wastewater collection network.

Speaking on the agreements, Fady Jameel, deputy president and vice-chairman of Abdul Latif Jameel Energy, said, "Governments across the region are pursuing ambitious policy programmes such as Vision 2030 in Saudi Arabia. Sustainable development and resource management are crucial to their success."

The Middle East and Africa face some of the most pressing water challenges anywhere in the world as rapid development and growing populations put pressure on scarce water resources. The agreements aim to help meet this growing demand, Jameel noted.

Marking further development to the company's water infrastructure projects in the Middle East and Africa, Abdul Latif Jameel Energy has won contracts to develop one of the world's largest desalination projects in Al Shuqaiq in Saudi Arabia and the first large-scale desalination plant in Kenya's Mombasa. The projects, together, are set to supply drinking water to close to three million people.

AGILITY BUILDS LOGISTICS WAREHOUSES FACILITY IN MOZAMBIQUE

Image Credit: API Events

The support programme for local Mozambican SME companies aims to enable them to lease our international standard warehouse facilities by paying a three-month security deposit.

Global logistics company Agility is building a pan-African network of international standard warehouse parks with an aim to make business easier and less risky as well as attract new multinational companies to invest in Mozambique.

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

Her comments come ahead of the second annual bilingual MozamReal Property Forum taking place on 5 June in Maputo, where De Vries will present a detailed view, and site tour, of the warehousing giant's first phase of 32,000 sq m of A-grade warehousing space suitable for storage, distribution, packaging, processing and light industrial work.

With conservative growth forecasts predicting a doubling of Mozambique's GDP in the next four to five years, the global logistics giant's future growth strategy is increasingly geared towards the continent and in lynchpin markets such as Mozambique.

De Vries explained, "E-commerce can require four times more warehousing in markets than traditional logistics pathways."

Owning more than 2.2mn sq m of logistics space worldwide and with more than 60,000 global clients, Agility's warehouse park on the Maputo Ring Road is set to transform and improve the ease of doing business in the economy.

She further added, "Our support programme for local Mozambican SME companies enables them to lease our international standard warehouse facilities by paying a three-month security deposit."

MALAWI STARTS MULOZA-CHIRINGA ROAD

Image Credit: Paul Saad/Flickr

The road project will ease transportation challenges and boost economic activities in the region.

The government of Malawi, through the Roads Authority (RA), has begun the first phase of upgrading the 45-km Muloza-Chiringa road connecting Mulanje and Phalombe.

As reported in the *Malawi News Agency,* Brown Mpinganjira, board chairperson at RA, said that the road is set to open doors to both the surrounding communities and the country.

After completion, the road is expected to enhance economic activities and ease transportation challenges people were facing when accessing various social services including education and health, said the source.

The source further added that the construction has been divided into phases in order to produce timely and quality work.

Njema said that the area is set to be transformed as the road project will ease transportation challenges and boost economic activities, allowing other developments to speed up.

He advised his fellow traditional leaders to own the development and ensure its timely completion by working in collaboration with the contractor, said the source.

COSTS IMPROVE IN THE Q1 2019 FOR ANGLOGOLD ASHANTI

Costs improved in Q1 2019 and all aspects of full-year guidance remained on track, said AngloGold Ashanti while starting a process to review divestment options for its South African assets.

Production for the three months ended 31 March 2019 was 752,000oz at an average total cash cost of US$791 per oz, compared to 824,000oz at US$834 per oz during the first quarter of last year.

All-in sustaining costs from these operations fell two per cent to US$1,009 per oz over the same period. The company delivered a solid Adjusted EBITDA margin of 37 per cent, despite a lower gold price and marginally lower production from certain assets, which it had flagged earlier in February.

AngloGold Ashanti is streamlining its portfolio to ensure greater management focus and to concentrate its capital on projects delivering the highest returns.


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TAX REFORM, DIGITISATION KEY TO FINANCING DEVELOPMENT

Image Credit: ECA

Africa must widen its tax base to achieve the UN 2030 global goals.

Africa must digitise its economies, broaden its tax base, prevent further deterioration of fiscal and debt positions, and aim for double-digit growth to achieve the UN 2030 sustainable development goals (SDGs), and the AU Agenda 2063, according to the 2019 Economic Report on Africa released at the Conference of Ministers.

This year's Economic Report on Africa, a flagship publication of the United Nations Economic Commission for Africa (ECA) focuses on fiscal policy. Government revenues account for 21.4 per cent, insufficient to meet countries' development financing needs.

"The report identifies several quick wins in Africa's pursuit of additional fiscal space to finance its accelerated development," Vera Songwe, the ECA's Executive Secretary stated at the launch.

NEW LOCAL DMP DATA CENTRE OFFERS SOLUTIONS FOR THE SOUTH AFRICAN MARKET

DMP South Africa (DMP SA), the local branch of European data management specialists Data Management Professionals (DMP), brings load shedding-proof data management solutions to the South African market with the launch of its local data centre on 31 March 2019. Data will be stored locally, and the majority of service offerings, including Data Management as a Service (DMaaS), will be delivered utilising local skills and resources. The backing and support DMP ensures that the data centre deployment is in line with global best practises and relevant ISO standards.

"Providing data management services through an overseas data centre is challenging due to the bandwidth required as well as latency when it comes to accessing data. However, the biggest issue is the lack of a localised offering and personalised service. Data management is not 'one size fits all', and our new data centre will empower us to provide bespoke designs and architecture for our customers," explains Iniel Dreyer, managing director of DMP SA.

POLICY, TRADE AND THE PRIVATE SECTOR DOMINATED MINISTER CONFERENCE

Image Credit: United Nations Economic Commission for Africa

Zouhair Chorfi, Secretary General of the Ministry of Economy and Finance, Morocco, HE Elsadig Bakheit Elfaki Abdalla, chairman of the outgoing bureau of the committee of experts; Vera Songwe, executive secretary of the UN Economic Commission for Africa.

The annual Economic Commission for Africa Conference of African Ministers of Finance, Planning and Economic Development (COM2019) kicked off in Marrakesh on 20 March, emphasising the importance of digitalisation in enhancing African economies as the continent celebrates the first anniversary of the highly hailed and historic signing of the Africa Continental Free Trade Area – (AfCFTA).

The weeklong event evaluated this year's theme – Fiscal Policy, Trade and the Private Sector in the Digital Era: A strategy for Africa – against the backdrop of recent economic and social development on the continent. With the value of the global digital economy estimated at more than $11.5trn and set to rise to more than $23 trn by 2025, according to Vera Songwe – ECA executive secretary – the effects of digital trade and economy in Africa are points of key debate.

"The potential of Africa is, and has always been, promising the continent has all the pre-requisites for rapid economic transformation in the next decade [but] the importance of digitalisation and the digital economy in driving growth and structural transformation, as well as optimizing fiscal performance in Africa cannot be overstated."

She added, "It is currently estimated to represent 15.5 per cent of global GDP and is expected to reach 25 per cent of global GDP in less than a decade [and] there has been a rise in the digital innovation hubs on the continent, such as the Silicon Savannah in Nairobi and the Kumasi Hive in Ghana."

AFRICA NEEDS TO INCREASE INVESTMENTS IN HIGH QUALITY INFRASTRUCTURES

The 6th edition of the Building and Civil engineering Works (BCW) and Infrastructure Conference will be held Addis Ababa, Ethiopia on the 10-11 October. The conference aims to explore how to develop public and private partnerships, promote infrastructure development in a more adapted and dynamic way, as well as position Africa as a destination of choice for investors by highlighting various investment options.

Achieving Africa states' aspiration for growth, development and transformation rely on the effective implementation of innovative policies ensuring their continental and global integration.

The BCW and Infrastructure Conference will see approximately more than 300 delegates from across the continent.

"Women in Africa need to become more representative in most spheres, including in infrastructure sectors, they need to become more involved in the decision-making and planning of infrastructure projects and programmes", said the Afro-optimist, Kaizene's founder, Lynda Aphing-Kouassi.

VODACOM LESOTHO M-PESA LAUNCHES BANK CARD TO M-PESA SERVICE

Image Credit: Brian Harries/Flickr

Banking made easier with Vodacom Lesotho M-Pesa.

Vodacom Lesotho M-Pesa has launched the Bank Card to M-Pesa service allowing Vodacom M-Pesa customers to transfer from their standard bank accounts into their M-Pesa accounts.

Palesa Mphunyetsane, executive head of M-Pesa, said, "We are excited to bring the Bank Card to M-Pesa services to our customers, affording them the convenience and security to move funds from their bank card to their M-Pesa accounts, while participating in the global digital economy. This partnership between the bank as a financial service provider and ourselves as a telecom, is a FinTech innovation that is expected to continue to expand the market for banking services, as it presents an opportunity to increase the user-friendliness of financial services, while bringing financially excluded Basotho into the financial system."


Unlocking Investments in
Renewable Energy for Africa
Sustainable Energy for All is a United Nations global initiative which promotes universal access to sustainable energy. Energy efficiency and renewable energy are two key priorities of the initiative. African countries face a range of challenges to enable and support these types of projects, including political instability and the need for payment securities backed by cash collateral and/or government guarantees.
The African Trade Insurance Agency, ATI, in collaboration with the German Development Bank, KfW, designed a facility to mitigate liquidity risk for renewable energy projects of up to 50 MW. The Regional Liquidity Support Facility (RLSF) helps Independent Power Producers to obtain liquidity that they need in the event that their off-taker (often a state owned entity) delays payment.
RLSF will provide immediate cash collateral supported by guarantees to a bank that will in turn open a stand-by letter of credit at a reasonable cost, so that the IPP can continue to operate for at least six months in the event of off-taker default. RLSF will unlock investments in renewable energy projects and ultimately, reduce the tariffs to end-users.

Financial markets reforms key to promoting Africa growth

George Asante, head of markets excluding South Africa at Absa, writes about the need for financial reforms on the continent to promote growth and development.

With Africa's population expected to exceed China's by 2025, the continent's economic potential is indisputable. And the rest of the world has taken notice. Between 2010 and 2016, more than 320 embassies were opened in Africa, and global investment is beginning to pour in. A diligent approach can ensure that these external opportunities are converted; but this is only half the challenge. If Africa truly wants to become an economic powerhouse in the future, it needs to get serious about reforming its financial markets.

A broad, all-inclusive financial market that makes it easy for investors will enable Africa to grow. Fortunately, commendable progress is being made. The ratification of the African Continental Free Trade agreement promises to create a single market with a combined GDP of US$2.5trn and access to 1.2bn people. But more needs to be done by individual countries in Africa to reform and liberalise their financial markets. This will be critical to fostering financial inclusion, economic development and capital raising.

Some countries, such as Botswana, Kenya, Nigeria and South Africa, have made steady progress towards reforming their financial markets. Unsurprisingly, South Africa was the top ranked nation in the 2017 and the 2018 editions of Absa's Africa Financial Markets Index. While the index's results highlight the progress and commitment of Africa to reforms in the financial markets, there is still work to be done. Countries such as Ethiopia and Mozambique lag behind, particularly in the development of stock exchanges, which are essential to capital raising through listings.

Ethiopia lacks a securities exchange and there are no equities listed on Angola's exchange. Both Cameroon and Mozambique have a market capitalisation of less than 5 per cent of GDP. South Africa is the only country where the total value of listed equities is more than $100bn, at $1.1tn. Only South Africa, Botswana, and Ghana have a market capitalisation greater than 100 per cent of GDP, and it is lower than 50 per cent in 14 other countries.

Accelerated reforms in Africa's financial markets are needed, principally because they can help tackle the significant funding needs of the continent, particularly for infrastructure projects. Such reforms can serve as a catalyst for capital markets being positioned as platforms for efficient mobilisation of much needed funding to support growth of small and medium scale sectors, in a risk-reduced environment.


Image Credit: Absa

George Asante

> "If Africa wants to become an economic powerhouse in the future, it needs to be serious about reforming its financial markets"

Africa's transformation requires significant resources. For example, to achieve universal energy access by 2025, there is a need to raise up to US$55bn annually in domestic and international capital, while as much as US$50bn is needed to fund other infrastructure projects across the continent.

While some African countries are implementing policies to bolster regional stock market integration and encourage expansion, they are still hamstrung. Low liquidity, lack of product diversity, excessive controls and administrative procedures in the foreign exchange markets, as well as, limited prospects for new listings are all significant obstacles to capital market integration and growth.

Nevertheless, it is not all doom and gloom. For example, several countries have made progress in migrating to market-determined foreign exchange regimes, implementing local content policies, and creating more transparent and well-regulated capital markets, which has been supported by an improving tax environment. This is vital for attracting foreign investment, encouraging domestic participation, and aiding the development of the local capital markets.

Equally impressive is the increased financial inclusion through better design, implementation, and regulation of savings institutions. This has widened opportunities for people in these countries to access capital markets. Progress has also been made through policies that have increased the size of assets held by local investors, creating opportunities to develop financial products and enhance market liquidity.

To accelerate financial markets reforms, African countries need to prioritise policy initiatives that make it easy for investors to participate in the markets. For example, African countries need to pay more attention to the trading and settlement infrastructure in order to spur liquidity; while ensuring timeliness and transparency of market data. This will improve the competitiveness of Africa's capital markets and better position Africa to attract its fair share of available global capital.

The fruits of opening up financial markets are undoubted. It is the main reason why GDP per head south of the Sahara sits two-fifths higher than it was in 2000. And while much of the world retreats into protectionism, it is heartening to see Africa attempt to open up its markets. This approach must continue; starting with ambitious financial market structural reforms. The continent has the power to transform not only its economic future, but also the lives of millions by leveraging on the power of the financial markets. It is an opportunity that Africa cannot afford to miss. ■

Exploring private equity landscape in Africa

Economist Moin Siddiqi explores the huge potential for private equity investors in Africa thanks to the lack of competition on the continent.

Africa is emerging as a new frontier for global portfolio investors to tap the region's resources and favourable demographics as well as secure higher returns in current low-interest rate environment in advanced economies. Foreign direct investment by private equity firms should continue to grow providing future opportunities and challenges.

Research by Asoko Insight and Africa Capital Digest identified some 212 private equity (PE) firms with 298 offices based across 27 sub-Saharan African (SSA) markets. It showed that 10 largest firms, defined by funds under management (FUM) exceeding US$1bn, included Actis, African Capital Alliance, African Infrastructure Investment Managers (AIIM), Brait, Development Partners International (DPI), Emerging Capital Partners (EPC), Harith General Partners, Helios Investment Partners, Investec Asset Managements and Old Mutual Capital. The next range, with FUM between US$500mn and US$1bn, included eight firms, followed by 63 firms with FUM of US$100-500mn range.

Seventy-one firms were documented with FUM of below US$100mn, and the remainder included PE investors with unknown fund sizes or with non-fund-based capital structures. Total FUM of PE and venture capital firms in Africa is estimated at US$30-35bn.

Several factors attract PE inflows to Africa; chiefly rapid urbanisation, rising disposable incomes, youthful workforce, tracts of uncultivated farmable land ripe for development and soaring Internet and cell phone penetration, as well as infrastructure upgrades. There is a perception of good macroeconomic management, regulatory/legal frameworks and socio-political stability.

Spotlight on African private equity markets by sub-regions

	Number of PE deals	Value of PE deals US$bn	Median deal size US$mn
West Africa	282	10.80	6
o/w: Nigeria	152	7.88	
North Africa	163	3.70	8
o/w: Egypt	65	1.52	
Southern Africa	294	3.50	6
o/w: South Africa	194	2.45	
East Africa	194	2.40	6
o/w: Kenya	112	1.41	
TOTAL	**933**	**20.40**	

Source: AVCA March 2019.
Private equity is defined as both private equity and venture capital.
Deal value includes equity (growth & seed capital), mezzanine (preferred equity securities), senior debt, leveraged buyouts and co-investments.

Average deal value and final close time

	2015	2016	2017
Average size of African-focused funds, US$mn	315.27	244.21	125.13
Average time spent on fundraising to reach a final close (months)	23	23	21

Source: Private Equity International.
PE funds are unlisted investment funds that pool and invest private investors' capital.

Core investing sectors

PE industry in Africa has been relatively small, over the past few years, however, have seen an amount of activity. According to the African Private Equity and Venture Capital Association (AVCA), 1,022 PE deals worth US$25.7bn were reported during 2013-18 mostly in Nigeria, South Africa, Egypt and Kenya – the continent's four largest economies. Total value of African-PE fundraising over the same period was US$17.8bn. While big four are major beneficiaries of PE inflows, fund managers are exploring frontier markets in East and West Africa, especially where there is potential for regional expansion. Policies toward deeper regional and financial integration have enticed PE investors in recent years – seeking 'economies of scale' and expanding operational networks in Africa.

Investors are focusing on opportunities arising from long-term structural demographic and economic shifts driving Africa's growth. Five core targets for PE funds are utilities/energy, information and communications technologies (ITC), consumer goods, financials and industrials (mainly light manufacturing). Since 2007, increased consumerism has attracted more than half of all PE investment into telecoms, ITC, consumer and financial services.

According to the World Bank, agribusiness could be a US$1trn industry in SSA by 2030; PE firms can support small and medium-size enterprises in agriculture, and help develop local/regional value chains. Knowledge and technology transfer occurs in larger investments, which benefits host countries.

Local investable money

Domestic pension funds are a future source of capital for African PE thanks to reforms in major countries encouraging trustees to invest in PE as an asset-class. A 2015 study from the Commonwealth, 'the Making Finance Work for Africa' Partnership Secretariat and Emerging Markets Private Equity Association (EMPEA) found African pensions had at least US$35bn available for allocation to PE. The Nigerian Pension Commission raised pension funds' allocation limit for PE to 10 per cent. The percentage of total portfolio under management that South African and Kenyan pension trustees can invest into PE/venture capital funds also stands at 10 per cent. While in Ghana, pension trustees can invest one-tenth of aggregate funds in alternative assets.

