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# African Review

FEBRUARY 2019

of BUSINESS and TECHNOLOGY

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"The government has put in place all the necessary regulations to support mining"

Hon. Abubakar Bawa Bwari, Minister of State, Ministry of Mines and Steel Development, Nigeria

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# Editor's Note

Welcome to our first edition of 2019. The event of the month is, of course, Investing in African Mining Indaba – the world's largest mining investment conference, happening on 4-7 February in Cape Town. To mark the event, we have put together a series of mining features on Ghana, Nigeria and Botswana, plus an exclusive interview with the Hon. Abubakar Bawa Bwari, Nigeria's Minister of Mines talking about the exciting mining opportunities beyond its vast oil reserves, pages 24-35.

The major power players are featured in our mining pages, showing that diesel gensets are still a vital back-up power supply in Africa's mines, which are often located in remote areas away from the grid, see page 32 and 33.

Some 250 million people across the Sahel region are expected to gain access to electricity thanks to an innovative solar project by the African Development Bank (AfDB). It will enable people to transition away from unsafe and hazardous energy sources, such as kerosene, which carry health risks, page 40.

In construction, we have various articles on cranes, excavators and much more, page 48.

**Samantha Payne, Editor**

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Will flexible workplaces be the future of work? Haussmann Group is introducing a new workplace concept *AfricaWorks* for companies to grow their business on the continent, at a reduced cost compared to the high purchase prices that currently exist on the real estate market in Africa.



## Egypt food exports drive into Africa

Transmar, the leading Egyptian container shipping line spearheaded the export drive of lemons, limes, tangerines, grapefruits and especially oranges using containers from its home port of Adabiya in the Red Sea .

Transmar has a wide range of containers ranging from 20ft through 40ft and high cubes as part of its extensive export operations based in Adabiya. With an increasing demand and more exporters looking for temperature controlled container

shipping, the company is also adding to its extensive reefer fleet over the next few months.

Mohamed El Ahwal, CEO of Transmar, believes the new reefer containers will add capacity and offer exporters even more choice when it comes to temperature controlled distribution.

El Ahwal spoke to existing customers and Egyptian exporters who want to explore newer markets in the Arabian Gulf at a recent food expo show in Cairo.

“This is a very important time for the Egyptian economy which is showing increasing signs of recovery and growth,” he said. “The start of the citrus season is always an important time for the country and we work with citrus growers and exporters to provide reliable, efficient and secure deliveries using our scheduled services from Adabiya into Saudi Arabia through the port of Jeddah along with services into the port of Sudan in East Africa. We are developing specific services for citrus exporters as part of our expansion plans for the region. Transmar has the services, the technology, the right containers and the experience to support Egyptian exporters in this vital area.”



Transmar will be adding to its extensive reefer fleet in the next few months.

Image Credit: Transmar

## FIRST TWO CNG BUSES DELIVERED FOR CTA

Kastour Egypt for Industry & Trading, has delivered the first two K335-CNG-Buses for the Cairo Transportation Authority (CTA) – with hundred and twenty buses due to follow in 2019 and 2020.

To be selected for this city bus tender, Kastour Egypt for Industry & Trading together with the Bus Management of MAN Center Importer NWC Africa decided to build this vehicle on the basis of a MAN A69 CNG chassis. This chassis is powered by a MAN CNG engine which has 12.8 L volume delivering 310hp and 1250 Nm with exhaust norm of EEV.

The passengers safety is being more and more in the focus of African metropolises; the vehicles are equipped with EBS, disc brakes, retarder integrated transmission from ZF model Ecolife. The engine compartment is provided with an automatic fire suppression system. Comfort items such as air suspension, ECAS system – raising/lowering and kneeling on the right side are some of the options included in the vehicles.

Kastour Egypt for Industry & Trading has established their production facility in Cairo. For more than 23 years MAN truck superstructures and bus bodies are being assembled there. Kastour Egypt for Industry & Trading together with MAN Bus Bodybuilder management developed a body for a low entry bus corresponding exactly to the CTA requirements.

The next buses will be delivered in July 2019 and the delivery of the last 60 units is planned for the first quarter of 2020.

“This contract illustrates the cooperation between MAN and its local partners. The chassis A69 CNG matches customer’s requirements and our partners capability, Kastour Egypt for Industry & Trading was able to develop a modern body chassis in a few months,” said Adel Lünz, head of Center Importer NWC Africa.

## SA-TUNISIA BUSINESS COUNCIL TO BOOST TRADE

The Deputy Minister of Trade and Industry, Bulelani Magwanishe has received the assurance of the Tunisian business community that they are keen and committed to the establishment of the joint South Africa-Tunisia Business Council, with the aim of stimulating trade and investment between the two countries.

Magwanishe used the second day of the Outward Trade and Investment Mission to Tunisia organised by the Department of Trade and Industry to visit several Tunisian business associations in Tunis.

During the meetings, Tunisian business associations expressed their desire to work with the South African business chambers and associations to contribute in increasing trade and investment between SA and Tunisia. Magwanishe said the council would be focusing on trade and investment and will facilitate skills transfer, industrialisation and infrastructure development.

“We are amenable to establishing a joint business council as the first priority,” said Abdesalem Loued, a board member of the Tunisian Union of Industry, Trade and Handcrafts. “Our association wants to forge relations with companies in SA through cooperation with the local business associations. We have member companies that have invested in other countries and we are confident that they will be interested in investing in SA as well if we manage to set up the platforms and connections that will enable us to share information on what is available there in SA in terms of investment and trade opportunities.” The president of the Tunis Chamber of Commerce and Industries, Mournir Mouakhar also gave his association’s commitment to mobilise its members work towards increasing his country’s trade and investment with SA.

## ► BRIEFS

### Cairo Metro receives upgrade on 44km on Line 1

The European Investment Bank will support new investment to upgrade the 44km Line 1 of the Cairo Metro. This is one of the busiest metro networks in the world with more than 2.6 million passengers a day, and once complete the upgrade will increase passenger capacity by 40 per cent and improve operational reliability. Improving public transport is crucial to enabling alternatives to car use and cutting carbon emissions.

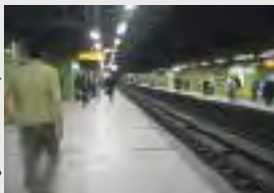


Image Credit: Shellfishy/flickr

The European Investment Bank invests in Line 1 of the Cairo Metro.

### Morocco’s growth remains stable

Morocco’s banking system outlook is looking stable for 2019 as ongoing economic diversification bolsters GDP growth and domestic loan performance stabilises, says Olivier Panis, Vice-President, senior credit officer at Moody’s. Credit growth is expected to remain moderate at four per cent this year as in 2018.



Image Credit: Adobe Stock

Morocco’s growth is expected to remain at four per cent in 2019.

He added, “Banks’ funding and liquidity remains healthy and their capital buffers modest. Political stability will support economic reforms.”

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## USA announces new Africa policy

The USA outlined its Africa strategy by reiterating its commitment to strong partnerships with major countries in Africa, specifically naming Kenya as a target for future US aid and investment. The USA said it would also seek to promote intraregional trade and commercial ties with its African allies, shifting its focus from “indiscriminate aid” to one of trade and investment and positioning itself as a more sustainable alternative to what it termed “predatory” Chinese and Russia interests in Africa.

According to Wildu du Plessis, Head of Africa for Baker McKenzie in Johannesburg, “Africa needs strong partnerships in order to address its development challenges so that its full economic potential can be reached. As such, the USA is already seen as a major player in infrastructure investment in Africa and its renewed Africa policy of sustainable engagement with allies could be seen as strengthening its role in Africa’s development. The USA Africa policy however, might also alienate African countries who could interpret the policy to mean that if they must partner with the USA alone or risk isolation.

Du Plessis says that Africa on the whole still suffers from massive under investment. According to African Development Bank (AfDB), poor infrastructure has cost the continent a cumulative 25 per cent in growth in the last two decades. The World Bank estimates that the continent needs more than US\$90 million per year to begin bridging the infrastructure gap. However, there are many positive developments on the continent. In many African countries, governance has improved, which has accelerated growth and made investment easier. Africa’s GDP is expected to grow to 3.7 per cent in 2019 and countries such as Ethiopia and Ghana, for example, have enjoyed some of the world’s fastest growth in recent years. In addition, a rapidly growing middle-class, improved access to new technology and an increased focus on regional integration in Africa has boosted trade and roused the interest of foreign investors.

“Increased US interest in Africa is also a counter to Chinese largesse in Africa and other emerging markets as it is reportedly concerned about the security implications of China gaining control of strategic assets as a result of unsustainable borrowing by some developing countries,” says Du Plessis.



Image Credit: Adobe Stock

**The USA has reiterated its commitment to strong partnerships with major countries in Africa.**

## AZURI AND UNILEVER LAUNCHES E-VOUCHER SYSTEM

Azuri and Unilever have launched an e-voucher system designed to help off-grid rural consumers in Kenya access consumer goods and services via pay-as-you-go solar.

During the visit to Kenya by UK Prime Minister Theresa May in 2018, Azuri and Unilever announced that they were teaming up to bring solar to millions more off-grid homes across Kenya and, with that, modern goods and services to enhance family life.

As part of the offer, Azuri customers who purchase a Quad solar home lighting system receive an e-voucher for free Sunlight washing powder for every week they top up their pay-as-you-go solar system.

The e-voucher system, powered by telecommunications provider Safaricom, has been developed to ensure the widest coverage across the remotest areas. Customers can redeem the e-vouchers at any participating kiosk or trader. Azuri has been a leading provider of solar home solutions in Kenya since 2012.

## AIR TANZANIA BECOMES AIRBUS A220 OPERATOR

Air Tanzania has become the first African carrier to take delivery of the Airbus A220 aircraft, the newest addition to the Airbus family of commercial aircraft. Air Tanzania (The Wings of the Kilimanjaro) also becomes the latest member of Airbus aircraft operators.

Representatives from the airline and officials from the United Republic of Tanzania Government alongside executives from the A220 programme celebrated the aircraft handover at the A220 Mirabel assembly line.

“The A220 unrivalled passenger comfort combined with its remarkable performance and economics will be an excellent asset to further develop Air Tanzania’s network,” said Tito Kasambala, Acting CEO, Tanzanian Government Flight Agency (TGFA).

The A220 will allow Air Tanzania to further develop its domestic and regional market as well as open new routes to India and the Middle East from its home base Dar es Salaam.

“With the addition of the A220 in our fleet we are confident that we will expand our footprint in the growing African markets and beyond, as we unlock additional routes and regain our position as a key player in the African air transport market,” added Ladislav Matindi, Managing Director & CEO, Air Tanzania Company Limited.

Air Tanzania becomes the fifth airline globally with an A220 family aircraft.

After Europe, Asia and America, we are proud to see the A220 fly now also on the African continent and in Air Tanzania’s livery. With over 240 Airbus aircraft flying in Africa and a large network of flight service offices in the region, we are ready to contribute to the airline’s success,” said Philippe Balducci, CEO of the A220 partnership. The A220 is the only aircraft purpose built for the 100-150 seat market.

## ► BRIEFS

### Rwanda’s top priorities to address hunger



Image Credit: Adobe Stock

Thirty per cent of Rwanda’s region is affected by hunger.

Hunger, gender imbalance and a growing population with youth distancing themselves from agriculture and primary production, were top of the Rwanda National Bank’s list to address said deputy governor, Monique Nsanzabaganwa.

“A third of the East African region is affected by hunger,” she said while the gender pay gap meant that 75 per cent of women were working for no wage. “Women may be falling through the cracks,” the bank governor added.

### Societe Generale confirms stable growth



Image Credit: Societe Generale

Some of the group’s 11,500 staff members support local economies.

Societe Generale confirmed solid growth of its African operations in line with its “Transform to Grow” strategic plan during a trip to Dakar. As part of the launch of its “Grow with Africa” programme, the bank also announced several initiatives in partnership with international, regional and local clients and institutions in order to meet sustainable development needs in Africa. Some 11,500 staff members on the continent support economies, serving 4.1 million customers.

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## Powering health care in sub-Saharan Africa



UNDP/Slingshot Solar panels at the Sipepa Rural Hospital in Bulawayo, Zimbabwe.

Image Credit: UNDP

The governments in sub-Saharan Africa have partnered with the United Nations Development Programme (UNDP) to launch the Solar for Health initiative to install solar systems in rural health centres and clinics where surgeries may be carried out by candlelight and where vaccines and medicines can expire without proper temperature regulation.

The initiative aims to use solar power to refrigerate medicines, maintain health information systems, and create adequate conditions for the delivery of babies while reducing emissions which harm the environment.

“The Government of Zimbabwe desires to have the highest possible level of healthcare and quality of life for its citizens regardless of their geographical location,” explained Clive Marimo, director for Hospital Planning and Infrastructure in the Ministry of Health and Child Care of Zimbabwe. “The rolling-out of the Solar for Health project tallied well with the ministry’s strategic plan of improving primary healthcare. Most primary healthcare facilities located remotely are off grid and the solar project transformed the services of such facilities where basic procedures were not possible due to unavailability of a power source.”

In a report by the UNDP, the installation of solar panels in Zimbabwe is helping to ensure that midwives and nurses can reduce complications during and following pregnancy and childbirth.

Dr Mwale Consity, provincial director for Lusaka, Zambia, added, “The Solar for Health is very important in the supply and management of medical and surgical consumables, most so, the cold chain. Vaccines, which are basically the future of our country, remain potent and viable.”