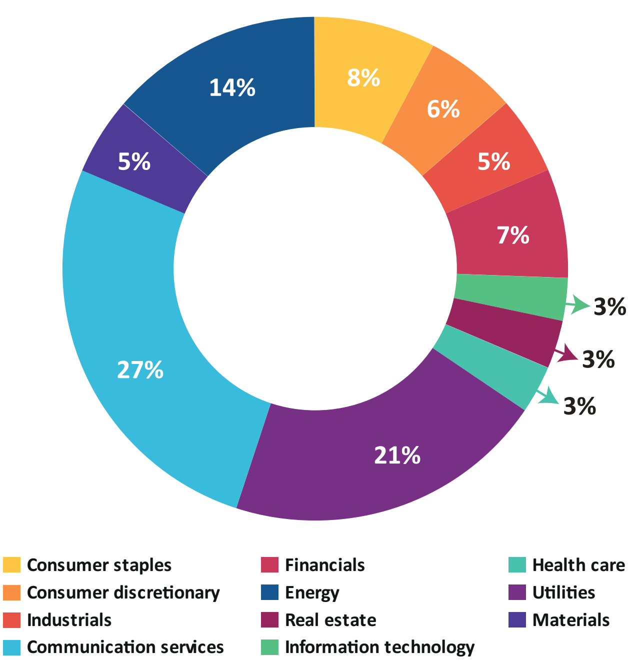
Pension funds in 10 African countries have an estimated US$379bn of assets under management, according to EMPEA. Significant participation remains unlikely until trustees become less risk averse and more familiar with infrastructure asset class. For African PE to grow on level with East Asia and elsewhere requires deep capital markets and stock exchanges with developed regulatory frameworks, thus providing greater liquidity, security and access for investors. An active secondary PE market is also necessary.

Militating risks

Investors cite numerous obstacles and constraints upon their African portfolios. These include currency risk, the typical PE timeframe of a five-year holding period is too short in African markets with limited exit outlets through initial public offerings (IPOs) – hence reflecting illiquid capital markets, the scarcity of viable mid-cap firms, legal regulatory/tax issues, coupled with political/economic uncertainties and infrastructure delays.

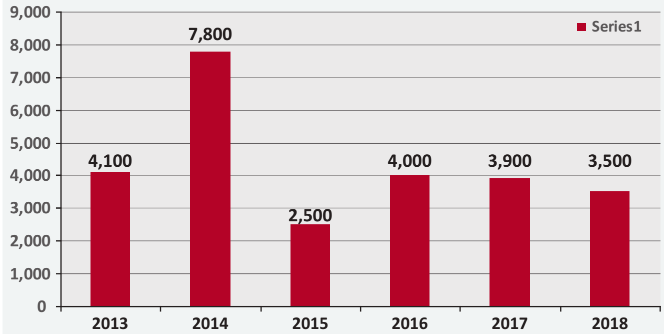
"Limited exit opportunities, fundraising environment and scarcity of talent are identified by the biggest proportions of limited partners (LPs) as critical challenges in Africa over the next three years," noted the 2018 AVCA Annual LP Survey. Limited partners include public and private pension funds, sovereign wealth funds, funds of funds and private sector investors such as Old Mutual Africa Private Equity Fund of Funds.

Per cent share of PE Deals by value, 2013-18



Source: AVCA, March 2019.

Value of private equity deals, US$mn



Source: AVCA, March 2019.

A practical strategy for managing currency risks in Africa is investing in resilient businesses like consumer staples, ITC, utilities and energy. Another option for investors seeking to hedge forex risks is portfolio diversification across sectors and geographies. Regarding political risk, one major strategy is diversifying those countries with proven record of good governance over a sustained period. Successful funds share common features: African specialisation, patient capital, tolerance and appetite for smaller assets. Established funds such as DPI and Actis focus on deals, often between US$70mn and US$100mn.

Benign prospects

A survey by AVCA of top 60 global LPs revealed that the majority planned to increase their allocation of PE investments in Africa. Almost half of potential investors surveyed expected their investments to yield double returns over the next decade, while two-thirds viewed Africa as a more attractive option than other developed markets. Thus far, regional penetration is low, but smaller markets and modest penetration create potential for high risk-adjusted returns for dedicated PE investors, relative to matured markets.

The 10 most popular SSA destinations for PE funds over the next three years are Nigeria, Kenya, Côte d'Ivoire, South Africa, Ethiopia, Ghana, Tanzania, Uganda, Zambia and Congo (DRC) according AVCA 2018 survey. LPs view West Africa as being an attractive destination – it attracted the highest share of reported PE deals in SSA over 2012-17, followed by East Africa.

Notwithstanding risks and challenges in Africa, the continent's demographics and growing consumerism provide grounds for PE firms to invest in sectors, notably infrastructure, logistics, agriculture, technology, education and health. ■

Lifting Ghana beyond foreign aid

As President Nana Akufo-Addo launched the Ghana Beyond Aid charter at last month's May Day Celebration in Accra, he announced he was pushing through election promises such as One-District-One-Factory.

Ghana's economic growth for 2019 is forecasted at 7.4 per cent, according to the World Bank.

Image credit: Adobe Stock

Ghana will march boldly from poverty to prosperity, according to President Nana Akufo-Addo.

The president was met with applause as he launched the Ghana Beyond Aid charter at a workers' rally at Black Star Square in Accra during last month's May Day celebration.

"The committee has worked tirelessly to produce a charter and a strategy document, which will guide our march towards 'Ghana Beyond Aid', and I am happy to [launch] this document. On behalf of the people of Ghana, I wish to thank the "Ghana Beyond Aid" Committee for the good work done.

He continued, "Ghana Beyond Aid is setting our nation on an irreversible pathway of prosperity. With the blessing of the almighty and our collective effort, we will march boldly from poverty to prosperity so that we can create a Ghana our forefathers envisaged and the current generation aspires to have, and our posterity will be proud to inherit – the Ghana of our dreams."

The president said his government was continuing to push through his election pledges such as Planting for Food and Jobs and his ambitious One-District-One-Factory as well as plans to inaugurate the Social Partnership Council to strengthen and harmonise relations between industry and government.

> "Ghana Beyond Aid is setting our nation on an irreversible pathway of prosperity"
>
> **PRESIDENT NANA AKUFO-ADDO**

"I'm very confident that this new approach to economic management and public policy making will foster even greater cooperation and trust among our partners. Together, we can achieve a more stable economy, peace at the labour front, and prosperity for the good people of Ghana."

According to a World Bank forecast, Ghana's economic growth target for 2019 is 7.4 per cent thanks to the oil & gas and mining sectors.

The nation has a bold vision to become one of sub-Saharan Africa's top five oil producers by 2020, with production of about 250,000 barrels per day. This is due to the Jubilee and Ten Fields operated by Tullow and Kosmos, following the discovery of oil 10 years ago, and other major players entering the market such as US's ExxonMobil and Aker.

Ghana is regarded as a lower-to middle-income country, richly endowed with natural resources and minerals, such as gold, manganese, diamonds and iron ore, which the president has previously stated "will help lift Ghana beyond foreign aid". It is already the second largest gold producer after South Africa and the world's tenth largest. Its major export commodities are oil, gold and cocoa, but as described by the *Financial Times*, Ghana is still trapped "in low value-added, extractive patterns of capitalism" and continues to be a price taker. The finance ministry's position in competing for a slice of the US$140bn global chocolate market amounts to just US$6bn, the newspaper reported.

However, there was good news earlier this year in regard to gold prices. According to the Bank of Ghana's Summary of Economic Financial Data in January, "some Ghanaian gold producers that had hedged the prices of their production benefited significantly from higher realised prices than the spot market prices at a time when gold prices are experiencing a downturn".

President Nana Akufo-Addo wants to establish a "vibrant aluminium industry in Ghana".

> "Aluminium is often described as the metal of the future. We have its raw material that is bauxite in abundance in Ghana"
>
> **PRESIDENT NANA AKUFO-ADDO**

The major gold miners include Asanko Gold and AngloGold Ashanti. Asanko Gold has the potential to become one of the largest mines in the country through two projects at Nkran and Esaase, situated in the western region of Ghana, which is expected to increase production to 450,000 ounces a year. AngloGold Ashanti's open pit mine in Iduapriem produced 228,000 ounces of gold in 2017. The Obuasi is currently on care and maintenance.

In March, the president appointed a new board of directors for the Ghana Integrated Aluminium Development Corporation (GIADEC), which is mandated to promote and regulate the bauxite and aluminium industry. It is part of the government's plan to exploit the large bauxite deposits and exploit substantial iron ore and manganese deposits, situated in the western and northern regions to build an integrated steel industry for the country. It wants to set up bauxite mines at Awaso, Nyinahin and Kyebi and build an alumina refinery.

At the swearing-in ceremony of the board of directors, Akufo-Addo said, "Aluminium is often described as the metal of the future. If that is the case, we have its raw material that is bauxite in abundance in Ghana. The time has come to make a concerted effort not only to bring the raw materials into play, but to establish the full value chain of the product so we can have a vibrant aluminium industry in Ghana."

Renewable energy drive

Having access to electricity is still top of the nation's agenda despite having the second highest electrification rate in sub-Saharan Africa, (Oxford Business Group).

In line with global trends, Ghana is looking to generate more electricity from renewable energy sources under its Renewable Energy Masterplan (REMP), which aims to increase its energy capacity from 42.5MW in 2015 to 1363.3MW and provide renewable energy-based decentralised electrification options to 1,000 off-grid communities.

The World Bank provided investment for four mini-grid projects around Lake Volta for island communities through the Ghana Energy Development and Access Project (GEDAP). It currently provides electricity to about 10,000 people, with an aggregated installed capacity of 1.7MW. The success of the US$230mn project is now contributing to other donors such as SECO and AfDB for additional programmes on access and renewable energy, the bank stated.

Technology

Vodafone Ghana is the principal fixed-line provider and the third largest player in the mobile services sector after MTN and AirtelTigo. Airtel Ghana is the second national operator. Mobile internet connections account for the vast majority of all internet accesses in the country.

In the report, *Ghana – Telecoms, Mobile and Broadband – Statistics and Analyses*, it states, "The launch of LTE services by Vodafone Ghana in March 2019, and the extension of the LTE-A services by MTN Ghana, have greatly improved the quality of mobile data services for end-users. This has been reflected in a number of areas, including the strong m-commerce and m-banking sectors. The vibrant mobile market has retained steady subscriber growth."

Ghana is one of Africa's largest mobile markets, with around 34.5 million subscribers and a penetration rate of 119 per cent – expected to hit above 130 per cent by 2020.

Ore Odusanya CO-CEO of Jumia, a leading pan-African online shopping platform, said it was no surprise smartphones were so popular in Ghana which has such a high internet usage in the country.

Speaking at the launch of the Ghanaian Mobile Sector report last year, he said, "Popular brands such as Samsung, Nokia, Techno, Apple, and Blackberry have successfully carved a niche for themselves in the Ghanaian mobile market. The main catalysts for this rise in the number of people with access to mobile phones and internet usage have been attributed to the recent push for telecommunication companies to expand their network coverage, the availability of cheap smart phones from China, and a robust legal regime."

The report indicated that 75 per cent of Ghanaians preferred the cash on delivery option in 2017, compared to five per cent and 25 per cent for credit/debit cards and mobile money options respectively. ■

> "Popular brands such as Samsung, Nokia and Apple have carved a niche for themselves in the Ghanaian mobile market"
>
> **ORE ODUSANYA CO-CEO OF JUMIA**

Tech entrepreneurs and companies in Ghana will be attending Tech in Ghana on 10 June as an official part of London Tech Week 2019. For more information, visit techinghanaconference.com

Ghana aims to increase its renewable energy capacity from 42.5MW to 1363.3MW.

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Image Credit: Kobo360

Ife Oyedele, Kobo360 co-founder accepting the Disrupter of the Year award at Africa CEO Forum Awards in Rwanda.

Kobo360, the technology logistics platform, has announced that it will expand operations into Accra and Nairobi.

The announcement follows news that the company launched in Lome, Togo, home to West Africa's largest shipping port, heralding a period of rapid expansion for the African start-up. Backed by international and African investors, including International Finance Corporation [IFC], Y Combinator and TLcom, the move comes as Kobo360 seeks to build a global logistic operating system [G-LOS] that will power trade and commerce across Africa and emerging markets. Positioned as a unique trading and transport hub on the African continent, the new territories have seen almost exclusively double-digit growth Togo [12 per cent], Kenya [10 per cent] and Ghana [7.9 per cent], and Kobo is now strategically positioned to grow with them.

The company is rolling out a beta operation in Ghana, recording more than100 trips and collaborating with clients such Olam Ghana, and expects to test the Kenyan market further where the team will meet with drivers and equip them with the tools they need to run trips effectively.

In Nigeria, Kobo360 has stood at the forefront of logistics, covering more than 80 per cent of the country and recording a 40 per cent cost reduction in the supply chain. The company now plans to extend to other key markets and expects to be in nine African countries before the end of 2019.

Speaking from the Africa CEO Forum in Kigali, co-founder and CTO of Kobo360, Ife Oyedele, said, "We estimate that Africa needs 10 times the number of trucks to meet short-term commercial transport needs, since rail continue to underperform. Time, cost and quality are key drivers of success in logistics which is why we, at Kobo360, are building a global logistics operating system [G-LOS] that will ensure fast movement of goods at a lower cost for businesses across Africa.

"Kenya is the hub of East Africa, it is the most innovative market in technology and if we win here, we have won across the region. From here we will expand to Uganda and Tanzania. By adding Ghana to our West African territories of Togo and Nigeria, we will link all the market to a Global Logistics System and this will help us to serve our customers across a seamlessly lined Pan-African market. By this we create value to our customers as we are in all the key countries in the continent."

To date, the company has partnered with global logistics brands including Dangote Group, DHL, Unilever and Lafarge and has moved than 297 million kilos of goods, serviced more than 1,450 businesses and aggregated a fleet of over 10,000 drivers and trucks. Launched in 2016, with a vision to revolutionise the logistics value chain in Africa, estimated at US$150bn.

Kobo360 won Disrupter of the Year at the Africa CEO Forum Awards.

TRACING STOLEN VEHICLES VIA IOT SOLUTIONS

Altair Semiconductor, a leading provider of cellular IoT chipsets, has announced it is partnering with ERM Advanced Telematics to develop low-powered and installation-free automotive IoT solutions..

The ultra-low power consumption of Altair's chipsets allows the device to be connected without having to be powered by the vehicle's battery, significantly reducing installation costs.

"As installation costs continue to rise in comparison to hardware prices, Altair's unparalleled low power figures and extended battery life means we can provide on-board solutions with minimal installation requirements that are able to remain in the field for up to two years," said Kfir Lavi, senior VP and deputy CEO at ERM Advanced Telematics. "This will usher in a new dawn for IoT and asset management, opening up a whole new market of applications for a wide range of automotive IoT scenarios."

ERM's new set of IoT and asset management solutions leverages Altair's optimised cellular IoT chipsets to also provid, asset management, stolen vehicle recovery (SVR) and vehicle financial services. These will include event-based platforms for automatic vehicle location and asset management applications using various sensors

Altair's optimised cellular IoT chipsets are the industry's most advanced, providing the market's lowest power consumption and enabling the longest battery life for IoT.

"Low power consumption is essential for the long-term growth of the automotive IoT space," said Gili Friedman, director of Business Management for Altair Semiconductor. "We are delighted that ERM Advanced Telematics has selected Altair's cellular IoT technology to provide the low cost and power-efficient connectivity necessary to enable new markets and use cases."

BRIEFS

Image Credit: Adobe Stock

There are 391 road and railway projects in the pipeline in Africa.

Ministers meet for road conference in Tanzania

The Roads, Bridges and Highways Africa conference will take place on 25-27 June in Dar es Salaam, Tanzania.

Hon Amadou Kone, Minister of Transport for Côte d'Ivoire and Hon Dagmawit Moges, deputy mayor of Addis Ababa, and Minister of Transport and Hon Alexander Chiteme will be among the speakers at the conference, which will be co-located with the third edition of Africa Port Expansion. There are 391 road and railway projects, worth US$467bn.

NAS to launch cargos services in Mozambique

Image Credit: Adobe Stock

There is big demand for air transport related goods due to the growing oil and gas sector in Mozambique.

National Aviation Services (NAS), the fastest growing aviation services provider in the emerging markets will offer comprehensive ground handling and cargo services in Mozambique in July. Hassan El Houry, group CEO of NAS said, "Airline traffic is growing steadily in Mozambique. Coupled with the developing oil and gas, and mining sectors, there is a huge demand for air transport related goods and services for both cargo and passenger operations."

IVECO inaugurates state-of-the-art showroom and service centre in Nairobi

The truck firm has inaugurated a new showroom and service centre in Nairobi and a new branch in Agadir.

IVECO expands into Agadir, Morocco.

IVECO, in partnership with its dealer Global Motors Centre (GMC) has inaugurated a new, state-of-the-art showroom and service centre in Nairobi, Kenya with the participation of 60 leading companies in the local transport sector.

The ceremony was hosted by Farooq Sheikh, managing director of GMC and Marco Torta, area manager for East Africa at IVECO.

Located on the ICD Road, adjacent to Mombasa Road, the new IVECO showroom and service centre has been designed to provide IVECO customers with sales, service and spare parts.

The showroom welcomes visitors in a comfortable environment. The workshop is staffed with qualified service technicians and well-stocked with spare parts to offer professional and efficient support.

GMC was appointed as IVECO's dealer in Kenya in 2017 and assembles the Eurocargo medium truck and the Trakker heavy tipper version at its assembly plant in Mombasa.

IVECO and GMC plan to start production of the new Stralis X-Way truck designed for construction logistics, at the Mombasa facility later in the year.

GMC sells and provides assistance for the line-up of IVECO Daily light duty vehicles, offering an extensive product offer ranging from 3.5 tonnes to 7 tonnes GVW, available in 4x2 and 4x4 configuration.

IVECO and GMC are currently supplying specialised heavy vehicles to Kenya's Government sector.

> "IVECO and GMC plan to start production of the new Stralis X-Way truck at the Mombasa facility later in the year"

Expanding into Morocco

In January, Atlas Véhicules Industriels (AVI) opened new premises in Agadir to take advantage of its strong economic potential and geographical position. Morocco is an important market for IVECO because it is considered to be the southern point of Europe and the gateway to sub-Saharan Africa.

IVECO says the region, which is the third base in terms of brand activity in Morocco, is therefore essential for the company because it plays a leading role in West Africa and a land of connection to other countries of the continent.

The opening event celebrated the increase in sales in Morocco. It has been two years since IVECO recorded nearly 1,000 sales of commercial vehicles a year, doubling sales figures from three years ago.

In Morocco, AVI created in 1996, is the exclusive distributor of the IVECO brand for 12 years (Daily, Eurocargo, Stralis), and is part of Premium, IVECO's exclusive distributor for the Francophone West Africa market. ■

Building connections in the tech space

Akosua Annobil, founder of AB2020 and Tech in Ghana.

Akosua Annobil, founder of AB2020 and Tech in Ghana, talks about her work in connecting high-level government stakeholders and tech businesses to help build the country's future.

It was while working on her communications and events platform AB2020, promoting and connecting businesses globally, that Akosua Annobil saw a gap in the tech sector in Ghana and launched the Tech in Ghana conference. It has become her company's flagship event, which takes place twice a year in Accra and London, bringing high-level government stakeholders together with tech entrepreneurs and companies in Ghana and the UK.

Fast forward two years, and the conference has become the must-attend event for tech businesses in both countries – and her work has not gone unnoticed.

The fifth Tech in Ghana is due to take place on 10 June as an official part of London Tech Week – Europe's leading technology and start-up festival.

How are you feeling about Tech in Ghana conference in June?

We're very excited to be an part of London Tech Week, which will be in line with Tech in Ghana's 2019 theme of *Connecting Our Global Networks: People, Opportunities and Industries*. I'm expecting a great response from participants. We'll then be back in Accra for our sixth event and learning expedition in November.

Last year, you were recognised in the Financial Times top 100 list of most influential Black, Asian Minority Ethnic (BAME) leaders in the UK tech sector. What was that like?

It was a huge honour to be recognised by the *Financial Times* as it's a publication I admired and did a work experience placement for in my teenage years.

I was very surprised about the response I received from people and those who shared the news across their networks. It made me excited about the future, and how this kind of recognition can help build Tech in Ghana into an even bigger platform and create more value for participants.

How successful was the fourth edition of the Tech in Ghana conference in Accra on 27 and 28 November, 2018?

It went really well. It was our fourth conference, and opened by the Deputy Minister for Communications, Hon. Vincent Sowah Odotei. Around 300 local and global companies, entrepreneurs, high-level government stakeholders and students attended over the two days. It delved in to some interesting key sectors such as fintech, agritech, investment, capacity building and the tech incubators that are helping to build start-up companies. We were very deliberate in giving the platform to tech communities outside of Accra and promoting what is going on across the nation and not just in the capital, which was very insightful for the audience.

It's rare to get the various stakeholders, government representatives plus the private sector and start-up community in one room, learning about how they can collaborate better, or at least hear from each other. It showed how Tech in Ghana is playing a huge part in building relationships within the ecosystem.

How did it compare to other conferences?

We had more students. Again, this was very deliberate because we were keen to share information with the next generation. We had students from Ashesi and Lancaster Universities in which we are finding very talented young people who are creating solutions to local problems. Some are even building world-class technology and this is getting overlooked, so we were able to introduce them to entrepreneurs who have been there and done it. We are really keen to make sure they have a chance to showcase their work and get feedback, which can be really powerful.

Tell us more about one of the conference's 'connecting the unconnected' theme.

'Connecting the unconnected' is a theme we highlight in all of our events. While there is great stuff happening in tech, there are also rural communities and underprivileged individuals that could be left behind if we're not mindful. We therefore like to explore how technology is helping to provide learning resources, useful data and services to those living in remote areas and in 'last mile' communities.

Who attended the conference?

Speakers ranged from corporates and government agencies; such as the office of the vice president, MTN (Ghana's biggest telco), Stanbic Bank and the National Information Technology Agency (NITA); to fast-growing local companies including Farmerline, eCampus, Kudigo and Cowtribe. Contributions also came from tech and entrepreneurship hubs iSpace, Meltwater Entrepreneurial School of Technology (MEST), Kumasi Hive and our event host the Accra Digital Centre among others. Meanwhile, keynote presentations included people like Andrew Takyi-Appiah, the founder of Zeepay – one of Ghana's most popular fintech companies that recently did a deal with Moneygram; Yofi Grant, CEO of the Ghana Investment Promotion Centre, who talked about how they're positioning tech as a priority investment.

We paid tribute to the late Ghanaian diplomat Kofi Annan and had a representative from the Kofi Annan ICT Centre of Excellence, which is based in Accra, talk about Mr Annan's legacy, vision and their future plans for the centre.

It was a really insightful two days and confirmed to me how much work needs to be done to give support with connecting these stakeholders in between our events.

Keep an eye on TechInGhanaConference.com for further updates. ■

SIM swap fraud: wave of attacks targeting financial services


Image Credit: Adobe Stock

Frauds using SIM swap are becoming the norm in Africa and the Middle East.

A new wave of SIM swap fraud is becoming more popular on the continent, especially in South Africa, with one victim reporting losses of US$20,000.

A SIM swap fraud happens when a scammer convinces a carrier to switch someone's phone number over to a SIM card that a criminal possesses.

According to cybersecurity firm, Kaspersky Lab, in some cases there are carrier's employees working with criminals. By diverting people's SMS messages, scammers can easily complete the text-based authentication checks that protect a user's most sensitive accounts in financial services, social networks, webmail services and instant messengers.

"Despite financial inclusion services prospering, the flipside to this is that it opens up a world of opportunities to cybercriminals and fraudsters who are using the convenience a mobile phone offers to exploit and poke holes in a two-factor authentication processes," said Fabio Assolini, senior security researcher of Kaspersky Lab. "Frauds using SIM swap are becoming common in Africa and the Middle East, affecting countries such as South Africa, Turkey and UAE. Countries such as Mozambique have experienced this firsthand. The implemented solution, by banks and mobile operators in Mozambique, as a result, is something I believe we must learn from and encourage other regions to investigate and apply, among other aspects, to mobile payment methods of the future – as a way to ensure that mobile phones do not become an enemy in our pockets," said Fabio Assolini, Senior Security Researcher of Kaspersky Lab.

EXPANDING BROADBAND INTERNET

Eutelsat Communications has chosen ground infrastructure providers to operate its future KONNECT satellite and associated broadband services: General Dynamics SATCOM Technologies has been selected to offer and deploy seven antennas, while Hughes Network Systems will provide its JUPITER ground network system.

With 75 Gbps of capacity, KONNECT is a new generation multi-beam satellite scheduled for launch at the end of this year. Once in service in 2020, the all-electric satellite will serve the broadband Internet market on a large scale throughout Western Europe and Africa.

Yohann Leroy, deputy CEO and Chief Technical Officer of Eutelsat, said, "Ground infrastructure was the last missing link in our KONNECT satellite programme and this has been bridged thanks to orders placed with Hughes Network Systems and General Dynamics SATCOM Technologies, two trusted partners and references in their respective fields."

General Dynamics SATCOM Technologies' solution will provide seven 9-metre antennas to support traffic exchange between the satellite and its ground network system, ensuring a best in class performance and speed of deployment on a cost-efficient basis.

Eutelsat's long-standing partner, Hughes, a world leader in satellite broadband networks and services, will provide its Jupiter platform for KONNECT's ground network system, including baseband equipment and new generation user terminals.

Planning the warehouse of the future

Alain Kaddoum, general manager at Swisslog Middle East, provides his insights to *African Review* about trends such as the role of e-commerce – revenues expected to grow to US$4.88 trillion in 2021 – shaping future warehousing.

The goods that make their way through supply chains – ultimately end up with consumers, and consumers are not only driving demand but also setting expectations for delivery. Going forward, we will see newer and newer technologies coming into play to support all of the above trends and further disrupt the logistics industry. The question, which comes to mind is: what will the urban distribution centre of 2030 look like?

We envision the urban distribution centre of the future as follows:

- We will see the rise of numerous urban DCS that bring vital logistics capabilities close to consumers. Urban DCs will likely be shared-service facilities that optimise all logistics flows for the area or community they serve, including the following core functions such as inventory and order picking, 3D printing and parcel consolidation.
- For the DCs of 2030 to be – successful, they will require advanced technologies that support them. Some examples are intelligent robots with advanced grippers that can pick not only individual products, but also assemble products from

Image Credit: Swisslog

A much higher level of automation is anticipated inside the DCs of the future.

PALLET SHUTTLES ARE A SOLUTION FOR HIGH DENSITY STORAGE

High density storage systems can increase capacity and improve access in new and existing warehouses.

As businesses grow, or seasonal demand fluctuates, the requirement for greater capacity and fast access within your warehouse operation becomes critical.

Most warehouse and logistics operations have palletised goods stored on standard adjustable pallet racking set out with wide aisles. This offers access to every individual pallet but can mean that 50 per cent of the warehouse space is given over to empty aisles. This is space which could be used to store products if it was accessible.

High density racking systems are used to increase the space available without a too great a compromise in product access.

Stodec Trading specialise in the design and installation of a range of these high density storage systems including double-deep pallet racking, push-back pallet racking, pallet-flow, narrow and very narrow aisle racking, drive-in or drive-through pallet racking, cantilever racking, and powered mobile pallet racking systems but one of the newest and most effective systems now is the pallet shuttle system.

Drive-in pallet racking with pallets supported on cantilever arms in dense blocks provides high capacity and is used widely where stock is slow moving. It requires fork-lift trucks to drive into the storage lanes to deposit or pick up pallets and rear pallets can only be accessed by lifting out front pallets first. New pallet shuttle systems have revolutionised the operation and value of this type of high density installation.

The shuttle unit runs on rails installed under the pallet support arms. The fork-lift truck deposits a shuttle unit into the required lane and it is instructed from the drivers radio controlled handset to automatically carry out a range of functions. These can include lifting and carrying pallets into the storage lane, or bringing them to the front or it can perform stock control functions using barcode scanning or radio frequency identification.

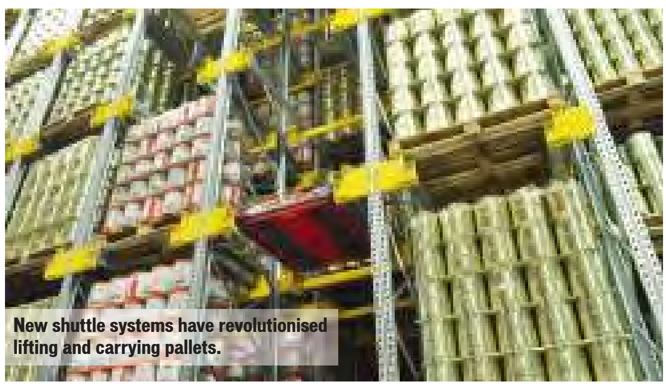

Image Credit: Stodec Trading Ltd

New shuttle systems have revolutionised lifting and carrying pallets.

Several shuttles can be operating at the same time in different lanes. The forklift truck only deposits and collects pallets from the front lane of the storage block, it never enters the rack so no rack damage occurs and your standard warehouse forklift can be used throughout (there is no requirement for special narrow forklift trucks). Shuttle units can deal with pallet loads up to 2,000kg, operate in - 20 c to +40°c, can recognise and deal with different pallet sizes, and are driven by maintenance free battery packs.

Storage lanes can be more than 50m long and stock rotation can be Last-In-First-Out (LIFO) or First-In-First-Out (FIFO) if critical to your product. Stodec Trading Ltd design and install storage systems across the world. Visit www.stodec.co.uk to see many examples and to download its new shuttle brochure.

several parts produced inside the warehouse, and consolidate orders from multiple sellers, including 3D printed products, into one shipping carton, the deep use of big data and smart, self-learning analytics to predict what consumers will be ordering, self-driving trucks and robotic loading and unloading systems to minimise the costs of logistics and fast, long-distance transportation solutions, such as Hyperloop to connect large, central warehouses with urban DCs in major cities.

- There will be an increased focus on last mile delivery. As a share of the total cost of shipping, last-mile delivery costs are substantial – comprising 53 per cent overall – according to a 2018 report by Business Insider Intelligence. We will see the rise of many different solutions and the urban DC will need to interact with all of these. One such solution is electric, and potentially driverless, version of the familiar delivery van. The urban DC will need to support customer pickup and a network of mobile pickup points. Some parcels may need even more individualised transport methods that could be accomplished by parcel-drones or small autonomous vehicles similar to Starship. Another potential scenario is that consumers will send their self-driving vehicles to collect their packages. For that, DC could use mobile robots to place the goods in the trunk of the car. It is not difficult to imagine the next generation of KUKA's Mobile Robot (KMR) doing this.
- We will see a much higher level of automation inside the DCs of the future. Systems based on small AGVs or mobile robots will be more adaptable to smaller spaces and more flexible in dealing with volatility. They will make it easy to change routing or logic to adapt to changing demands. Some of this is already possible today with solutions like Swisslog's CarryPick system. Self-learning software and peer-to-peer communication would make these vehicles "plug and play," eliminating much of the fixed, front-end costs required for traditional automation systems.
- Last but not least, warehouse management software is already evolving in this direction, with platforms integrating multiple functions, including automation control, into a modular architecture that more easily adapts to changing technology while also providing the business intelligence that will be required to support predictive logistics.

Supply chain managers are already dealing with a myriad of technology and market changes as they implement modular, automated solutions to increase productivity and throughput in their warehouses.

However, changes occurring in society, with more disposable income and higher consumer expectations, may stretch existing distribution networks beyond their ability to adapt.

The future of the warehouse lies in moving products closer to consumers, supporting individualised production and providing same-day delivery through multiple channels. And the solutions emerging to support these core capabilities will continue to evolve to meet the demands of the future. ■

Enerpac SL400 Gantry for Marine Maroc power plant lift in Morocco

Marine Maroc, a leading North African international logistics company, has used its new Enerpac SL400 gantry to install high pressure heaters weighing 130 tons at the 2×693MW Safi coal-fired power plant located close to the city of Safi in southwest Morocco.

Now under construction, the Safi power plant will be the first coal-fired project in Africa to use ultra-supercritical technology offering 10 per cent higher efficiency compared to conventional plants, enabling significant CO_2 reductions and lower fuel costs.

Image Credit: Enerpac

Enerpac SL400 gantry delivers high pressure heaters at Safi coal-fired power plant.

With a capacity of 1,386MW, the Safi power plant is part of Morocco's national strategic plan to meet its growing electricity demand at the lowest possible cost while respecting the environment.

Marine Maroc was contracted to transport heaters to the Safi plant from Safi port. On arrival at the plant, the Enerpac SL400 telescopic hydraulic gantry was deployed for the first time to lift the heaters from the company's hydraulic modular trailers. The SL400 gantry is Enerpac's highest capacity bare cylinder gantry. Equipped with three stage lifting cylinders, the SL400 lifts up to 9,14m at the top of the third stage and can handle up to 408 ton (4000 kN) at the top of the first stage. For Marine Maroc, the gantry is equipped with powered side shift units for ease of manoeuvring loads.

As standard the SL400 features an Intelli-Lift wireless control system allowing unobstructed views of the load. The wireless system ensures automatic synchronisation of lifting with accuracy of 24 mm (0.95 inch) and automatic synchronisation of travel with accuracy of 15 mm (0.60 inch). The gantry control system allows users to operate the lift locally at each leg or use the Intelli-Lift remote control. For enhanced durability, the SL400 offers a sturdy, proven base frame that can withstand a variety of environmental conditions.

"Our experienced staff are highly capable of handling large and heavy loads," said Mohammed Belaidi, from the technical department at Maroc Marine. "The SL400 is an outstanding addition to our heavy lifting capability for many power plant projects where the gantry can be readily deployed both outside and inside the plant when space is limited."

POWER HUB LAUNCHED IN JOHANNESBURG

Cummins, a global power leader, launched its state-of-the-art premises in the Waterfall Logistics Precinct in Waterfall City. The Power Hub strategically consolidates various business premises in support of the company's position as Africa's preferred power solutions provider, the company says.

The Power Hub, a 15,355sq m facility, holding a substantial R350mn (US$24mn) investment, houses the Cummins Southern Africa regional headquarters, the Master Rebuild Centre (MRC), Africa Learning Centre and Gauteng Operations. The company adds, the launch heralds the completion of a three-year project that culminates in the creation of a world-class sales and service facility. The new premises are geared to support of the Cummins vision of exceeding customer expectations while improving operational efficiencies. Racheal Njoroge, managing director of Southern Africa, said, "We are extremely excited to officially launch our new state-of-the-art facilities. The architectural layout has been optimally and uniquely designed."