In Zimbabwe, UNDP has equipped 405 health facilities with solar systems to strengthen national systems for health. It estimated a 100 per cent return on investment within two to five years when health facilities with unreliable energy sources install solar systems.

## SA CONGRATULATES MADAGASCAR’S PRESIDENT

President Cyril Ramaphosa has congratulated Madagascar for running a successful peaceful run-off presidential election which has seen Andry Rajoelina emerging as the president of the country.

President Ramaphosa wished President Elect Rajoelina well in his term as the president of Madagascar. He also praised leaders, Rajoelina and Marc Ravalomanana who were running in the run-off presidential election for working together in ensuring that the interests of the people of Madagascar come first by accepting the run-off results.

The South African government notes with satisfaction a report by the SADC Election Observer Mission comprising of observers from South Africa that the election was “conducted orderly, professionally and within the requirements of the legal framework of the Republic of Madagascar”. President Ramaphosa said this confirms that SADC is committed to democratic processes.

## DIGITALISATION INSPIRES BUSINESS OPPORTUNITY

The Digital Transformation of enterprise and society is changing the way people work and how we function. Siemens is leading the charge in embracing digitalisation to make a positive impact in society. Partnership with Legae Larona Sewing Cooperative, 100 per cent black owned women enterprise, to create South Africa merchandise using a data visualization of Alexandra.

Siemens says the AlexandraSeries is a true reflection of the many possibilities that exist in this new age of digitalization. This project, inspired by the #SiemensFABRIC campaign showcases the impact that data collection, analysis and visualisation can have in catalysing the township economy.

“We embarked on a data visualization project in Alexandra to see what could be learnt about the “DNA” of the township but also how this information could be better understood to improve living conditions for the community, said Keshin Govender, group head of Communications, Siemens Southern and Eastern Africa. After tapping into our digital resources to consolidate this data, we used the visualisation to create layered patterns of the community which were then printed onto South African woven fabric. The result; a vivid visual representation of the community of Alexandra told through its data attributes.”

Siemens CEO for Southern and Eastern Africa, Sabine Dall’Omo says, “Using the data visualisations we were able to see and understand the township and the challenges it faces, but we were also able to identify areas where we could make a tangible and sustainable difference in the Alexandra community. As part of our Enterprise Development programme, we identified Legae Larona Sewing Cooperative, who used this fabric to create great South African products for our employees and members of the South African business community.

## ► BRIEFS

### Nkomazi SEZ to boost industrialisation in Mpumalanga



Image Credit: OECD/Flickr

Dr Rob Davies, the minister of Trade and Industry of South Africa.

Rob Davies, the minister of Trade and Industry of South Africa, said the recent designation of the Nkomazi Special Economic Zone (SEZ) in Mpumalanga will contribute to the economic and industrial development of the Nkomazi region and the province at large.

The Nkomazi SEZ will be developed as an agro-processing hub, supported by logistics and other services. The SEZ programme has attracted 115 private companies with a total value of US\$831mn.

### Zambia firm completes works on railway



Image Credit: Adobe Stock

Works on the Chipata-Mchinji Railway Line in Zambia have been completed.

Rehabilitation works on the Chipata-Mchinji Railway Line in Zambia have been completed, according to a local media report. Zambia Railways Limited made the announcement and said works on the CEAR Railways on the Malawian side between Chipata and the Port of Nacala were expected to be finished afterwards in mid-January. The Chipata-Mchinji Railway Line was shut by rains on 26 December, 2018 on both sides of the Zambia/Malawi border.





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## Ghana president expresses fears over China's involvement in illegal mining in the country

Ghanaian President Nana Akufo-Addo's government has launched an investigation after Chinese nationals were found mining gold illegally, according to media reports.

"Ghana and China have a strong relationship," the president said. "However, we have a big problem in Chinese involvement in illegal mining activity in Ghana...[and] we have decided to do something about it."

He said Chinese living in Ghana were exporting illegally mined gold to the UAE, which could account for "a disparity of US\$5bn between official trade statistics and actual gold exports in 2017", reported Nikkei Asian Review.

The president has previously said it would put his presidency on the line in the fight against illegal miners to safeguard the country's future.

"But it has been said that I should be careful because many of these people voted for me and if I continue this exercise, they would not vote for me," he said.

"We have a duty to protect it for those who would come after us and if our river bodies are drying up, our landscape is being desecrated. We have a responsibility to say no, we can't allow this to go on for our own common survival and that of those to come.

"If we allow that to continue, we are jeopardising our own future."

He continued, "I cannot, and will not, give up on the fight to protect our environment. I entreat the media and all well-intentioned Ghanaians to continue to join the fight to protect our lands and water bodies." He stressed it was unacceptable that Ghana's rivers and forests that "have been with us for centuries" should dry up and be devastated because people had to survive.

Illegal mining in Ghana has also been claimed to be the biggest threat to cocoa production – plummeting to 740,000 tonnes in 2015 from more than a million tonnes in 2011.



The Ghana President has launched an investigation after Chinese nationals were illegally mining in the country.

Image Credit: Adobe Stock

## CONSUMER CONFIDENCE DROPS IN NIGERIA

Nigeria's latest Consumer Confidence Index (CCI) for the third quarter of 2018 has shown a four point decline to 118, while Ghana's CCI for the same quarter has risen five points to 113.

Managing director Bryan Sun of Nielsen Sub Saharan Africa, which carried out the survey of 1,500 respondents blamed slowdown in economic growth, high inflation and current political climate in the lead up to the elections for the drop in consumer confidence in Nigeria. "Consumer wallets are currently very stretched, with consumers struggling to make ends meet," he said.

Nigerian consumers who say now is a good or excellent time to purchase what they need or want has declined by five per cent to 43 per cent in quarter two of 2018. This declining sentiment is reflected in their views on job prospects where 37 per cent viewed them as neither good nor bad.

While Nigeria has shown a slump in confidence, Ghana's CCI figure rose to 113.

He said, "A slight respite in inflation and better performance by the industrial and export sector, plus the government's focus on job creation has led to a slight boost in consumer confidence in Ghana."

But the sentiment around the state of personal finances has taken a slight hit. Ghanaians who think the state of their personal finances would be excellent or good over the next year dropped three points to 76 per cent whereas 18 per cent think that the state of their personal finances is not so good or bad.

"Both Nigeria and Ghana, despite the fluctuation this quarter, fall on the positive side of the consumer confidence spectrum, as reflected by a CCI score of above 100. There's potential for growth in both countries and with the right investment and focus, they still prove to be promising prospects for the continent."

## BURKINA FASO: RESILIENT AMID SECURITY SHOCKS

On December 21, 2018, the Executive Board of the International Monetary Fund completed the first review of Burkina Faso's economic performance under a three-year programme supported by the IMF's Extended Credit Facility (ECF) arrangement. The Burkina Faso economy has shown resilience in the face of security shocks over the last two years. GDP grew by 6.3 per cent in 2017, up from 5.9 per cent in 2016 and is projected to stabilise at 6 per cent in 2018. Activity has been supported by expansionary fiscal policy. Inflation was 2.1 per cent year-on-year at end-December 2017 and has remained at that level in 2018. Public debt eased to 38.4 per cent of GDP in 2017, as the impact of new borrowing was offset by the appreciation of the euro against the dollar and robust GDP growth. The risks to the outlook are tilted to the downside, from the threat of further terrorist attacks, which could weigh on mining and tourism, and social tensions and unrest, which could impact government revenue collection and add pressures on current spending.

## ► BRIEFS

### Equatorial Guinea primed for huge growth



Equatorial Guinea will host multiple events as part of its Year of Energy campaign.

Equatorial Guinea is ready to capitalise on expected new investment and solidify its global standing through its 'Year of Energy' campaign. Equatorial Guinea will host multiple events this year to champion its oil and gas projects and promote intra-African cooperation, including flagship events for the African Petroleum Producers' Organization (APPO). Eleven new oil and gas wells are to be drilled in 2019, with a US\$2.4bn investment.

### Benin selected to develop concurrent compact



Benin is approved by the MCC to develop a concurrent regional compact

The Millennium Challenge Corporation Board of Directors held its quarterly meeting on December 11, 2018 and approved Benin as eligible to develop a concurrent regional compact. It will provide the country to explore potential and new regional investments while Benin implements its current compact. Benin's second MCC compact, which came into force in June, 2017, is dedicated to the electricity sector. The US\$375mn grant is supplemented by US\$28mn from the government.



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## Upcoming Events Calendar 2019

### FEBRUARY

4 - 7

#### INVESTING IN AFRICA MINING INDABA

Cape Town, South Africa  
www.miningindaba.com

19 - 20

#### AFRICA ENERGY INDABA

Johannesburg, South Africa  
www.africaenergyindaba.com

### MARCH

12 - 15

#### PROPAK AFRICA

Johannesburg, South Africa  
www.propakafrica.co.za

20 - 21

#### INTERMODAL AFRICA

Mombasa, Kenya  
10times.com/intermodal-africa-mombasa

26 - 27

#### GLOBAL MONEY TRANSFER SUMMIT

Cape Town, South Africa  
www.gmts-iamtn.com/gmts-cape-town-2019

28

#### TMT FINANCE AFRICA

Cape Town, South Africa  
www.tmtfinance.com/capetown

### APRIL

8 - 14

#### BAUMA

Munich, Germany  
www.bauma.de

16 - 17

#### SECUREX WEST AFRICA 2019

Lagos, Nigeria  
www.securexwestafrica.com

### MAY

14 - 16

#### AFRICAN UTILITY WEEK

Cape Town, South Africa  
www.african-utility-week.com

#### POWER-GEN AFRICA/DISTRIBUTECH

Cape Town, South Africa  
www.powergenafrika.com

### JUNE

11 - 14

#### AFRICA ENERGY FORUM

Lisbon, Portugal  
www.africa-energy-forum.com

11 - 12

#### 2ND ANNUAL FUTURE BANKING EAST AFRICA SUMMIT

Nairobi, Kenya  
www.fleming.events/future-banking-east-africa-summit

## Mining Indaba celebrates 25th edition with LSE opening ceremony

Mark Shashoua, CEO of ITE Group, owners of Mining Indaba, ceremonially opened trading on the London Stock Exchange. The event attended by partners including the World Gold Council, Memery Crystal, ICMM, The World Platinum Investment Council, Brunswick and Thor Exploration celebrated the upcoming 25th edition of the largest mining investment event in the world.

Investing in African Mining Indaba is a fully focused investment conference taking place 4-7 February in Cape Town. It provides high quality content across four days, presenting a platform for deal-making and networking for the entire value chain and the most influential players in African mining.

Alex Grose, managing director of Mining Indaba said, "Investing in African Mining Indaba, is the world's largest mining investment conference, and this year celebrates 25 years of leading investment into African Mining. Investing in Mining Indaba 2019 is being held at a pivotal moment for investing in South Africa. The recent mining charter and regulatory improvements made through President Ramaphosa's investment policies

are providing investors with greater certainty than in recent years.

This ceremony further cements our partnership with the LSE Group, supporting our main aim of helping mining companies access capital."


Mark Shashoua, CEO of ITE Group, added, "I was delighted to be opening the LSE with the Mining Indaba team, which ITE Group recently acquired, and with our industry partners and friends. Our vision is to create the world's leading portfolio of content-driven, must-attend events, delivering an outstanding experience and ROI for our customers. Mining Indaba is a fantastic event that is dedicated to developing the mining industry across the African continent."

Mining Indaba has a proven track record of bringing together more than 6,000 delegates including mining company CEOs, international investors and over 34 government ministers and heads of state. It is globally recognised as the place to meet everybody who's anybody in the African and global mining industry and one of the most important meetings in the world for the sector. Organisers say the 25th edition is expected to be the largest one to date.



Mark Shashoua, CEO of ITE Group, owners of Mining Indaba, ceremonially opened trading on the London Stock Exchange to mark the 25th edition in Cape Town.



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## AFDB APPROVES US\$14.12MN TO SUPPORT NIGERIA'S MEMBERSHIP IN ATI AGENCY



**Nigeria set to join ATI agency following AfDB's US\$14.12mn support facility.**

The African Development Bank (AfDB) Group through its trade finance operations, has approved a US\$14.12mn facility to support Nigeria's membership in the African Trade Insurance Agency (ATI). This is a critical and mandatory step to enable ATI to commence its operations in Nigeria. Nigeria, as Africa's largest economy, joins 14 other African countries that have already signed up to ATI membership. Once membership formalities in ATI are finalised, Nigeria could benefit from gross political and commercial risk insurance cover on total investments and trade amounting to more than US\$5bn by 2020. The catalytic effect of using limited financial resources in this way is undoubtedly massive.

The approved facility complements ongoing and planned interventions geared at building institutional capacity and improving the resilience of the Nigerian economy.

## BBOXX LANDS US\$31MN DEAL WITH AIIM



**Ten million people in Rwanda, Kenya and DRC will have access to power thanks to BBOXX's deal.**

Ten million people in Rwanda, Kenya and the Democratic Republic of Congo will gain energy access following a deal between BBOXX, a next generation utility platform, and Africa Infrastructure Investment Managers (AIIM). AIIM, through its AIIF3 fund, is investing US\$31mn for a minority stake in BBOXX's operations in the three countries. The deal with AIIM will allow BBOXX to install two million solar systems by 2022.

This investment will accelerate the roll-out of

BBOXX's solar systems which combine solar panels and batteries with pioneering technology, available on a pay-as-you-go basis via mobile money.