RENEWABLE CAPACITY GROWTH STALLED IN 2018

After nearly two decades of strong annual growth, renewables around the world added as much net capacity in 2018 as they did in 2017, an unexpected flattening of growth trends that raises concerns about meeting long-term climate goals, according to the International Energy Agency (IEA) latest data.

The agency reported last year was the first time since 2001 that growth in renewable power capacity failed to increase year-on-year. New net capacity from solar PV, wind, hydro, bioenergy, and other renewable power sources increased by about 180 Gigawatts (GW) in 2018, the same as the previous year. That is only around 60 per cent of the net additions needed each year to meet long-term climate goals, it stated.

Renewables have a major role to play in curbing global emissions. Renewable capacity additions need to grow by more than 300GW on average each year between 2018 and 2030 to reach the goals of the Paris Agreement, according to the IEA's Sustainable Development Scenario (SDS).

But the IEA's analysis shows the world is not doing enough. Last year, energy-related CO_2 emissions rose by 1.7 per cent to a historic high of 33 Gigatonnes. Despite a growth of 7 per cent in renewables, electricity generation, emissions from the power sector grew to record levels.

"The world cannot afford to press 'pause' on the expansion of renewables and governments need to act quickly to correct this situation to enable a faster flow of new projects," said Dr Fatih Birol, the IEA's executive director. "Thanks to declining costs, the competitiveness of renewables, is no longer heavily tied to financial incentives. What they mainly need are stable policies supported by a long-term vision and a focus on integrating renewables into power systems in a cost-effective way. Stop-and-go policies are harmful to markets and jobs."

BRIEFS

Largest mini-grid to be built in Nigeria

Image Credit: Adobe Stock

The mini-grid in Ogun State in Nigeria will supply more than 600 households.

Solar Nigeria has signed a Community Agreement with the Ode Omi Community to build the largest rural mini-grid in Ogun State, according to reports. The project will be commissioned in September and will supply a peak load of 99kW to the community in the first phase, followed by up to 500kW in its second phase. "Other benefits to the community will include free street lighting and better health and education outcomes," said Tobi Oluwatola country director of Solar Nigeria FTP.

Hybrid plants in Senegal to be installed

Image Credit: DHYBRID

PV-diesel hybrid power plant in Senegal.

Hybrid specialist DHYBRID has been selected by EPC and main contractor Omexom, the energy brand of the VINCI Energies Group, to supply seven PV-diesel hybrid systems in remote areas in Senegal. The total output capacity is 2MW, the storage capacity is 2MWh. "Senegal is working towards the continuous expansion of renewable and energy storage systems and we are particularly proud to be part of this transition," said Benedikt Böhm, CEO of DHYBRID.

South Africa looks to gas future

Amid Eskom's ongoing struggles, South Africa's new-found gas wealth will not necessarily impact its ailing power sector overnight. Martin Clark reports.

Photovoltaic solar power plant in Prieska, South Africa.

Image Credit: Total Media

The discovery of the giant Brulpadda gas condensate field earlier this year was a shot in the arm for South Africa's energy industry.

Barely a week goes by without more doom and gloom reflecting the plight of debt-stricken state power utility Eskom – from its bailouts to its blackouts.

Once the nation's flagship electric company, it has been engulfed by a series of problems in the past decade, from a staggering 420 billion rand (US$29bn) debt to serious corruption and mismanagement allegations.

Potentially, the opening of a new gas province off South Africa's southern flank offers some long-term answers to the country's current energy woes.

Certainly, the offshore Brulpadda-1 discovery by French oil giant Total and its partner Qatar Petroleum International offered more welcome news.

> We expect the power generation sector to drive gas demand growth"
>
> AKIF CHAUDHRY, PRINCIPAL ANALYST, COMMODITY ANALYTICS, WOOD MACKENZIE

The gas field, which is estimated to contain as much as 1 billion barrels of oil equivalent, looks to be easily South Africa's largest ever hydrocarbon discovery.

Located in the deepwater Outeniqua Basin, 175 km off the shoreline, Total said that Brulpadda "opened a new world-class gas and oil play" at the time of the discovery in February.

The field also sits about 180 km south-east of PetroSA's Mossel Bay gas-to-liquids (GTL) plant.

Total is now preparing to test several follow-on prospects in the area, acquiring 3-D seismic data this year to followed by up to four exploration wells on the same license block.

But can it make any real difference to South Africa's present-day power crisis?

It seems unlikely for Eskom, a public utility that is facing challenges on all fronts right now, and which supplies 95 per cent of all the country's energy needs.

While the government has stepped in with a high-profile bailout to help out in the interim, it does not fix the gigantic debt the company has amassed through the years.

Eskom is now facing being broken up into units as officials seek to establish a more sustainable future for the company.

Moreover, the vast bulk of its power generation comes from ageing coal-fired plants.

What the recent gas find could do for South Africa though is accelerate its overall energy diversification,

Total gas station in Cape Town.

which has already moved up a notch in recent years with the advance of solar and other renewable power.

Eskom likewise provides electricity to the nation from various hydro plants and the 1,860-megawatt Koeberg nuclear facility in the Western Cape, which it is keen to keep running for some decades to come.

According to energy consultancy Wood Mackenzie, the Brulpadda discovery could prove a catalyst to restart South Africa's gas-to-power programme, as well as replenishing gas supply to the Mossel Bay GTL plant. This comes at a time when gas resources are likewise amassing in South Africa's neighbour, Mozambique.

There are talks of raising gas imports into South Africa, either for direct use or for processing into GTL liquids. Akif Chaudhry, principal analyst, commodity analytics, at Wood Mackenzie, said the use and development of gas in the South African economy long-term requires clear direction from the government.

"We expect the power generation sector to drive gas demand growth," he said. "However, at present, all South Africa's open-cycle gas turbine units are set up to run on diesel. The country's gas infrastructure is also limited, designed mainly to deliver gas to the Mossel Bay plant and to import piped gas from Mozambique."

It potentially opens the door to more gas-fired power development, with opportunities for turbine suppliers and other companies. However, there remain many additional challenges, as Namibia will testify after spending years unsuccessfully trying to develop a gas-to-power plant of its own using reserves from its large-scale Kudu gas deposit.

What happens next could depend on the outcome of Total's upcoming round of drilling, to see if Brulpadda really is the opening of a new exploration frontier.

The discovery, according to some estimates, is up to five times bigger than all the gas finds so far in South Africa put together.

It does not let Eskom off the hook, of course – far from it – nor is it any miracle cure for the country's current electricity shortages, but it is an opportunity to expand the role of gas in the economy and accelerate diversification into new fuels, beyond coal.

Either way, it is a rare moment of celebration for the beleaguered energy sector in the continent's biggest economy. ■

A natural gas power plant in Douala, Cameroon.

Image Credit: Altaaqa Global Energy Services

Providing BOOT solutions to shorter term projects

James Shepherd, CEO of Altaaqa Global Energy Services, talks to *African Review* about why the company's Build-Operate-Own-Transfer (BOOT) model is a unique offering for customers.

Congratulations on your recent appointment as CEO at Altaaqa Global Energy Services. You have vast experience in the energy sector, what have been your career highlights to date?

Over the past 26 years I have been involved with some fantastic projects from the first cross-border projects from Mozambique, the 2010 FIFA World Cup in South Africa to the first solar hybrid projects in mining. Throughout my career, the highlight has been the remarkable teams I have worked with and at Altaaqa Global, we have a fantastic team who make a big difference to our customers. I am thoroughly enjoying this new phase of my career.

I understand you are currently spearheading the company's major rebranding. How important is this for the company in shaping the future of the energy industry?

The market has changed considerably over these past years, like any successful company we needed to adapt and change. The rebranding was a natural step to instigating that change but at the same time reflecting the long heritage of the Zahid Group and demonstrating our technology-agnostic solutions that best fit our customers' needs.

The Build-Operate-Own-Transfer (BOOT) financial model is a unique offering for customers in the industry. Could you provide more details and explain how it works?

Traditional BOOT models have existed for many years in the Independent Power Producer (IPP) space, whereby over a period of time the offtaker/customer own the asset. In the shorter term projects, the model has been one of rental where at the end of the contract the equipment is taken away.

What I have experienced over the past 26 years is that, more often than not, that same rental equipment is required the year or two after, thus requiring a new rental contract at a high cost. What we have done is introduce the traditional IPP BOOT model to the shorter term projects to provide a fully financed solution with an O&M contract. At the end of the day, customers are thereby able to own the assets outright with no upfront payments or balloon payments at the end of the projects. Customers can either then keep the existing plant as back-up to maintenance, for peaking requirements, future growth or redistribute it to other areas of their network to reduce transmission losses.

> "What we have done is introduce the traditional IPP BOOT model to the shorter term projects to provide a fully financed solution with an O&M contract. At the end of the day customers are thereby able to own assets outright with no upfront payments or balloon payments at the end of the projects"
>
> **JAMES SHEPHERD CEO OF ALTAAQA GLOBAL ENERGY SERVICES**

How many BOOT deals does Altaaqa Global Energy Services have? Do you believe this model could be revolutionary in Africa for various sectors?

We have a number of projects globally, most recently, a 20MW project in Colombia which is a five-year BOOT, a fifteen-year 25MW turbine BOOT in the UAE and a 20MW project in Nigeria. Demand is high for this solution and is ideal for both industrial and mining sectors. Not only do we see it as replicable but we have a number of clients who wish for us to install it across a number of locations for them.

How significant is BOOT to the company's major rebranding campaign and to the company's expanded product offering?

BOOT is one of the elements but there is also the solar hybrid technology with our sister company Greencells Group and micro-grids with Powerhive.

We are focused on offering our clients real choice and the lowest cost of energy to meet their specific needs.

What differentiates Altaaqa Global Energy Services from its competitors?

Being technology-agnostic, we are unlike many of our competitors who are focused on turbines or small reciprocating engines. We are able to offer both, of course, and also larger, more efficient engines coupled with solar and hybrid solutions. But the number one thing that differentiates us from our competitors is our people, their professionalism, passion and customer focus.

Could you elaborate more on the significance of being a true strategic power partner to clients rather than just a technology provider?

Technology is evolving at an incredible pace and we are in an enviable position to our competitors whereby we have not invested in just one type of technology. We are able to provide short-term, medium-term and long-term solutions. We also have the capability to upgrade power systems with more efficient technologies as they become available whether that is solar, higher efficiency engines or turbines. We always aim to provide the most efficient current solution to our customers and work closely with them year-on-year to improve that efficiency as new technology becomes available.

Image Credit: Altaaqa Global Energy Services

James Shepherd, CEO of Altaaqa Global Energy Services.

What are the future trends to watch for across Africa's energy sector?

It has been a tough few years for Africa utilities: a lack of USD liquidity in many markets, poor transmission, and ageing of existing plants, coupled with an ever growing demand have seen many utilities and energy ministries running a two-tier strategy of keeping the lights on now while trying to build for the future. This has put a huge strain on the balance sheets of most utilities in Africa and future investments will have to come from the private sector. The major trends I see are the growth of micro-grids/distributed power, LNG solutions, the continued rise of renewables but battery storage will be the key and the integration of grids across Africa to evacuate power from a country with a surplus to one that has a deficit and is in need of power. ■

New Perkins 1706 delivers a powerful performance.

Setting the standard

African Review talks to Karan Ohri, product marketing manager (electric power) at Perkins, about the company's long history in Africa and its plans for the future.

Can you briefly outline the Perkins engines story in Africa?

Perkins has worked closely with many original equipment manufacturers in Africa since 1950, and over the decades has steadily grown the number of engines it exports there. Many Perkins engines experiencing their 'second life' are also used in agriculture and construction. Today, with 11 independent Perkins distributors across Africa, Perkins sells and supports a range of engines, with a particular focus on the electric power generation market.

What would you say are the main factors behind your long-term success?

We continue to see increased interest and demand for Perkins powered equipment in Africa, largely due to our positive brand reputation for reliability, our engine range and our extensive and highly experienced distribution network, which we continue to invest in. Perkins has powered the success of generator set manufacturers for more than 85 years as customers know they can rely on our world-class team to create efficient, reliable and innovative engine solutions for every node and every need.

> "The diesel engine market continues to dominate the electric power sector"
>
> KARAN OHRI PRODUCT MARKETING MANAGER, PERKINS

Karan Ohri.

Can you tell us about your latest project successes in the region?

One of Algeria's largest hospitals now has a healthy supply of emergency power, thanks to a high-quality solution provided by Arken and Perkins. Arken's solution for this job consisted of four generator sets, powered by Perkins 4008TAG2A engines, and each delivering 1100 kVA of standby power.

Are there any partner companies that you are working alongside in Africa?

The demand for the Perkins brand in Africa continues to grow for parts, support and engine sales. Perkins is bolstering its presence with two new distributors, Earthmoving Services Company and Seco Power. This investment in distribution will provide unparalleled sales and service support to Perkins customers via 11 independent distributors.

How is interest in renewable energy and clean tech affecting the gensets business generally?

The diesel engine market continues to dominate the electric power sector as it remains the most cost effective and reliable form of fuel available to meet the demand for temporary and tethered power supply. Hybrids running on solar power or batteries are starting to emerge in certain parts of the world on the low power segment in niche applications, such as light towers. However, a major transformation in terms of power source is still in the future for the generator set market which generally follows the on highway and off-highway industrial market to adopt new technology.

> "The smaller footprint and 23 per cent reduction in height also enable generator set manufacturers to package this engine in a smaller canopy"
>
> **KARAN OHRI, PRODUCT MARKETING MANAGER, PERKINS**

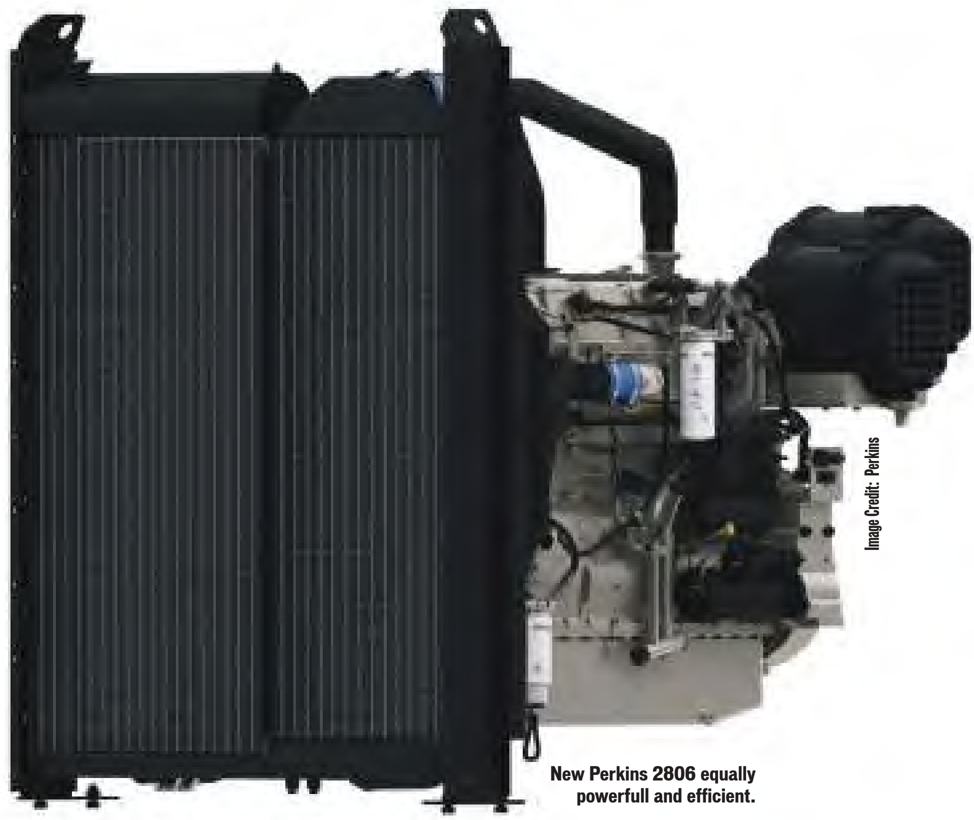

Image Credit: Perkins

New Perkins 2806 equally powerfull and efficient.

What are your plans going forward for 2019 and beyond?

The electric power sector never stands still and neither does Perkins. We are dedicated to driving our engine innovation forward and providing 24/7 service and support, all with the aim of increasing productivity, growth and success of customers' businesses across the globe. In an extremely competitive electric power market, Perkins is committed to continual innovation across all its products and services. We are doing a huge amount of work on increasing power density, so customers get more power from the same size engine. With customers in many territories facing increasingly stringent emission standards, we are committed to designing engine solutions that meet our customers' requirements while meeting the demands for value, innovation and performance. ■

PERKINS: NEW MODELS AND CURRENT TECHNOLOGY DEVELOPMENTS

Over the past year Perkins has launched three new engines – the **1206, 1706** and **2806** – all of which are designed to deliver industry-leading power ratings from a smaller unit and make a generator set manufacturer's business more successful. Each platform delivers a massive uplift in power density across a comprehensive range of power nodes.

The Perkins **1706A-E93TAG2** produces 350 kVA from a 9.3 litre displacement, providing superior output and performance. With 22 per cent improved power density, this market-leading product offers a reduced package size, better fuel consumption and cheaper running costs.

Major features include a state-of-the-art fuel system, high efficiency turbocharging, improved thermal management and the latest Perkins ECM technology to enhance product performance. A cutting-edge new cooling pack design allows Perkins to still achieve the engine's full power ratings under extreme ambient conditions, so customers can be confident the engine will meet their requirements under all circumstances.