The funds will be applied across BBOXX's distribution mix, positively impacting a range of customers including households, schools and SMEs across rural, urban and peri-urban regions. It will help in enabling economic growth in these communities by creating new markets through the entry point of electricity.

Mansoor Hamayun, CEO and co-founder of BBOXX, said, "This latest deal with AIIM shows BBOXX's commitment to mobilising greater investment and capital in the off-grid sector, through partnering with major global companies.

## KIBO RENEWS MOU WITH MOZAMBIKAN ELECTRIC UTILITY EDM



**Kibo Energy has renewed its MOU with EDM.**

Kibo Energy has announced that it has renewed and expanded its Memorandum of Understanding with Mozambican state-owned electric utility, Electricidade de Mocambique ("EDM"), to advance the financing, construction and operation of the Benga Independent Power Project in Mozambique.

Energy supply remains a major government priority in the development of the country. Louis Coetzee, CEO of Kibo Mining, said, "We continue to make excellent progress in Mozambique with the development of Benga advancing according to plan. The renewal and expansion of this MOU with EDM is demonstrative of the significant local stakeholder support for the Project and we look forward to 2019 with confidence."

## PRIVATE EQUITY FIRMS AFRICINVEST, CATALYST INVEST IN KENYA'S PRIME BANK

Private equity firms AfricInvest and Catalyst Principal Partners have acquired a minority stake in Prime Bank Limited.

The investment was achieved through AfricInvest Azure, a special purpose vehicle formed by Tunisia's AfricInvest and Kenya's Catalyst Fund II, the parties said in a statement.



**Prime Bank offers corporate and SME banking services through its branch and digital infrastructure.**

The transaction represented another significant investment in East Africa by AfricInvest, following on several previous successful acquisitions in the region through predecessor funds.

The bank has a presence through its affiliates in Malawi, Botswana, Mozambique, Zambia and Zimbabwe as well as operating in the insurance sector through its subsidiary, Tausi Assurance. Skander Oueslati, chief investment officer for AfricInvest, said, "The transaction is reflective of the type of investments AfricInvest pursues, with an emphasis on sustainable growth, regional expansion, innovation, strong management capacity, and clear visibility on stakeholder value creation. We are excited to play a part in this journey and will be fully supportive by leveraging our network and expertise."

## JOHN DEERE POWER SYSTEMS APPOINTS SENIOR VICE PRESIDENT



**Pierre Guyot has become the new senior vice president for John Deere Power Systems.**

Deere & Company has named company executive Pierre Guyot to become senior vice president for John Deere Power Systems following Jean Gilles' planned retirement from the post. Guyot will lead the Power Systems division that produces engines, drivetrain components and electronic components used in John Deere equipment and for OEM applications. He also will oversee operations of the company's electronic solutions business. "Pierre has demonstrated a commitment to disciplined execution and a broad understanding of our business, notably in the areas of supply chain and engines," said Jim Field, president, Worldwide Construction & Forestry Division.



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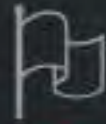
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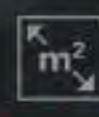
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# Building connections in the tech space

Akosua Annobil, founder of AB2020 and Tech in Ghana, speaks 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 now 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. Last year, she was recognised in the Financial Times top 100 list of most influential Black, Asian Minority Ethnic (BAME) leaders in the UK tech sector.

**Wow, 2018 was a really successful year for you. How did you feel being recognised as one of the top 100 most influential BAME tech leaders in the UK?**

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. Having worked in the media before, I'm am not used to being the subject of stories so I was very humbled and grateful. I like what the list represented, and it made me realise the impact of what we're doing.

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 careful. We therefore like to explore how people from the most remote areas are accessing world-class learning materials. One of our speakers was Richard Appiah Akoto, an ICT teacher at Betenase M/A Junior High who went viral last year after posting a picture of himself drawing a Microsoft Word Window on a blackboard while teaching ICT to his students. He did this because he didn't have the resources to teach them how a computer works. After he posted the picture on Facebook it was shared across other social networks and eventually Microsoft got in touch, and other organisations helped to build computer labs for his community. It was a really positive story which also proved that despite a lack of resource, with the help of digital media you can still make a difference.

**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



Image Credit: AB2020

**Akosua Annobil was recognised by the Financial Times as one of the top 100 most influential Black, Asian Minority Ethnic (BAME) leaders in the UK tech sector.**

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 an really insightful two days and confirmed to me how much work needs to be done to build on the conversations, and support with connecting these stakeholders in between our events.

**What's your plan for 2019?**

The fifth Tech in Ghana will be held in the UK on 10 June as part of London Tech Week, which is Europe's leading technology and startup festival bringing together one 50,000 delegates from across the world – so we're excited to about that. We'll be back in Accra for our sixth event and learning expedition in November. Keep an eye on TechInGhanaConference.com for updates. ■





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# Power draw

Barry Mansfield looks at how Africans can expect to benefit from new energy storage technology.

**E**nergy storage deployments in emerging markets are expected to surge by over 40 percent annually in the coming decade, adding roughly 80 GW of new storage capacity to the estimated 2 GW existing today. Due to advances in the field of energy storage and the growing need for power in Africa, energy storage can be one of the tools to help address Africa's energy poverty. An early player is US start-up Concept, which will start shipping its all-in-one battery systems to Africa in May – beginning with a 50Hz, 220V, three-phase version of its Powerstation 247 Plus.

So far the development of advanced energy storage systems (ESS) has been highly concentrated in select markets, primarily in regions with developed economies. Despite quickly falling costs, ESSs remain expensive and the considerable upfront investment required is difficult to secure without government support or low-cost financing. This type of advanced technology requires a high level of expertise to be developed and operated cost-effectively. Furthermore, the services enabled by ESS systems are often not properly valued or acknowledged within existing energy market regulations.

Even in the face of these obstacles, installations of stationary ESSs are increasing dramatically around the world. That's partly down to the fact that energy markets are presently undergoing extensive reforms to allow ramped up usage of distributed resources. The International Energy Agency (IEA) estimates that by 2020, developing countries must double their electrical power output to satisfy extra demand. It is projected

that by 2035 these nations will represent 80 percent of the total growth in both energy production and consumption.

To meet worldwide goals for emissions reductions, much of this new generation capacity must come from renewable sources. The need to integrate and effectively utilise these (especially in regions with weak grid infrastructure) will necessitate the use of increasingly sophisticated energy storage solutions. Furthermore, emerging economies must bring a stable electricity service to around 1.2 billion people who currently lack access. Experience of recent decades has shown that the traditional, centralised grid cannot affordably provide for underserved populations in an acceptable time-frame.

Distributed and remote power systems have massive potential to provide service around the world, but are subject to a number of barriers. One mooted solution (discussed last year by experts at African Utility Week in Cape Town) is to combine gas and renewable generated energy storage. Solar expert Abraham Cambridge points out that energy storage is immediate; crucially, it is not necessary to wait for years for plant construction. In the event of load-shedding, the stored energy is always available - gas simply cuts off when the system shuts down.

Although the vision of a co-generated energy storage system is grand in theory, a continued reliance on hydrocarbons is described as the “elephant in the room” by Owen Lock, application manager at S&C Electric. While Lock is convinced that energy storage is the answer for Africa, he concludes the solution needs to be put as



Image Credit: Adobe Stock

**Energy storage solutions in emerging markets are expected to soar by more than 40 per cent annually in the coming decade.**

close to the problem as possible. It's a good sign, then, that Eskom has recently taken delivery of a GE Durathon storage battery to accompany its existing lithium-ion phosphate battery at the state-owned utility's test site in Rosherville, Johannesburg.

Eskom has also launched its Distributed Battery Storage Programme, committing to solar-plus-storage and energy storage projects totalling 1,400MWh. It has released an environmental and social management framework study (ESMF) for the programme, published in conjunction with the African Development Bank Group. The group will partially finance the scheme, together with the World Bank. This wide-ranging plan will see storage deployed across all nine provinces of South Africa, in two phases of development and construction.

The first phase will involve the deployment of 800MWh of battery energy storage along distribution sites in Eastern Cape, Northern Cape, Western Cape and Kwa-Zulu Natal at various points. These projects are set for completion by December 2019. The second phase involves 640MWh of battery energy storage deployed (in combination with 60MW of distributed solar PV) in all nine provinces by December 2021. Meanwhile, the ESMF study examines the social, economic and environmental risks, giving recommendations on how to mitigate these.

From a range of technologies including thermal and mechanical energy storage systems, Eskom has decided that electrochemical

batteries should be the “preferred solution to meet strategic requirements”. This covers what the firm has categorised as solid state batteries (lead acid and lithium-ion, with the market currently skewed towards 85 per cent lithium by deployments) and flow batteries such as zinc bromine flow, vanadium redox and sodium-sulphur batteries of the type manufactured by Japan's NGK Insulators.

In other news, a Finnish government initiative (called Energy and Environmental Partnership for Southern and East Africa) awarded international clean energy development company Camco Clean Energy a grant totalling US\$420,000 to establish a hybrid energy storage solution in South Africa. The award announced last March will see Camco fitting its Red T Energy Storage technology, which includes solar PV, at Johannesburg's Thaba Eco Hotel to boost its existing weak grid connection and avoid over-reliance on its back-up diesel generator.

This 180kWh technology system will be used alongside a 100kW solar PV installation and an existing diesel generator, says Camco. The new set-up is expected to save the hotel up to 175MWh of power annually, the same amount of power that would have been generated by back-up gensets or consumed by the main power grid. The project financing was provided by the Finnish group (including the Ministry for Foreign Affairs of Finland), the Austrian Development Agency and the UK Department for International Development. ■

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## ENGIE to fuel first buses with compressed natural gas in Côte d'Ivoire

The Côte d'Ivoire Minister of Transport has launched a groundbreaking initiative to fuel a fleet of buses with natural gas.

Amadou Koné unveiled the fleet of buses commissioned by the Société des Transports Abidjanais (SOTRA) and supplied by IVECO as part of the country's commitment to the Paris climate agreement.

ENGIE and Tractebel collaborated to engineer, supply and install the first ever compressed natural gas (CNG) fuelling station in Abidjan.

The fuelling station is located on SOTRA's premises in Yopougon and will facilitate the operation of the new range of compressed natural gas buses.

When fully commissioned, the gas fuelling station will have a compression capacity of 1360 m<sup>3</sup>/h, and will be split into two units, each equipped with two hoses,



Image Credit: ENGIE

The minister unveiled a fleet of natural gas buses which were supplied by IVECO.

enabling four buses to charge at any one time.

ENGIE and Tractebel have a unique level of expertise and a local presence that was vital to the success of the venture. They

are specialists in delivering infrastructures which provide alternative fuels for green mobility solutions. The Abidjan station is the first stage in the Ivorian government and public

transportation companies plan to increase the number of CNG buses and ensure that the region is working towards fulfilling its commitment to the Paris Agreement. More importantly, it will lead the way for other African countries that are keen to further embrace clean technologies. Countries including Ghana, Togo, Benin and Cameroon are monitoring the success of the initiative with the intention of replicating the project.

As part of the deal between IVECO and the Société des Transports Abidjanais (SOTRA), 50 Crealis buses will run on compressed natural gas in Abidjan. The particle emission levels will be nearly zero, and their Nitrogen Oxide emissions will be reduced by 60 per cent. The buses will serve within Abidjan's wider urban area.

## SOUTH AFRICA SPACE AGENCY EARNS GLOBAL RECOGNITION

The South African National Space Agency (SANSA) has been selected by the International Civil Aviation Organisation (ICAO) as the designated regional provider of space weather information to the entire aviation sector using African airspace

The announcement was made by the Department of Science and Technology in South Africa.

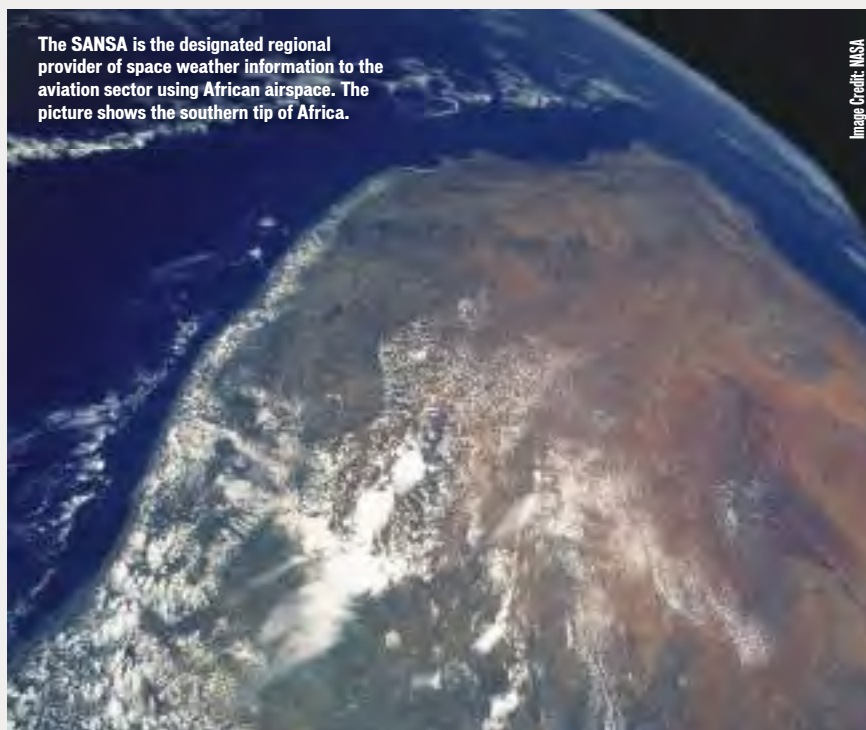
This means that every aircraft flying in the continent's airspace will rely on SANSA for the space weather information it needs to submit as part of its flight plan.