Both the **1206** and **2806** offer significant power density improvements from a smaller package. With a seven litre displacement, the Perkins **1206A-E70TTAG3** produces up to 275 kVA and delivers 20 per cent improved power density from a 20 per cent lighter engine when compared to the previous 1506 platform.

New technology on the engine includes twin series turbocharging for increased engine response, while a higher-pressure fuel system gives precise control of fuelling, delivering improved performance across the board.

Delivering 825 kVA from an 18-litre displacement, the Perkins **2806A-E18TTAG5** offers 28 per cent improved power density, a 35 per cent reduction in package size and a 48 per cent smaller footprint. Aside from performance benefits, the smaller footprint and 23 per cent reduction in height also enable generator set manufacturers to package this engine in a smaller canopy, saving space, installation and transportation costs. This engine complements the Perkins **4006** at this power range, giving customers more choice and flexibility to suit their specific needs.

Power project successes will be highlighted at aef

For the first time, this year's Africa Energy Forum (aef) – taking place in Lisbon from 11-14th June – will provide a platform to recognise power projects which reached financial close or commercial operation in the last 18 months.

METKA - Bridge Power LPG project.

Selected projects will be showcased in the opening session at the Africa Energy Forum in Lisbon on 10 June and published in a project listing directory available for all delegates.

The initiative celebrates more than 90 projects within the aef community and celebrates more than 200 project leaders and partners. Such a response demonstrates the continued momentum of Africa's energy sector, with many additional projects not even listed. The organisers EnergyNet share their favourite entries with us:

Nachtigal Hydroelectric Dam Project, Cameroon

The Nachtigal hydroelectric dam project is a major milestone in the Electricity Sector Development Plan developed in 2014 by the government of Cameroon with the support of the World Bank and EDF.

It is owned 40 per cent by EDF, 20 per cent by IFC, 15 per cent by the government, 15 per cent by Africa50 and 10 per cent by STOA, with a project cost of more than US$1.4bn.

The money lenders are IFC, which is the lead arranger (it is IFC's largest power investment in Africa) alongside the African Development Bank, Proparco, Dutch Development Bank, FMO, the Emerging Africa Infrastructure Fund, Asian Development Bank, Africa Finance Corporation, CDC Group, European Investment Bank, and the OPEC Fund for International Development.

The project entails the construction and operation of a 420MW hydropower plant on the Sanaga river near Nachtigal Falls, and is one of the very few large hydropower projects delivered under an IPP model on the continent.

Considered as a national priority, Nachtigal is part of Cameroon's development plan to enhance both the reliability of the energy sector and access to power.

The power produced will be sold to the national utility company at a competitive price, thereby benefitting the Cameroonian consumers and boosting the economic and industrial development of the country.

The project will have a substantial development impact, creating up to 1,500 direct jobs during construction (65 per cent locally sourced), and many permanent jobs upon completion in 2023.

Lake Turkana Wind Power Project, Kenya

Faced with energy deficiencies and increasing energy demands to power its growing economy, Kenya is taking a giant leap forward with the Lake Turkana Wind Power (LTWP) project, which provides around 15 per cent of the country's electricity capacity when fully operational and up to 30 per cent at night.

Located in Loiyangalani District, the wind farm is the largest of its kind in Africa and is the largest single private sector investment in Kenya's history.

The LTWP not only provides Kenya with much needed green energy, but saves the country more than EUR100mn a year in imported fuel costs and drive down overall electricity prices for Kenyan consumers and businesses, powering sustainable growth in Kenya.

The LTWP is owned by Aldwych International, KP&P Africa B.V, Norfund, Finnfund, IFU, Sandpiper and Vestas.

LTWP is financed by a consortium of senior and subordinated lenders specifically the European Investment Bank, African Development Bank, The Trade and Development Banks, East Africa Development Bank, EKF, Standard Bank of South Africa, Nedbank of South Africa, Proparco, DEG KFW Bankengruppe, Dutch development bank FMO and EU Africa Infrastructure Fund.

Bridge Power LPG Project, Ghana

The scope of the project includes the engineering, procurement, construction and commissioning of a 200MW power project in combined cycle (CCGT) configuration, in Tema, 16 miles east of Accra. The plant will be capable of being fuelled by liquefied petroleum gas or natural gas or diesel.

The scope includes extensive infrastructure works for LPG transportation from the close Tema refinery and the Tema port and LPG storage facilities of 13.600cu m.

Panagiotis Gardelinos, general manager of METKA, business unit of MYTILINEOS S.A, said, "We are delighted to have worked with Endeavor to realise the first stage of the 400MW multi-fuel combined cycle Bridge Power project in Ghana and to implement an innovative structure of supplier credits to enable full construction of the project while the sponsors finalise arrangements for permanent financing.

"This is the third project in Ghana for METKA, the EPC Business Unit of MYTILINEOS and demonstrates our continued commitment to deliver to all citizens a future with energy autonomy, always based on the latest technological developments and international best practice.

"We are proud that we are able to provide sustainable energy solutions worldwide and especially in sub-Saharan Africa where the needs are so great." ■


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FG WILSON: MORE POWER IN A SMALLER PACKAGE

FG Wilson has launched new, more fuel-efficient generator set models powered by Perkins 2806 engines, P780-1 and P850-1 at 50 Hz and P813-1, P895-1 and P938-1 at 60 Hz.

All models offer significant cost savings on fuel compared with those using the existing engine and their smaller footprint size creates potential savings on shipping, transportation and installation costs.

Suitable for a wide range of applications, the new models feature sound attenuated enclosures with galvanised steel as standard. Open models are capable of operating in up to 50°C ambient temperatures and models with enclosures in up to 40°C. All offer a choice of single and dual wall bunded fuel tanks.

Now on sale through the worldwide FG Wilson dealer network, the new models are available to order from FG Wilson manufacturing facilities in the UK and in China.

FG Wilson's generator sets are powered by Perkins 2806 engines, P780-1 and P850-1 at 50 Hz.

Image Credit: FG Wilson

HIMOINSA SOUTHERN AFRICA: HELPING MINES TO OPERATE SAFELY AND EFFICIENTLY

HIMOINSA Southern Africa specialises in providing power solutions covering all aspects of the mining industry across Southen Africa.

The commercial and technical flexibility of HIMOINSA Southern Africa's product offerings, including rental/outright purchase/BOOT and lease purchase options, combined with the quality of units, which are vertically manufactured to guarantee reliability and efficiency to the highest European ISO 9001 and EC Mark compliancy standards, ensures that mines are able to operate compliantly, safely and efficiently, from the earliest stages. From a one unit, rapid black start, emergency standby power back-up, to a fully managed, continuous operating, multi megawatt synchronised fleet.

The industrial range of generators for mines have anti-vibration supports, soundproofing and external connection points, with easy maintenance access for all serviceable fluids and consumables, all focused around safety for the maintenance technicians.

Sibanye Stillwater – Beatrix and Driefontein mines

A 5MW and a 4MW at 6.6kV have been installed for emergency back-up power for mine shaft ventilation, pumps and winders. It is a fully synchronised rapid black start diesel power package, which has been supplied, installed, commissioned, with ongoing maintenance by the company's technical team.

HIMOINSA 1,270kVA.

Image Credit: HIMOINSA Southern Africa

Navigating trends in African energy

Damon Thompson, commercial director for EnergyNet, organisers of the Africa Energy Forum (aef), speaks to Dimitri Papefstratiou, partner of DLA Piper, about the major trends in the energy sector.

Damon Thompson: What changes are happening in the energy sector in Africa?

Dimitri Papefstratiou: In the last few years, there has been enormous change in the energy landscape. Fundamentally, it used to be the case, that you had every year, two or three major thermal projects reaching financial close, at least on the power side. You had a continuous base load of activity in the oil and gas space. Renewables were, of course, being developed as transactions reached financial close, but there were fewer and further between. That trend has really reversed.

Now we're seeing a relative contraction of the bigger deals in the power space, the thermal deals in particular, not necessarily because there is any reticence in terms of fuel type or technology, but you might say that that is certainly true for coal.

For other thermal technologies, there continues to be a real trend pushing them forward. In fact, we closed a first phase financing for the Bridge Power LPG Project in Ghana, which is a 200MW deal, multi-fuel sourced. That was quite a success.

DT: What's driven that change?

DP: I think it's been a number of factors. Firstly, you've had challenges and contractions across a number of the major economies in Africa.

If you see difficulties in South Africa, Nigeria, Kenya, and in some of the other major developed economies, particularly in northern Africa, for example, Egypt, you would expect to see that play out across the board. We now tend to see one, maybe two big deals at maximum.

Image Credit: EnergyNet

Dimitri Papefstratiou, partner of DLA Piper, talks to Damon Thompson, commercial director for EnergyNet.

DT: Big deals being 350, 400 megawatts plus?

DP: Absolutely, closing every year. Oil and gas has been affected, of course, because of the turbulence in terms of oil price, but, also, I think that space has been inevitably impacted by some of the questions that are being asked in terms of climate change and institutional funding. You will have seen recently that the Norwegian sovereign wealth fund has been recalibrating its own criteria for investing in oil and gas companies and projects.

I think that's the change that we see played out across the industry. Probably, the biggest change has been in the volume of renewable energy transactions that are being generated and closed in relatively rapid timelines.

DT: Don't you think that South Africa has been the catalyst?

DP: I think so, but also, technological change has been a major factor. It used to be the case, seven or eight years ago, that the majority view was that it was only possible to finance renewable energy projects with some form of state subsidy.

Now we've reached a moment in the technological landscape where, in fact, older, existing coal fire generation may be more expensive to fire than new solar installations. The fundamental change in that economic pattern has driven the development.

DT: Do you think that this resistance to fossil fuels on a global scale has had on a knock-on impact in South Africa? I know Standard Bank has pulled out of funding a couple of major coal projects in South Africa. Is that then having an effect on the fact that there are a lot more renewables projects in the pipeline?

DP: That is certainly one view. Largely, that is correct. Certainly, of course, as you know better than I do, most of the projects that are financed in Africa on a project financing basis, involve large components of ring-fence DFI financing one way or another.

Of course, the DFI community is extremely sensitive, rightly so, to environmental concerns. that has been one of the main factors in driving a great reduction in the number of new coal fire generation coming online.

DT: Just for people who don't know what DFI is...

DP: That's a Development Finance Institution.

DT: Are they government-funded?

DP: They are typically publicly or multilaterally funded institutions. They're very, very active in the African energy space, as you would expect institutions like the IFD umbrella in France and, in particular, Proparco which is very active. In Germany, you have the KfW group and its member, DEG, which is very active. Of course, we should not forget CDC and others.

DT: I'd quite like to move on to DLA Piper now, on the role of a law firm within that power project value chain that we have. What role first of all, does a law firm play in developing those power projects? Then, why has DLA experienced some success over those years?

DP: Sure. What lawyers tend to do is not just focus on contractual details. I think there is a misconception that we encounter in the industry where legal participants and legal advisors in the transaction are thought of as being part of the execution and implementation phase of a project. Of course, we do do that. That is very much part of our bread and butter. But really the role that we tend to play as experienced practitioners in what is now a global landscape, is being able to come in probably quite early on and assist with a number of strategic and market insights that

will help our clients pick out those issues which might impact visibility or timeline.

DT: Bankability, I guess?

DP: Absolutely. Bankability is one part of that visibility spectrum. It's really identifying the blocks or the issues that investors will look at and go, 'Hang on. There's a real issue here. We need to address it'.

DT: You don't just bundle the documentation, then?

DP: No, no, we don't. Of course, most project finance deals are quite complex transactions which involve groups, spectrums of contracts working across different players.

In effect, project finance transaction is a number of different deals bundled into one. There's a government-facing deal. There is a contractor-facing deal in terms of EPC, which is the engineering procurement construction part, and ONM, which is operation and maintenance. There is a financing component to the transaction. There will be a planning licensing component as part of the development scale.

Our role is bundling all of that together and working out the best way of delivering the deal within that spectrum which satisfies our clients' requirements. That is what we do.

Power lines in Ghana.

Image Credit: Adobe Stock

DT: I'm going to make you imagine that I'm a trainee lawyer looking at joining your team in Africa. How would you sell that to me? What are the major points about enjoying working in the African energy sector?

DP: The major element which drives all of us in the industry is the impact that we have on the daily lives of people who live in the countries we work in. It's hard for us perhaps to envisage in this surrounding, but the reality for most people working and living their lives in sub-Saharan Africa, is a life where power supply is constrained, or expensive, and in many cases is not available at all. These are highly intelligent, capable, skilled people in many cases. Not being able to utilise the tools that are part of modern daily existence is a real drawback in terms of developing the local economy, and in terms of reaching their individual potential. Making that change, that concrete change in one person's life is worth it.

DT: Would you say that local content has been a major factor in the majority of projects that you've worked on?

DP: Yes, because most major transactions of this kind will inevitably have a strong local partner participating in it. There is, of course, local involvement in local economic growth.

There is inevitably a part of capacity building in terms of local actors interacting with government and offtakers, often parastatal organisations. Often these are skilled practitioners, so there isn't any need to teach anyone anything. ■

MITIGATING LIQUIDITY RISKS WITH INNOVATIVE REGIONAL LIQUID SUPPORT FACILITY

As sub-Saharan African countries seek to attract investors in the energy sector, one of the challenges to making Power Purchase Agreements (PPAs) bankable has been lack of effective risk mitigation solutions to the liquidity risk of off-takers – mainly national utilities. This is because most of the financiers perceive the utilities to be poor credit risks, leading to a less than 5 per cent conversion rate in the sector. With increased overcapacity particularly in East Africa, and strain on off-takers' and host countries' balance sheets, it has become increasingly difficult to obtain any form of offtaker payment guarantee.

ATI partners with KfW

In a bid to address this challenge, the African Trade Insurance Agency (ATI), a multilateral financial institution, has partnered with the German development bank, KfW, in setting up the Regional Liquidity Support Facility (RLSF). RLSF will see renewable energy projects of up to 50MW (and exceptionally up to 100MW) have access to a stand-by letter of credit backed by 100 per cent collateral in the form of cash and on-demand guarantees. The facility, managed by ATI with all projects reviewed and due diligence carried out by the ATI underwriting team, will cover up to six months' worth of the Independent Power Producer's (IPP) invoices.

Burundi and Malawi will benefit from solar PV projects, in part, thanks to new RLSF.

Image Credit: Adobe Stock

RLSF, which will benefit from ATI's Preferred Creditor Status, is being rolled out in ATI member countries that have signed onto the RLSF Memorandum of Understanding. To date, these countries include Benin, Burundi, Madagascar, Malawi, Uganda and Zambia.

The first projects likely to benefit include solar PV projects in Burundi and Malawi that are nearing financial close as well as the three successful bidders under the GET FiT Zambia solar PV tender program. In Benin and Madagascar, RLSF will accompany new government initiatives in 2019 and beyond to increase their electricity generating capacity and the role of renewables in the energy mix.

Diversifying Uganda's energy mix

Uganda presents a unique case as it is on track to be one of the first countries in the region to have overcapacity in the power sector with a current generation capacity of around 1,179MW, outstripping peak demand of 656MW. RLSF will play a role in encouraging a greater diversification of Uganda's energy mix and allowing smaller projects (possibly at lower tariffs) to replace more costly projects within the grid over time.

Other countries likely to benefit from RLSF in the near future are Ethiopia and Ghana. Based on the existing deal pipeline and eligible projects that have shown an interest in RSLF cover, the facility will provide cover for renewable energy projects that will add more than 200MW to the grid across the six existing eligible countries, supporting more than 10 projects with an average installed capacity of under 20MW by 2020.

For more information, visit www.ati-aca.org

Africa Development Bank approves US$70mn loan for Ebonyi State road

The African Development Bank Group (AfDB) has approved a US$70mn loan to construct a road in Nigeria's southeastern Ebonyi State.

The bank will provide US$40mn, while its co-financier, the Africa Growing Together Fund (AGTF), will contribute US$30mn.

The Islamic Development Bank is also providing Nigeria a loan of US$80mn, while the Ebonyi State Government will provide US$17.6mn, for a total project cost of US$167.6mn.


Image Credit: Adobe Stock

The road project in Ebonyi State will aid the development of special agro-industrial zones.

The bank group's funding will cover the rehabilitation and asphalting of a 51km stretch between Nwezenvi and N'Doko, and part of the corridor between N'Doko and Ezzamgbo spanning 38.91km. It is due to be completed in five years.

The project will aid Ebonyi's aspirations to develop special agro-industrial zones dedicated to processing of subsistence crops. It will improve road safety and accessibility of farming communities and small-scale industrial areas. Some 1,400 jobs will be created during the construction phase.

Once completed, the road network, which will cover a total 177.81km, is expected to serve also as an international link between the State of Ebonyi and Nigeria's eastern neighbour, Cameroon, in addition to connecting Ebonyi to Benue and Enugu.

In line with its High 5s priorities, the project attests to the AfDB's commitment to improve the quality of life of Africans by improving accessibility and road safety in its member countries.

The bank began financing transport projects in Nigeria in 1972 and has since provided the equivalent of US$630mn in financing the sector, including a US$69.9mn facility through the private sector.

DOW ANNOUNCES ALKOXYLATION CAPACITY

Dow has announced plans to expand its alkoxylation capacity at its existing facility in Spain, which will directly benefit Europe, Middle East and Africa. This low capital intensity, high return, incremental investment builds on the previously announced alkoxylation capacity expansion on the US Gulf Coast, to support growing demand and advance Dow's leading positions in attractive consumer, industrial, and infrastructure markets growing above GDP.

"New Dow's more market-oriented structure enables deeper collaboration with customers and faster response to market opportunities and capacity constraints," said Ester Baiget, business president of Dow Industrial solutions. "This new capacity optimises our existing asset infrastructure to enable growth at our customers. It is a true testament to our dedication and passion for seeking solutions that will benefit our customers, our markets and the communities in which we live and work."

BUILDING CONFERENCE TO TAKE PLACE IN ETHIOPIA

The sixth edition of the Building and Civil engineering Works (BCW) and Infrastructure Conference will be held in Addis Ababa, on 10-11 October. The conference aims to explore how to develop public and private partnerships, promote infrastructure development in a more adapted and dynamic way, as well as position Africa as a destination of choice for investors.

Achieving African states' aspirations for growth, development and transformation relies on the effective implementation of innovative policies, ensuring their continental and global integration.

The BCW and Infrastructure Conference will see approximately more than 300 delegates from across the continent.

It is being spearheaded by Kaizene International, a Abidjan-based firm, organisers of the Annual Conference on Infrastructure and Public works.

"Women in Africa need to become more representative in most spheres, including in infrastructure sectors. They need to become more involved in the decision-making and planning of infrastructure projects and programmes," said Kaizene's founder, Lynda Aphing-Kouassi, who is well known to be particularly passionate about the contribution of women and youth to the growth and development of the continent.

Other aims of the conference include intensifying the production of companies and the expansion of investment actions.

According to the African Development Bank, the continent's industrial backwardness is mainly due to the lack of infrastructure. For Africa, facing the challenges of globalisation requires an increased investment in its infrastructure to meet the UN Sustainable Development Goals (SDG) goal.

Kaizene International advises public and private companies to improve their customer services through training programmes.

BRIEFS

DCG and TAZARA sign agreement

The Dar es Salaam Corridor Group (DCG) and the Tanzania-Zambia Railway Authority (TAZARA) have agreed to develop a dry port at the terminal end of TAZARA in New Kapiri Mposhi, Zambia.


Image Credit: Adobe Stock

The Dar es Salaam Group has agreed to develop a port in Zambia.

It will be built on a Build-Lease-Transfer (BLT) public-private-partnership model.

"This is one sure way of guaranteeing additional freight traffic that will naturally accrue from the business generated by the dry port's operations," said the authority's MD Eng. Tandeo Ching'andu.

Eskom revamps Koeburg plant

Troubled Eskom is overhauling its 1,860MW Koeberg facility – the continent's only nuclear plant, according to Bloomberg.


Image Credit: Adobe Stock

Africa's only nuclear plant will be having a revamp.

Eskom told reporters, "only a relatively small number of large components require replacement" and would be "timed so they coincide with routine unit shutdowns for refueling and maintenance."

This comes amid construction delays at two of its new coal-fired stations; Thabametsi and Khanyisa in Limpopo and Mpumalanga.

Construction to begin on Jasikan-Dodo Pepesu eastern corridor road

Construction works on the 54km Jasikan to Dodo Pepesu road stretch on the Eastern Corridor Road is set to begin July 2019.

The project had been earmarked under the phase one of the US$2bn government of Ghana-Sinohydro master project agreement for the construction of the road.

President of Ghana Nana Addo Dankwa Akufo-Addo announced this on 14 May. He assured the residents of Oti region they would receive their fair share of development projects.

"We are going to make sure that there is an even spread of infrastructural facilities in the region. Every part of Oti will have their fair share of infrastructural development," he said.

The President, en route to Nkwanta, stopped by Ntruboman Senior High School in Brewaniase, where he presented a school bus and pickup vehicle to the school, in fulfilment of a pledge he had made to them.

President Akufo-Addo also cut the sod for the construction of the 12km Kpassa to Mama Akura Road. He further cut the sod for the construction of a classroom and dormitory block at Nkwanta Senior High School.

In July 2018, the parliament approved the Master Project Support Agreement (MPSA) between Ghana and Sinohydro Corporation Limited for construction of priority infrastructure projects. The project is expected to ensure operational efficiency of Ghana's road transport sector which includes moving persons, goods and services within the country and to the neighbouring countries.

Road and infrastructure projects, such as the Jasikan-Dodo Pepesu road stretch, aim to boost Ghana's socio-economic development.

Image Credit: RightSaidFredo/Pixabay

Kwaku Kwartebg, deputy minister of finance, further commented that Sinohydro agreed for the arrangements for payments of 85 per cent of the construction cost. The remaining 15 per cent would be provided by the government.

Dr Mark Assibey-Yeboah, chairman of the committee on finance, noted that the government of Ghana implemented important road and infrastructure projects such as hospitals, bridges, interchanges, affordable housing and fishing landing sites, aiming to boost the country's socio-economic significance in the region.

Building roads of the future

An overview of major road projects in the pipeline across Africa. Nonalynka Nongrum reports.

The new oil and gas discoveries across the continent are putting the continent back in the international limelight. However, the massive infrastructure deficits are acting as a deterrent to its development by preventing investment and economic diversification.

Big Four auditing firm KPMG estimated the transport costs to be 50 to 175 per cent higher in Africa than in many parts of the world due to Africa's poor infrastructure.

The gaps in infrastructure such as rail, roads and ports have also restricted cross-border trade. With Africa's GDP estimated to reach US$2.6trn by 2020, filling the infra gap is of utmost importance. The continent is encouraging investment to connect its cities and solve poor networks through a slew of initiatives.

With a total of 391 roads and railway projects in the pipeline worth US$467bn, the main focus has currently been on repairing bad roads and laying new ones.

With the introduction of the African Continental Free Trade Area (AfCFTA), there has been a surge in economic activity, with investments in roads, railways and other infrastructure projects aimed at boosting trade between the countries.

Here is a look at some of Africa's upcoming major road projects:

Côte d'Ivoire

As part of the US$6.4bn infrastructure improvement plan, Côte d'Ivoire is renewing most of its road network and easing congestion in its largest city, Abidjan.

Contractor Alstom SA and Bouygues SA will oversee the construction of a US$1.6bn commuter train network in Abidjan, and the city will have two additional bridges and at least four interchanges.


Image Credit: SMEC

Compaction of the Mbinga-Mbamba road in Tanzania.

The government also awarded a contract to China State Construction Engineering Corp for the fourth Abidjan bridge spanning the lagoon.

The government is extending the four-lane highway in the interior and building a wider road to the eastern border with Ghana.

Amede Koffi Kouakou, minister of economic infrastructure, said last year, "We want to be an emerging country, but to achieve that we will need high-quality infrastructure to support the economy."

The majority of roads deteriorated after the nation's four year civil war that ended in 2007.

"We have 4,500 km of roads that are often older than 18 years. There was almost no maintenance during the crisis – we have a lot of work to do," the minister added.

Ghana

Ghana has two essential initiatives in the pipeline, the Tema Motorway Grade Separation project and also the reconstruction of road network linkages.

The US$55.6mn motorway, funded by the Japanese government through the Japan International Corporation (JICA), extending from Lagos through Lomé, Accra, and Abidjan to Dakar, will serve as the junction to the sub-region and will be part of the improvement of Ghanaian International Road Corridors project.

Phase one of the Grade Separation project began in February 2018, and includes a 2.1km three-lane dual carriageway with 730m underpass on the national route N1. It is expected to be completed in 28 months.

Phase two of the project involves the construction of a flyover on the Akosombo-Tema harbour road. The project will conduct detailed design improvements for the rehabilitation of National Trunk Road N8 in the Central Region.

Ethiopia

The US$465mn Modjo-Hawassa highway project is underway and is expected to see completion within three years as scheduled.

The 202km highway phased in four projects – Modjo-Meki, Meki-Batu, Batu-Arsi Negele and Arsi Negele-Hawassa – aims to expedite import-export through port Mombasa linking major towns, districts and agricultural as well as industrial zones.

The subprojects are financed by different development partners. The Modjo to Meki is financed by African Development Bank (AfDB), Meki to Ziway is by Korean Bank, Ziway to Arsi Negele is by World Bank, while Arsi Negelle to Hawassa is by Chinese Exim Bank. The project has created jobs for more than 6,000 youth.

> "We have 4,500km of roads that are often older than 18 years"
>
> AMEDE KOFFI KOUAKOU, MINISTER OF ECONOMIC INFRASTRUCTURE

Tanzania

Recent oil and gas discovery in Tanzania has kick-started the development of the US$900bn Mtwara Development Project – a major infrastructure project involving southern Tanzania, Northern Mozambique, Eastern Malawi and Eastern Zambia.

The project aims to develop a transport corridor that will provide these regions with access to the port of Mtwara. The government is building a dry port in the western Kigoma region of the country and will be connected by a standard 2,500km gauge railway to the Port of Dar es Salaam. The project includes building the 136km Mangaka-Tunduru road section and the 804km Mtwara-Mbamaba Bay road.

Most recently, the Tanzania President Dr John Joseph Magufuli kicked off the upgrading of the 67km Mbinga-Mbamba Bay Road by laying the foundation stone in a ceremony on 7 April.

SMEC, a global consulting engineering company with offices across Africa, is providing construction supervision on the project. It is part of the Mtwara Development Corridor Road Project.

A company spokesman said,

"Upon completion, this road will support economic growth by facilitating movement of people and agricultural products from neighbouring areas to market centres in the region, as well as enabling interstate trade between Tanzania and its neighbouring countries Zambia, Malawi and Mozambique." The project is due for completion in January 2021.

Nigeria

Nigeria plans to build a 177.81 km road network that will also serve as an international link between the State of Ebonyi and the eastern neighbour of Nigeria, Cameroon, in addition to connecting Ebonyi to Benue and Enugu.

AfDB is funding a US$70mn loan that will cover the rehabilitation and asphalting of a 51 km stretch between Nwezenvi and N'Doko and part of the 38.91 km corridor between N'Doko and Ezzamgbo. It is expected to be completed in five years.

The Islamic Development Bank is also providing Nigeria with a loan of US$80mn, while the Ebonyi State Government will provide US$17.60mn, for a total project cost of US$167.60mn.

The project will assist the aspiration of the agricultural state of Ebonyi to develop special agro-industrial zones dedicated to the processing of subsistence crops. It will improve road safety and accessibility for farming communities and small-scale industrial areas. During the construction phase, some 1,400 jobs will be created. ■

WIRTGEN W 380 CRI: WORLD'S HIGHEST-PERFORMANCE COLD RECYCLER

The global road network is showing visible signs of aging in many places due to the rapid increase in heavy-duty transport. In order to ensure that the road infrastructure remains functional over the long term, roads are requiring structural rehabilitation. Wirtgen has developed the high-performance W 380 CRi old recycler to meet these requirements.

The challenge: Completing structural road rehabilitation more quickly

Road rehabilitation projects all have to meet the same requirements, regardless of where they are being carried out. They must be cost-effective, eco-friendly, and above all, finished quickly, because time is of the essence. Patchwork repairs are neither sustainable nor do they address the root cause.

The solution: Wirtgen Cold Recycling Technology

The cold recycling process, which at a minimum recycles the surface and base course material, is already popular today, and demand for this solution will continue to grow in the future. In the in-place cold recycling process, for example, the asphalt surface is removed either in full or in layers, (depending on the level of damage), by a recycling train operating across the entire width of the pavement in a single pass, mixed with binding agents on site, and then paved again.

W 380 CRi cold recycler.

Image Credit: Wirtgen

W 380 CRi sets the pace of the recycling process

At the heart of this recycling train are tracked cold recyclers such as the new W 380 CRi from Wirtgen. With working widths of 3,200mm, 3,500mm and 3,800mm, the recycler mills the road between 100 and 300mm deep in most applications. At the same time, it granulates the material and transforms it into a new, homogeneous material mixture by adding binding agents such as cement, bitumen emulsion. With a mixing capacity of up to 800 t/h, the cold recycler can feed enormous quantities of recycled material to a Vögele paver via its swivel-mounted and height-adjustable discharge conveyor at the rear. This makes it possible to complete long stretches of road in a day. Final compaction is carried out by Hamm tandem and tyre rollers.

Positive mood at bauma 2019

Record bauma attracts more than 620,000 visitors – the biggest yet.

The world's leading trade fair for construction machinery, building material machines, mining machines, construction vehicles and construction equipment welcomed 620,000 visitors from more than 200 countries – the best results in its 65-year history.

The top 10 visitor countries after Germany were Austria, Italy, Switzerland, France, the Netherlands, Russia, Sweden and the Czech Republic, Poland and Great Britain. There was also an increase in overseas visitors with 5,500 attendees hailing from China alone.

Klaus Dittrich, chairman and CEO of Messe Munchen, said he was more than satisfied with the results of bauma 2019.

He said, "For the industry, bauma is by far the world's most important innovation platform and economic engine – something that we clearly saw this year. Particularly, in these times of sweeping technological change that is being triggered by digitalisation, bauma provides the industry with security and confidence. Thanks to the momentum in demand generated by the seven-day event, companies will be able to calmly face economic showdowns. bauma 2019 highlighted the opportunity and tremendous outlook of the industry as a whole."

Exhibitors

Business was booming for many exhibitors. Zeppelin/Caterpillar, for instance, introduced more than 20 world premieres. Masa's managing director described it "as the most successful bauma of times" while Domenic G Ruccolo, CEO of Wirtgen Group rating bauma 2019 as "the most successful in the history of the Wirtgen Group".

Andreas Bohm, a member of the board of directors of Liebherr-International AG, said, "We took orders from all parts of the world and made a whole lot of new contracts." PERI was also taking "many excellent orders home with it," according to Alexander Schworer, managing director for marketing and sales.

Riccardo Magni, the president of Magni Telescopic Handlers, said the success of the trade fair was down to "the experienced and professional visitors and the careful organisation".

Major trends

Exhibitors agreed digitalisation was a megatrend in the construction machinery industry, with sensors and communication interfaces that collect and analyse data becoming standard equipment.

Machines and vehicles are becoming cleaner, quieter and more efficient, with many having electric and hybrid drive systems.

A Komatsu demonstration during bauma.

Image Credit: Komatsu

"Customers' interest in electric drive systems has never been so high as it was this year," said Dr Frank Hiller, chairman of the board of management at DEUTZ AG.

Some forward-thinking companies received the bauma Innovation Award 2019 at a ceremony on the evening before the trade fair opened. These were Herrenknecht, which won the prize in the machine category with its E-Power Pipe. It had developed a process for environmentally-friendly laying of underground cables. This protects the landscape from major changes and thus enables greater acceptance by the population when it comes to laying power lines.

Liebherr-Hydraulik Bagger was awarded the Innovation Award in the design category. It integrates standard tablets into the control environment of a construction machine and implements the requirements of operators using a Graphics Unit Interface. Other award winners were MOBA Mobile Automation and Max Bögl. ■

DOOSAN: FIRST TO USE 5G FOR WORLDWIDE TELEOPERATION

One of the highlights of the bauma 2019 exhibition in Munich was Doosan's teleoperation demonstration. It is the first manufacturer to use 5G technology for worldwide teleoperation of construction machines.

Teleoperation means operating construction equipment from a remote station. On the stand there was an operator's booth where visitors could experience operating a Doosan DX380LC-5 40 tonne crawler excavator more than 8,500km away in Incheon in South Korea. It has been developed with LG U+, the South Korean telecommunications and data services company.

Special features include:

Doosan 5G teleoperation.

Image Credit: Doosan

- A low-latency video transmission module with fast video transfer (with encoding and decoding), important in reducing time delay.
- LG U+ introduced new modules providing low latency image processing to further minimise the time delay. Because the LG U+ platform provides a 5G connection that is 5-10 times faster than current 4G systems, the operator has the same real time control of the remote excavator and with the same accuracy. 3D machine guidance, real time diagnostics and a full gauge display are all available at the teleoperation control booth.
- It can be used for general earthmoving applications and for dangerous applications, such as industrial waste disposal, involving hazardous, toxic or radioactive substances.

MB CRUSHER: NEW GENERATION OF SHAFT SCREENERS

Diego Azzolin, production director at MB Crusher, announced the new generation of shaft screeners, which were launched to the world during bauma 2019.

The innovative MB-HDS Screening Bucket is available in four models with shafts suitable for the different material selection requirements and, as with all MB Crusher machines, they can be easily installed on excavators, diggers, mini diggers and loaders (from 5 to 35 tonnes) in order to easily access and move around work sites, construction sites, areas containing large pipelines, towns or remote agricultural areas. It reduces noise levels by 40 per cent when processing materials.

He said, "The new MB-HDS series is radically different from all the other systems available on the market. It has been designed to be a real wild card: it can adapt to a range of different working environments and can select different types of materials with unprecedented simplicity and speed, without the need for a specialist or special training.


The MB-HDS Screening Bucket can be adapted to many working conditions.

Image Credit: MB Crusher

"Since 2001, when we patented our first crusher bucket, MB Crusher has evolved while remaining true to its purpose, which is to facilitate the work on site and to make it competitive, self-contained and profitable.

"The new MB-HDS series selects and crushes excavation and demolition materials, asphalt, coal, organic materials, wood, bark and light plastics. Also, it enables products to be re-purposed immediately. It is possible to transform one material into another effortlessly any time you need to: this is the most important and useful innovation of the MB-HDS Screening Bucket. The bucket allows users to easily change the rotating shafts on site in complete safety: just one person can do this in a matter of minutes."

He added, "For us, having developed this new system represents a breakthrough, and for companies, whether they are big or small, it means having a construction site that is always working, and obtaining high-quality materials that can be re-used or sold, saving transport, dismantling and maintenance costs."

JA Delmas expands its product range in West Africa

The Cat dealer plans a complete rollout of the Cat GC range of excavators during this year.

Vincent Colleu, head of Construction and Infrastructures Business Unit, is in charge of equipment sales, including parts, services and rental for JA Delmas. He talks to *African Review* about the Network's plans to expand its product offering in 2019 and beyond.