SANSA, an entity of the Department of Science and Technology, underwent an extensive assessment to make it one of two ICAO- designated regional space weather centres, the other being a joint Russia- China centre.

The department said that the ICAO designation of SANSA offers an opportunity to further use the newly renovated space weather centre in Hermanus, Western Cape.

The newly upgraded centre's monitoring of the sun and its activity have provided the country with vital early warnings and forecasts on space weather conditions, and these benefits will now be extended to the international aviation community.

SANSA will partner with one of the ICAO's three global space weather centres, PECASUS, the Pan-European Consortium for



The SANSA is the designated regional provider of space weather information to the aviation sector using African airspace. The picture shows the southern tip of Africa.

Image Credit: NASA

Aviation Space Weather User Services, to provide ICAO with space weather information for the African region.

PECASUS is a consortium of nine European countries, and its partners will provide South Africa with better access to international models and expertise.

This victory comes shortly after the launch of the continent's most advanced nanosatellite so far, the ZACube-2, in December 2018.

The international community has supported South Africa's ICAO designation and has demonstrated confidence in SANSA's ability to provide the services required.

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# Maritime logistics to underpin Africa's growth

Africa's ports, sea freight and marine logistics sector will all play a long-term role in the region's development, especially in an era of heightened environmental concerns.

Image Credit: Adobe Stock

Durban Port is Africa's busiest port and handles around 65 per cent of the country's container cargo.



**A**frica's ports, its sea freight, and maritime logistics chain, are all helping to establish the continent in the global marketplace.

Durban, Africa's busiest port, is a good barometer not only for South Africa, or the local KwaZulu Natal economy – it handles around 65 per cent of the country's container cargo – but for the continent as a whole.

The port handles over 80 million tons of cargo every year, with 58 berths, though its infrastructure is set for a big upgrade in the years ahead to accommodate ever greater volumes.

Other planned investments at Durban include a new cruise terminal to boost tourism by 2020.

South Africa's other big commercial ports, like Saldanha Bay, are planning huge upgrades too.

At Richards Bay, a new project to build a floating dock infrastructure

was signed off at the end of last year.

The development means the port will be able to enter the ship repair market for vessels that call at Richards Bay.

The floating dock also represents Initiative 7 of South Africa's so-called Operation Phakisa, a government-driven programme aimed at unlocking the potential of the nation's Oceans Economy.

As well as big ticket infrastructure projects, this also covers areas such as operations, skills and capacity building as well as market growth,

and suitably underlines the coming together of the marine and maritime industries with ever pressing environmental and sustainability concerns.

## Dormant giant

Away from South Africa, much of the rest of the continent's ports, sea freight and logistics chain has likewise flourished on the back of improved growth over time.

It reflects the fact that Africa relies heavily on its ships and ports to service its intercontinental trade.

This includes not only general cargo and container facilities, but also specialised ports serving the oil and gas industry and other commodities.

Maritime trade is still shaped by the continent's trade concentration and limited diversification.

Accordingly, 40 per cent of goods exported by sea in 2017 comprised of crude oil, while over two-thirds of imports were accounted for by dry cargoes (dry bulks and containerised goods) and close to 20 per cent of imports were made up of petroleum products and gas.

The potential for further expansion in these and other areas is simply huge: Africa represents just 4 per cent of world container port traffic, for instance, compared to 64 per cent for Asia and 16 per cent for Europe.

According to the UN Conference

“By diversifying their economies, Africa can improve its containerised trade and port traffic volumes”

UN CONFERENCE ON TRADE AND DEVELOPMENT

on Trade & Development (UNCTAD) – which refers to Africa as a “dormant giant” – demographic growth and regional integration will further nurture the region’s maritime trade in the years ahead.

But the region will need to plan ahead and think smart to fully capitalise.

“By diversifying their economies and enabling greater integration into regional and global value chains, Africa can improve its containerised trade and port traffic volumes and emerge as an exporter of containerised goods,” UNCTAD said in an October 2018 statement.

For this to happen, however, trade policy and regional integration initiatives may not be enough.

Instead, it calls for more efforts, not only in terms of upgrading infrastructure, but also in modernising and improving overall logistics and productivity.

“Africa’s container ports and hinterland transport networks need to support these efforts by upgrading infrastructure and services, and improving performance, to match international standards. This entails, among other things, enhancing productivity levels: on average, crane productivity is around 20 moves per crane per hour in West Africa, 25 to 30 in South Africa, and 35 to 40 in Asia.”

### Industry activity

Meanwhile, interest in the sector from an industry aware of these shifting market dynamics, remains strong, especially in the major maritime markets of South Africa and in North Africa, notably Egypt and Morocco.

Transmar, Egypt’s only container shipping line, recently strengthened its Middle East and East African routes using the Port of Adabiya, at the top of the Gulf of Suez.

The free zone port – also a key port for palm oil imports into Egypt – is regarded as the jewel in the nation’s logistics crown due to its high levels of service and congestion-free operation.

The company cites a recovery in the Egyptian economy as one of the

reasons behind its decision.

The Port of Adabiya is located on the western shore of the Gulf of Suez, about 10 km south of Suez, with nine berths and the ability to handle both dry and liquid bulk cargo vessels.

Transmar chief executive Mohamed El Ahwal said his company is in the process of increasing its reefer container numbers. “We have seen a real increase in container traffic of all kinds across our supply chain.”

He also highlighted the company’s skills and knowledge of the region and intermodal offerings using not only ships but also trucks and rail services.

“Congestion can cause serious financial and scheduling implications for goods such as fresh fruits and dairy products,” he said. “Using Adibaya as our base reduces these risks and enables Transmar to offer a service that guarantees a smoother and more efficient way to keep the supply chain running. We will be increasing our operations in the region to meet growing demands and using Adabiya means we will continue to offer round-the-clock effective solutions for every Transmar client.”

Away from the major economies, there is also fresh interest in some of Africa’s smaller ports.

In November 2018, Bolloré Logistics opened a new logistics hub in Lastourville, Gabon, highlighting the essential link between sea ports on the coast and facilities inland.

Connected to the railway operated by SETRAG (Société d’Exploitation du Transgabonais), the new logistics platform will store, manage and carry processed wood in containers from production sites in the forest interior to the Owendo container terminal, 557 km away, to the south of Libreville.

The hub will be able to handle 4,500 TEUs (twenty foot equivalent unit) per year during the start-up phase and streamline the timber shipment process for the four main forestry companies in the province of Ogooué-Lolo. ■

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# Ghana's golden future ahead

As one of the major mining centres on the continent, H.E. President Nana Akufo-Addo has been invited as special guest of honour at the 2019 Investing in African Mining Indaba to share the future opportunities of mining in Ghana.