Last year, the launch of the Cat Next Generation excavator range in Abidjan was a significant move for JA Delmas, as it expands its product offering in West Africa.

Now, the company wants to build on its success this year with a complete rollout of the Cat GC range of excavators up to 45 tons.

320 GC excavator used in Africa.

Tell us more about the strategy of JA Delmas in West Africa in 2019 and 2020.

Vincent Colleu: In terms of product offering, our strategy for 2019 and 2020 is to keep on introducing the Cat expanded range of equipment and to deliver the best, most profitable experience to our customers, wherever they are in West Africa. Our customers can have different expectations depending on their projects, their business models and their applications. For the same size of machine, Caterpillar can offer different models in order to match any customer needs. The demand for the SEM Utility range and Cat GC range have grown significantly over the last three years. In 2019, Caterpillar will launch nine new GC models and the plan is to reach 28 GC models in the Caterpillar range before the end of 2020.

This year, we've also launched our new CSAs (Customer Service Agreements) offering a wide range of support to our customers from the parts kits delivery up to the full maintenance agreement.

Thirdly, embedded technology is a key asset. All our machines are delivered with the Cat product link remote monitoring system, which is standard on our equipment to allow customers to be able to locate and check the status of their entire fleet.

We started rental activities 10 years ago and continue to invest substantially in our rental solutions. There is a big demand from customers for OPEX solutions. Overall, it is important for us to offer a complete solution to our customers based around the equipment, financing packages, technologies and rental opportunities.

How is the JA Delmas Network structured to meet customer expectations and build a long-term relationship?

VC: In addition to our product and service strategy described above, we strongly think making our customers life easier is the best way to improve their experience working with JA Delmas and Caterpillar. That's why we are really pleased to announce the launch of the new JA Delmas customer portal including different tools like parts.cat.com (for on-line parts ordering) or Maestro (our on-line order tracking tool). Finally, the Network keeps investing massively in its infrastructures, workshops and general facilities as well as in people. Our ambition is to inaugurate a JAD Academy by 2020.

Is JA Delmas partnering with any other brands in the future?

VC: Yes, another major part of our strategy is to expand the JA Delmas brand portfolio in addition to the Caterpillar equipment. We are planning to launch a new partnership with key manufacturers. We need to be able to offer all types of construction solutions for a job site.

What was the customer feedback following the Next Gen Hex range launch in Abidjan last November?

VC: This was a key moment when we launched the Next Generation 20-ton size excavators last year. It was a major new product range introduction from Caterpillar for years, so it was very important as a Cat dealer to make sure that we would introduce these new models into the market in the right way. We gave customers a demonstration of the Next Gen Hex range at the construction and infrastructure trade fair in Abidjan. We were able to show our customers all the benefits of the machines in terms of fuel consumption, maintenance and operating costs.

These machines consume up to 25 per cent less fuel than the previous models and are more adapted to the quality of fuel available in Africa. They work at a lower cost and reduce maintenance costs by up to 15 per cent as we have reduced the number of filters and parts to be changed.

The last key feature is the Cat Connect Technology embedded in the equipment, which boosts efficiency by up to 45 per cent. We have standard solutions for operations as well as 2D and 3D options for increased productivity when operating the machines. The customer feedback was really good in terms of reliability and productivity of the machines so we were really happy. Our sales in this range have increased since the event.

We're now introducing in West Africa the new NGH models up to the 45 tons and looking forward to delivering a great experience to our customers with this new range of excavators!

In addition to the Next Gen Hex, we're really pleased to have presented to our customers at bauma our new Cat soil compactors range with the CS11 GC and CS12 GC. These models are the perfect match for the road construction and maintenance projects in Africa and will be rolled out to our African representatives throughout the rest of the year.

Do you have any other significant developments to share with our readers?

VC: Brand new facilities will be inaugurated in the Dakar region in September. It is a €10 million investment and will be one of our biggest sites in West Africa to better serve our customers. ■

JA Delmas serves three main industries in 11 West African countries: mining, construction and infrastructures to energy manufacturing and services. It has been present for more than 165 years and a Cat dealer for 87 years.

SINOBOOM: FIRST BAUMA

Susan Xu, general manager of SINOBOOM, which was founded in 2008 and based at Changsha – China's capital for construction and heavy machinery in Hunan Province – spoke to *African Review* about the company's first time exhibiting at bauma in Munich.

The company showcased its lithium-powered battery and electric drive machines, such as the four-metre Self-Propelled Electric Scissor Lift, eager to penetrate the European market.

"We are about to launch these in the Middle East as well, but our plan is to expand globally," Xu explained.

GTBZ32J - a 32m Self-Propelled Telescopic Boom Lift at work in Nigeria

Image Credit: SINOBOOM

SINOBOOM's Mobile Elevating Work Platforms are already present in Africa, Middle East, Asia, Europe and South America.
Its lithium-battery machines have free maintenance and double the productivity than machinery run by traditional lead-acid batteries, reducing reduces labour and workforce costs by 30 per cent.

The machines' hydraulic systems make them more powerful and flexible for the operator to drive. Another main feature is the machine's monitor screens.

"We have big screens in our large articulated boom and telescopic boom lifts, making it easy for operators to use and maintain the machinery," Xu added. "Our RT systems also help rental companies to manage their devices and report errors to our management system, which is integrated with our factory offices in Hunan Province."

Image Credit: RisCura

Bridging the gap in infrastructure

Gerald Gondo, business development executive, RisCura, speaks to *African Review* on why investors would benefit from a performance index for infrastructure investments.

Gerald Gondo.

Never before has the need for infrastructure felt so immediate and acute. This became apparent to me as I travelled to Nairobi, Lagos, Lusaka and Gaborone during the first three months of this year.

A commonality I saw across all these African cities – the yellow metal equipment either excavating, tilling, scooping or pouring inputs – could result in an improved outcome for Africa's infrastructure. According to the World Bank, closing Africa's infrastructure quantity and quality gap has the potential to increase GDP per capita by as much as 2.6 per cent per annum.

Historically, governments have borne the responsibility for infrastructure development as infrastructure is typically considered a "public good". However, in most African states, governments are struggling to keep up with the level of development required.

To combat the continent's infrastructure deficit, alternative sources of funding are needed, and institutional investors are increasingly seen as natural funding partners given their long-dated liabilities that seek inflation-linked assets.

But, not all infrastructure assets offer the virtues of inflation hedging and it is important for investors to understand the categories of infrastructure assets, as well as the life-stages of their development, as these result in different cashflow profiles. There are two main types of infrastructure investment – greenfield and brownfield.

Greenfield infrastructure investment refers to investments that create new infrastructure. For an investor, some inherent risks of these projects include construction risk, performance risk and off-taker risk. The creation of the asset primarily involves funding the project, with the risk of the project not reaching a stage of being commercialised. At this stage of development, the infrastructure asset would not manifest any inflation-hedging features.

Brownfield infrastructure investment refers to investments in existing and ready to operate infrastructure assets. These assets can generate revenues. Given that the infrastructure now exists and is in use, the risks of investing into this project are substantially less than in a greenfield project where the future cash generation is uncertain.

Brownfield infrastructure investments are also often scalable; by enhancing the facilities, greater output can be produced and therefore greater cashflows. These features allow for the cashflows emanating from brownfield infrastructure investments to be modelled to escalate or be linked to inflation and the cashflows can be used to match against long-dated liabilities because of the long-dated nature of the operating capacity of most infrastructure assets.

With an understanding of the fundamental merits of the asset class, it is important to appreciate how institutional investors in Africa would traditionally approach the asset class. Prudential investment requirements might preclude them from taking up exposure to a single asset (e.g. one toll road) and they could invest in a diversified portfolio of infrastructure assets. This can be achieved by investing in a fund, where the fund is able to give investors diversified exposure to the asset class. However, it is important to appreciate that most infrastructure investments would be classified as unlisted investments.

Most institutional investors are relatively risk averse and may not have investment mandates allowing for investing in unlisted instruments. Thus, for long-term savings to be channelled towards African infrastructure assets, the investment mandates would need to be revised to accommodate investments in unlisted instruments and infrastructure assets.

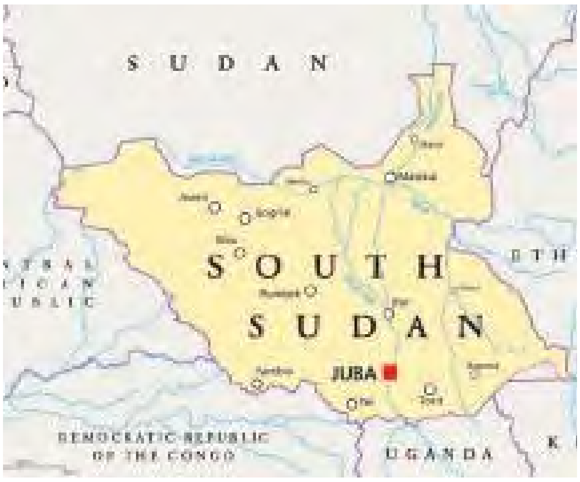
In addition to revised mandates, institutional investors would benefit from a performance index for infrastructure investments in Africa. This would improve their ability to evaluate the available investment opportunities, monitor the performance of infrastructure investments and make better informed decisions on asset allocation.

RisCura has partnered with Africa Investor to launch Africa's first infrastructure performance benchmark. The first results are expected in mid-2019 and will provide much needed insight into investment in this sector, which should in turn facilitate increased investment into African infrastructure projects. In time, this should contribute towards closing Africa's infrastructure gap and help boost economies across the continent. ■

Mineral-rich resources are up for grabs in South Sudan

With as many as 11 states (out of the 32) having mineral-rich deposits, the newest country in the world map is looking to attract foreign direct investment to develop its mining sector that will eventually improve its GDP.

On 17 April, at the South Sudan Investment Roadshow in Dubai, Deng Deng Nhial, South Sudan Ambassador to the UAE, addressed a huge delegation of businessmen and media at The Address Boulevard Hotel about the favourable business environment that the country can offer to investors that include rich natural resources, pro-business leadership and regulations (including duty exemptions and concessions for imports), labour pool with native English skills and the strategic location in East Africa.



South Sudan is offering many incentives with regards to taxes and the production as well as concessions on machinery import.

Speaking to African Review, Gabriel Thokuj Deng, South Sudan's Minister of Mining, was optimistic about the interest of investors already present in the country while also stating that the sector needs FDI to boost its resources and related output.

Formerly under the Ministry of Petroleum, the Mining Ministry came into existence two and a half years ago. Revealing that no mining operations have commenced yet in the country, the minister reiterated that South Sudan is endowed with 16 mineral deposits – gold, iron ore, copper, diamond, bauxite and cement.

"The deposits have been verified by external parties from the UK, Germany and Belgium. We are looking at geo-mapping now to quantify the resources. This will make giving out concessions easier."

When asked the benefits to the investors in the mining sector, the minister mapped out the profit sharing plans, he said, "The investors produce minerals. After deducing operational costs, 20 per cent will go to the government, five per cent to the areas of mining and its population, and 75 per cent of the profit will go to the investor. We also encourage the investors to export 50 per cent of their production while the remaining should be sold to our Reserve Bank. This will help us have reserve gold and reinvest the local money, thereby boosting our GDP."

However, South Sudan is not giving away all its resources to foreign companies. It is also saving some of the best for its local population.

Deng added, "Our people are our major resources and we need to look after them. The Ministry of Mines has a special programme to support local and artisanal miners who will have the rights to acquire small-scale mining concessions. They also have the right to work with outside investors. We have signed MOUs with Angola and Zimbabwe to train our people in the craft of mining."

With the government pushing for private partnerships and incentives, South Sudan is rapidly developing content for local and international investors, along with aiming to put attractive regulatory frameworks in place – the country is looking to build its economy.

LIBERIA SIGNS MOU WITH NIRON METALS

The government of Liberia and Niron Metals were pleased to jointly announce the signing of a Memorandum of Understanding, regarding the passage through Liberia of iron ore from the Zogota iron ore deposit in the Guinea.

The MOU relates to the use of existing rail and port infrastructure in Liberia.

The signing of the MOU follows the joint vision of economic cooperation, expressed by the leaders of the republics of Guinea and Liberia, H.E. President Alpha Condé and H.E. President George Weah, at a meeting held in Dakar on the 2 April 2019.

The government of Guinea has already given authorisation for Niron to export material from Zogota, complying with the Mining Code of the Republic of Guinea 2013.

The chairman of the Liberian National Investment Commission, Molewuleh Gray said, "This agreement opens a new chapter and supports the development of a world-class mining and logistics project for the benefit of the people of the Mano River Union. The government will now initiate discussions with the railway and port concessionaire, relating to third-party access rights. Thereafter, we anticipate accelerated tripartite discussions to commence."

Sir Mick Davis, chairman of Niron said, "This MOU is an important milestone in our plans to develop the Zogota project. We intend to complete our feasibility study within six months and continue to work with relevant stakeholders to bring Zogota rapidly into production for the benefit of all."

The MOU signatories from Liberia were Hon Samuel A. Wlue, minister from the Ministry of Transport; Hon Gesler E. Murray, minister from the Ministry of Mines & Energy; Hon Molewuleh B. Gray, chairman of the National Investment Commission; and Hon Samuel D. Tweah, minister from the Ministry of Finance and Development Planning.

BRIEFS

Image Credit: Adobe Stock

Billions of gold is being illegally taken out of African countries.

Gold smuggled out of Africa

Around US$15.1bn worth of gold was smuggled out of Africa in 2016 to the United Arab Emirates, according to Reuters.

Analysts found the majority of the gold exported had not been recorded by African states, indicating no taxes had been paid to the gold producing countries. In their report, mining firms said UAE gold imports from Africa came from informal sources rather than themselves. Countries such as Ghana are clamping down on illegal mining.

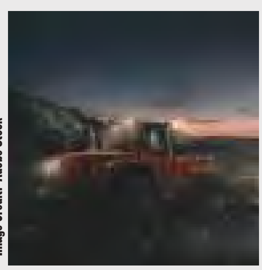


Image Credit: Adobe Stock

Thor Explorations has completed an independent economic assessment for a project at Segilola.

Thor finishes feasibility study

Thor Explorations has announced positive results for its Independent Open Pit Definitive Feasibility Study at its 100 per cent owned Segilola Gold Project in Nigeria.

Thor also completed an Independent Preliminary Economic Assessment for an underground project at Segilola.

The DFS Project comprises an open pit mine and will include the construction of a 625,000 tonnes per annum processing plant.

MB crushing equipment plays a vital role in Djibouti project

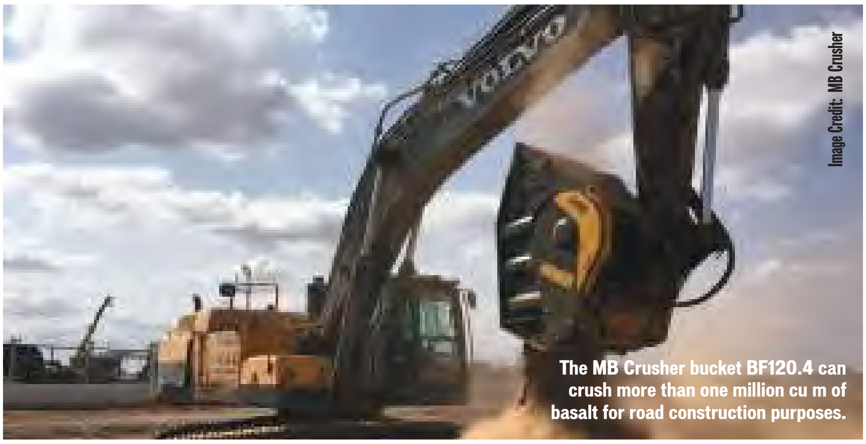


Image Credit: MB Crusher

The MB Crusher bucket BF120.4 can crush more than one million cu m of basalt for road construction purposes.

MB Crusher technology is being used in the development of the US$3.5bn Djibouti International Free Trade Zone.

Djibouti is located at the junction of the three rifts – the rifts of East Africa, the Gulf of Aden and the Red Sea. It plays a crucial juncture role for import and export, representing a major gateway connection.

Yangkai, the Chinese general manager responsible for the Djibouti International Free Trade Zone (DIFTZ) project, was impressed by MB Crushers' power simply by watching a video on the MB Crusher YouTube channel.

The quality and quantity of daily recycled material obtained by the MB Crusher BF120.4 was one of the main aspects the company took into consideration when they decided to buy it.

The MB Crusher Bucket BF120.4, mounted on a Volvo EC3800L Excavator, can crush more than one million cubic metres of basalt for road construction purposes.

The BF120.4 crusher bucket, suitable for operating machines exceeding 30 tonnes, has been designed to meet specific crushing requirements in quarries, landfills and for all aggregate recycling operations. It is a versatile and powerful machine that has established a strong presence in the crushing sector in large-scale urban and road construction sites.

MB Crusher stated that the DIFTZ will transform the region's trade and provide a strategic basis for global businesses to access the rapidly growing African market.

Construction of DIFTZ began a week after the completion of the Addis Ababa-Djibouti Railway – a new 752km track connecting the capital of Ethiopia with the Port of Djibouti.

Within the belt and road initiative, the DIFTZ initiative is expected to create 200,000 new jobs and reinforced Djibouti's role as the strategic link between global maritime trade routes.

ANOTHER QUALITY DIAMOND FOR FIRESTONE

Firestone Diamonds has recovered a 72-carat yellow diamond, a 22 carat makeable white diamond and an 11 carat fancy light-pink diamond, all of which will go out for tender in early May.

This comes after a 70-carat white diamond, which was sold in March, was found at its Liqhobong Diamond Mine. A number of other high value stones, including a 46 carat white diamond, were also sold for the quarter ending March 2019 (Q3 of the company's 2019 financial year). The company also reported the average value was US$80 per carat, with signs of recovery in prices realised for the smaller, lower value goods.

Paul Bosma, CEO of Firestone Diamonds, said, "We spent most of the third quarter mining in the lower grade northern part of the pit and it was pleasing to see an increase in average diamond value which resulted in improved revenue for the quarter. Besides continued strong demand for our special stones it was also encouraging to see a modest increase in pricing for the smaller, lower value goods at the March sale.

"During the final quarter of the year, mining will return to the higher grade, southern part of the pit. Waste stripping is accelerating according to plan and we achieved our highest ever monthly tonnes moved in March.

"The rainfall increased in March and we received very good rains during April which has replenished our reservoirs, the extent to which should be sufficient to see us through the coming dry season."

Supply chain excellence at Weir Minerals branch

As Weir Minerals Africa's hub for central and east Africa, the newly upgraded Kitwe facility in Zambia is offering customers world class supply chain efficiency.

The branch in Kitwe, Zambia, officially opened in early 2018 and boasts a state-of-the-art logistics and supply chain management systems to match those at Weir Mineral's main distribution hub in Alrode near Johannesburg.

"Our Kitwe branch now has a 100 per cent location-controlled warehouse that runs off our enterprise resource planning (ERP) system with Wi-Fi-enabled scanners in place. This has resulted in the achievement of inventory accuracy rates in the high 90s," said Luhann Holtzhausen, Weir Minerals Africa supply chain director. "The technology and technical capacity in this facility enables us to pick and bin items in real time. This will match any other system that customers may have seen globally and is also a benchmark within Zambia."

The new warehouse uses ERP alongside Wi-Fi enabled scanners for a high inventory accuracy rate.

Image Credit: Weir Minerals

The new warehouse is all under one roof, with high visibility through natural and artificial lighting, where every product is clearly labelled with bin location and barcodes for easy tracking. Shelving of up to three metres high keeps all items neatly stacked, easy to identify and quick to retrieve.

"The right goods in the right quantity in the right place means that when a customer asks for an item, we know that we have it and can find it without delays," he said.

Holtzhausen emphasised the importance of the ERP system's ability to track trends in customer usage in a systematic and methodical manner, to avoid any stock-outs on mine sites. Particularly at remote mines that take time to reach, lack of timeous access to spare parts and equipment can be costly in terms of operational downtime. ■

NEWMONT AND GOLDCORP COMBINE TO CREATE WORLD'S LEADING GOLD COMPANY

Ghana's leading gold producer, Newmont Ghana, has welcomed the successful acquisition of Goldcorp – creating one of the world's leading gold companies.

The stock-for-stock transaction valued at US$10bn closed on 18 April. Newmont Goldcorp now looks forward to a safe and orderly integration.

"Newmont Goldcorp features an unmatched portfolio of world-class assets, prospects and talent. This includes long-life operations and profitable expansions and exploration opportunities in some of the world's most favorable mining jurisdictions including Ghana, the Americas and Australia," said Alwyn Pretorius, regional senior vice president, Africa Operations. "The depth, quality and scale of our global business will allow us to generate sustainable, long-term value for all of our stakeholders for decades to come."

"We've met our goal to become the world's leading gold business, and we'll maintain that position by executing our winning strategy," said Gary J. Goldberg, chief executive officer. "That strategy focuses on constantly improving safety and efficiency at our current operations while we continue to invest in expansions and exploration to fuel next generation production. An equally important part of that strategy is to meet stakeholders' expectations by continuing to lead the sector in value creation and sustainability performance."

Ahafo mine in Ghana, owned by Newmont Goldcorp.

Image Credit: Newmont Goldcorp Ghana

Tom Palmer, president and chief operating officer, added, "Our proven operating model and shared values set the stage for a successful integration process. Getting this process right is fundamental to realising the full potential of the Newmont Goldcorp combination.

Ultimately, our goal is to leverage a more prolific portfolio and an even richer talent pool to generate superior value over the course of decades," he continued.

Newmont Goldcorp Ghana said it will continue to advance its purpose to create value and improve the lives of its host communities and the broader Ghanaian economy through sustainable and responsible mining.

"Our values of safety, integrity, sustainability, inclusion and responsibility will continue to guide how we deliver superior operational execution, consistent project delivery, and leadership in safety an sustainability," Pretorius added.

Image Credit: Flickr/TheEITI

Copper processing plant at Tenke Funkurume Mining site in Katanga Province.

DRC remains good mining investment destination

More than 3,500 mining experts are expected to attend DRC Mining Week in Lubumbashi from 19-21 June.

"The DRC has the potential to become the world's largest copper producer through the consistent application of clear and rational mining policy. This would be a game changer for the economy, placing the DRC in a position to transform into a middle-income country by 2050."

This is according to Peter von Klemperer, the head of mining and metals at the Standard Bank Group, and the exclusive Diamond Plus sponsor at the DRC Mining Week, which returns to Lubumbashi from 19-21 June this year.

According to the Standard Bank executive, "The DRC is just too important a jurisdiction from a resource volume and grade quality perspective for any serious player in the global mining sector to ignore. Standard Bank remains excited about the opportunities and prospects offered by this important mining investment destination and key global resources supplier."

More than 3,500 international mining experts and local stakeholders from more than 50 countries are expected to attend the exhibition and conference, which is celebrating 15 years of gathering the mining community in the country. Five country pavilions, from France, Germany, South Africa, the UK and Zimbabwe, are part of the exhibition.

Important platform

Von Klemperer said, "Standard Bank supports a large number of resources clients in the mining sector in the DRC, and DRC Mining Week provides us with an important platform to engage with clients and major stakeholders in the DRC's resources sector. Standard Bank has been involved in the DRC for more than 20 years, funding operations and managing banking for a range of clients, from established developed-world players to newer, Chinese clients."

He continues, "Standard Bank has developed a broad client ecosystem in the DRC, including both mining and resources players as well as the wider services, supplier and support industries associated with the country's diverse and rich resource endowment. Beyond Standard Bank's developed resources sector expertise, the bank's presence and capability in the country plays a critical role in supporting all our clients' effects, their day-to-day banking and transaction needs on the ground in the DRC. Combined with Standard Bank's global presence and capability, this is especially significant for large foreign investors as Standard Bank is also equipped to manage their daily transaction flow in the DRC from anywhere in the world."

> "DRC is just too important a jurisdiction from a resource volume and grade quality perspective for any serious player to ignore"
>
> **PETER VON KLEMPERER, HEAD OF MINING AND METALS, STANDARD BANK GROUP**

He added that as the exclusive Diamond Plus sponsor of the 15-year anniversary of DRC Mining Week, Standard Bank's message at the event in June will be that "from an investment funding perspective Standard Bank combines global capital reach and world-leading structuring expertise with a developed African balance sheet leveraged by a strong local presence, deep experience and insight, and developed capability within the DRC. The unique universal banking ecosystem that Standard Bank has developed on the ground in the DRC also positions Standard Bank's Transactional Products and Services and Global Markets teams to support client's operational business inside the country. This dual global and local capability unites global financial access with on-the-ground execution in a capital-importing sector dependant for earnings upon efficient local production and global export." ■

DRY-TYPE TREND AS TRAFO POWER SOLUTIONS GEARS UP FOR GROWTH

Africa continues to follow the global trend in taking up dry-type transformer technology, owed largely to its enhanced safety levels and lower maintenance requirements.

According to David Claassen, managing director of local dry-type transformer specialist Trafo Power Solutions, said the growth of this market segment continues to extend the capacity of these units, which are now available in outputs up to 25MVA.

"Africa has also been an enthusiastic market for the trend towards modular installations in applications like mining, water treatment and power generation. The safer, oil-free design of dry-type transformers allows them to be readily placed in modular substations, in close proximity to other equipment and personnel," said Claassen.

In a partnership that will further boost the accessibility of dry-type transformer solutions across Africa, Claassen said that Trafo Power Solutions has now formalised its close collaboration with leading Italy-based manufacturer TMC Transformers.

"TMC is one of two leading designers and manufacturers of dry-type transformers," he said. "After working with them for the past couple of years, we have signed an exclusive engineering partnership agreement to supply and service sub-Saharan Africa."

Claassen emphasised the close alignment between the solution-focused approaches of the two companies. "We work together at all stages of each project from application engineering through to design, manufacture and customer support," added Claassen.

Image Credit: Trafo Power Solutions

TMC Transformers operates a world class manufacturing facility in Italy.

TMC Transformers business development manager Roberto Deri highlighted that the European company does not only manufacture standard products, but is driven by customers' specific needs and project applications.

"This is the reason we are highly selective in our partnerships, as those companies with whom we work, such as Trafo Power Solutions, must have the engineering and design expertise to work closely with us on a technical level," said Deri. "In this way, we fully leverage the capacity of our state-of-the-art design and manufacturing facility."

The 25,000 sq m facility is situated in Busto Arsizio near the Italian/Swiss border and produces on average 16 complete transformer units a day. Deri noted that TMC's owners have more than three decades of experience in this field, having built up their previous transformer business into a market leader worth €200 million before it was sold to a leading global OEM.

Advertiser's Index

'GAME-CHANGER' TAILINGS SOLUTION FOR MINING SECTOR TO BE RELEASED

Combining filtered mine tailings with waste rock to form a GeoWaste is a breakthrough solution from FLSmidth that lowers water usage, rehabilitation costs and tailings footprints.

According to FLSmidth regional product line manager (Dewatering) Leonard Neluvhola, the Ecotails solution is nearing the end of a lengthy testing process by one of the world's leading gold producers.

"The success of its application to date confirms that Ecotails will be a game-changer for the mining sector," said Neluvhola. "Not only can mines improve their environmental performance by applying this system, they will see bottom line benefits too."

The Ecotails solution involves dewatering and filtering tailings to a point where moisture content is just 10 per cent to 25 per cent.

The FLSmidth EcoTails tailings solution lowers water usage and rehabilitation costs.

"Up to 90 per cent of the water in tailings can therefore be reused in the plant," he said. "This is a vast improvement on pumping highly diluted slurry to a conventional tailings dam, where the water is lost to evaporation."

The drier tailings are then mixed with the mine's waste rock, after it has been sized and screened to be transportable by conveyor. The resulting GeoWaste can be placed by a stacking system, as it is much more stable than wet tailings and can be stacked higher on a smaller footprint. This helps to address the serious concern mines have about the large footprints consumed by their tailings dams and waste rock dumps.

In addition to its greater stability, GeoWaste is more conducive to vegetation growth. It is an ideal medium for concurrent environmental rehabilitation. The concurrent approach is becoming more popular, as it can mitigate the costs and risks of mine closure. Wet tailings risk land contamination through leaching.

"With our Ecotails experience and complete system offering, FLSmidth can provide a complete materials handling solution," Neluvhola said.

South African mine deploys Passport 360 solution at four major sites

Kumba Iron Ore, one of the largest opencast mines in South Africa, has rolled-out Passport 360 at four of its sites to manage compliance and streamline health and safety requirements.

With more than 8,332 employees and a yearly output of 1.5 million tons, Kumba Iron Ore also deals with about 600 sub-contractors. Passport 360 was called upon to roll-out a cloud-based system to manage compliance at all operations in real-time, director and co-founder Siobahn Whitehead explained.

Such is the extent of Kumba Iron Ore's operations that it requires proactive monitoring in terms of compliance, combined with readily-accessible information in the event of any incident or Department of Mineral Resources (DMR) investigations. "Standing time equates to a loss of production and revenue, and so compliance management has to be proactive," Whitehead stressed.

This was achieved by introducing Passport 360's prequalification system, which now allows small, medium- and micro-sized enterprises (SMMEs) to be onboarded efficiently. Prior to the cloud-based system, Kumba Iron Ore relied on a paper-based system. This resulted in lengthy delays, as well as decreased compliance visibility.

"The solution from Passport 360 has now allowed Kumba Iron Ore to streamline its contractor onboarding times, as well as cut costs," Whitehead emphasised. Passport 360 allows project owners to set compliance requirements and standards against multiple projects. This avoids the issue of inconsistency across sites, which often results in confusion, unnecessary travel time, duplications, cost inflation, and added risk.

Passport 360 allows contractors to access back-end information with negligible security risk.

CHRYSO SOLUTION SEALS THE DEAL

Developed to assist coal mines to seal their ventilation walls and air-crossings, the CHRYSO Vent Block Sealer can, in fact, seal any porous substrate quickly and cost-effectively, said its new business manager, Frans Bakselerowicz.

With its continuous product development of value-added solutions, CHRYSO responded to the coal mining industry's need to address ventilation wall leakage, he explained. The styrene acrylic copolymer sealer efficiently addresses the challenge of hollow blocks and joints in the walls.

"The conventional use of a bitumen emulsion paint-on application product had proved to be very labour-intensive and costly," said Bakselerowicz. "By contrast, the CHRYSO Vent Block Sealer is an easy spray-on product, using a knapsack pump which does not need any compressed air to spray. This allows its application even in back areas of a mine, where there are no electrical and compressed air services available."

The ventilation walls in a mine are usually made of concrete hollow blocks, clay bricks and corrugated iron sheets. However, he emphasised that any porous substrate can be sealed, as it can bridge gaps of up to 1 mm in magnitude.

Any larger crack or hole can be repaired with a.b.e. paintable flashing tape and then sprayed over. In high leakage areas, a second coat can be applied if required.

"Among the advantages of CHRYSO Vent Block Sealer is that it is easy to use, and does not require specialist skills," he said. "As a non-flammable product it is ideal for use in coal mines and other potentially hazardous areas."

Will renewables expand Ghana's economy?

Ghana is turning to renewables as a way to expand its electricity capacity and diversify the energy mix, with the private sector flagged to take the lead in a major project roll-out.

On February 13, the Energy Commission, a statutory agency charged with regulating and managing the development of Ghana's energy resources, lodged its Renewable Energy Master Plan (REMP) with the Ministry of Energy (MoE), setting out the blueprint for the development of alternative power production through to 2030.

Under the plan, due to come into force this year, Ghana aims to increase installed renewable capacity – which, under the classification, excludes hydropower projects greater than 100MW – from 2015 levels of 42.5MW to 1,364MW by 2030, of which 1,095MW will be linked to the national grid.

At present, the country has total installed capacity of 4,132MW, according to the MoE, made up of thermal power (61 per cent), hydro (38 per cent) and solar (less than one per cent).

However, given that unpredictable rainfall and water supplies can affect hydropower generation, the REMP places a particular focus on solar energy. The MW peak (MWp), which measures the maximum possible solar power generated under ideal conditions, is expected to rise from 22.5MWp to 447.5MWp over the 12-year period.

The roll-out of capacity will create 220,000 new jobs, according to the commission's forecasts, in the renewables segment and the broader economy, as well as cut carbon emissions by 11mn tonnes.

To achieve these goals, the REMP foresees US$5.6bn in total investment, representing an annualised spend of US$460mn, of which 80 per cent is expected to come from the private sector.

To encourage private sector input, the plan lays out a series of government incentives. These include substantial tax reductions; exemptions on import duties and value-added tax through to 2025 on materials, components, machinery and equipment that cannot be sourced domestically; and import duty exemptions on plant and plant parts for electricity generation from renewables.

Tax exemptions on imports will gradually be phased out, however, as domestic renewable energy technology improves and is able to better meet the manufacturing and service needs of power providers.

Off-grid growth to power remote communities

Rising demand and the growing need to support social and economic development in remote communities is already driving renewable energy expansion and generating business opportunities in the alternative power sector.

The government is running a pilot programme to provide off-grid solutions in isolated communities, with 55 areas to benefit from having renewable generation capacity installed under a US$230mn scheme.

While Ghana has the second-highest electrification rate in sub-Saharan Africa, at 84 per cent, behind only South Africa, millions living in remote communities do not have access to electricity, and 33 per cent of rural households are not connected to the national power grid.

The high cost of linking these communities to the main national grid has been the leading factor in extending off-grid services to these regions, mostly located in and around the Lake Volta basin.

Such communities, many of which rely on fishing and agriculture as their main forms of income, would benefit economically from reliable access to electricity, with the opportunity for refrigeration allowing for their produce to be preserved fresh and shipped to markets beyond the region.

The initial roll-out of off-grid networks forms part of a far bigger programme envisioned under the REMP; 1,000 communities are to be linked to standalone renewable sources by 2030.

A smaller-scale solution for isolated communities undertaken by the MoE has been the distribution of solar-powered lanterns, which can also function as charging units for mobile phones.

Off-grid capacity is also set to be expanded under a new partnership between domestic renewable energy technology provider Strategic Power Solutions (SPS) and AEG International of the US.

Under a project launched at the end of March and supported by the US Trade and Development Agency, 28 health centres and 310 schools across six Catholic dioceses will be linked to solar power sources.The solar panels to be deployed at these sites will be assembled at SPS' manufacturing facility, while the batteries and other equipment required will be imported from the US.

While such projects have the direct benefit of improving access to reliable energy sources, they also help encourage the local renewables sector to expand capacity, with SPS moving to increase its annual production capabilities from 32 MWp to 165 MWp in the short- to medium-term.

Some 120,000 of the solar lanterns, intended to offer an alternative to more costly and polluting kerosene lamps, had been distributed by the ministry as of late March, and one million are to be handed out by 2030.

The increased use of renewable energy sources in rural and remote communities also targets a reduction in the use of wood for cooking, which should help cut fossil fuel consumption, slow deforestation and improve air quality. ■

Source: Oxford Business Group