**M**ining in Ghana continues to play a critical role in the country's socio-economic development, with minerals accounting for 37 per cent of total exports.

It remains the second largest gold producer after South Africa and the world's eighth largest. It is also well endowed with iron ore, manganese, bauxite, diamonds and major offshore oil reserves.

Large scale miners and artisan miners are the two main players in the industry, which represents five per cent of the GDP.

The major gold producing companies in Ghana are Gold Fields Ghana, which operates mines at Damang and Tarkwa, AngloGold Ashanti which has two mines, the open-pit Iduapriem Mine, some 70km north of the coastal city of Takoradi, and the Obuasi Gold Mine, which is currently on care and maintenance. Other companies include Goldstone Resources, Central Africa Gold Ghana, Golden Star Resources, and Newmont Ghana Gold Limited.

Asanko Gold has also emerged as a new player in the industry and won the accolade of 'Mining Company of the Year' at the 4th Ghana Mining Industry Awards for its sterling 2017 performance as a producing gold mine. Asanko Gold Mine 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. The Project 5 Million and Project 10 Million are expected to increase production to 450,000 ounces a year.

Speaking at the awards gala, the Governor of the Bank of Ghana (BoG), Dr Ernest Addison stated that Ghana's major export commodities – oil, gold and cocoa – had performed strongly over the last two years. "Ghana has swung from a country that recorded trade deficits to one that is currently recording trade surplus," he said.

## Other mining companies

It is not just gold, the country has rich deposits of bauxite and manganese ore. Ghana Bauxite Company produces bauxite in the Bibiani, Anhwiaso and Bekwai districts.

The government estimates Ghana's total untapped bauxite reserves at US\$460bn and hopes to raise revenue through the rise in price of alumina (refined bauxite).

In an address to the nation on Independence Day on 6 March, 2018, President Nana Akufo-



H.E. President Nana Akufo-Addo will be sharing the future opportunities of mining in Ghana at the 2019 Investing in African Mining Indaba.

Addo who will be attending the 2019 Investing in African Mining Indaba in Cape Town on 4-7 February, said revenue from bauxite was going to fund his government's vision of "A Ghana Beyond Aid". There are plans to establish an Integrated Bauxite/Aluminium Development Authority to finance the exploitation and development of large bauxite deposits and exploit substantial iron ore and manganese deposits, situated in the Western and Northern regions of the country to build an integrated steel industry for the country.

The Ghana Manganese Company (GMC)'s Nsuta-Wassa open pit mine, is believed to be the only significant producer of manganese ore in the country. However, the GMC came under fire last July after failing to involve the government in pricing manganese ore that was being sold to a firm in China, according to media reports. Chief Operations Officer for Ghana Manganese Company, Benjamin Ato Quarshie, denied the claims and assured the government it was complying to directives set out in the contract agreement, including promising to support the government to rehabilitate Tarkwa-Agona-Nkwanta road, damaged by hauling manganese to Takoradi Port.

Great Consolidated Diamond Ghana Limited (GCDGL) has also been marred by controversy after failing to start mining operations at the Akwatia field since it took over government-owned Ghana Consolidated Diamonds Ghana Limited (GCDL) eight years ago. GCDGL was meant to invest US\$100mn in a five-year period and produce one

million carats of diamonds every year within that time as well as create jobs for the community. But the mine has been plagued with funding problems and is still not in operation.

A company spokesman, however, told *African Review*, that it still had a licence to operate the mine despite previous calls to government to have it revoked.

Since it begun operations in 1924, the diamond field has produced more than a 100 million carats of diamonds.

AngloGold Ashanti is expected to start gold production at its Obuasi mine by the third quarter of 2019 after receiving environmental permits in June last year. For years it has battled informal miners, which the president is passionate about removing to safeguard the country's future.

In an earlier statement, Akufo-Addo said, "This is the time for all of us to say we have to do something now to secure our future and I have absolutely no doubt about it that if there is any one right thing to be done in Ghana today, it is a mobilisation to stop the phenomenon known as galamsey. It is the right thing for us to do."

"With the key permitting and regulatory process complete, we will continue to progress the redevelopment of the Obuasi mine as a modern, productive, operation that will benefit a range of major stakeholders for at least two decades," added Srinivasan Venkatakrishnan, CEO of AngloGold Ashanti.

## Oil and gas discoveries

The government is also planning to take advantage of its thriving oil and gas industry. According to Ecobank, the nation aims 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 largely thanks to the Jubilee and Ten fields operated by Tullow and Kosmos, following the discovery of oil 10 years ago.

Other players to enter the Ghanaian market include US's ExxonMobil and Aker, a Norwegian firm, signing major offshore oil and gas exploration and production agreements with the Ghana National Petroleum Corporation (GNPC).

In turn, Ghana's discovery and exploration of oil in commercial quantities has provided opportunities for the banking and financial sector to develop products to support the industry. ■

Image Credit: Presidency of Ghana





**We create value and improve lives through sustainable and responsible mining.**

Workers at the Segilola Gold Project in Osun State. Nigeria's most advanced gold project.

# Nigeria's mining ambitions

Image Credit: Thor Explorations

In an exclusive interview with *African Review*, Hon. Abubakar Bawa Bwari, Minister of State, Ministry of Mines and Steel Development, Nigeria, talks about changing the perception of the country towards becoming a mining destination and the importance of including artisanal miners in the sector going forward.

Nigeria is open for mining. Lessons have been learned from the past in the oil and gas sector, now the time has come to take advantage of the vast downstream and upstream mining opportunities, says Hon Abubakar Bawa Bwari, Minister of State, Ministry of Mines and Steel Development, Nigeria.

But investment in the sector is still desperately needed to meet the government's bold target to increase mining from 0.3 per cent of the country's GDP to seven per cent by 2025.

"We have to pursue this target aggressively in order to achieve it, so there's no going back on achieving diversification," Bwari said.

And even if the oil price continues to rise, he asserts that "we have learned our mistakes" and it will be to "our advantage" to use the money to invest in and provide infrastructure that will support mining and agriculture.

Sitting relaxed and calm, despite a hectic couple of days of press conferences and roundtables with investors in London, the Niger-state born minister warmly welcomes *African Review* before flying back to his beloved country to share with us the ministry's work – that is trying to improve Nigeria's position as a mining

destination and allay any fears over security, corruption and other pressing issues.

"The perception of Nigeria being an oil and gas destination should change," he said. "The government has put in place all the necessary regulations to support mining to make the mining environment friendly. We've improved our infrastructure to encourage mining. Our laws are good and can be compared to any other mining jurisdiction as they are very competitive. The population is there and labour is cheap."

Among the favourable policies implemented by the government is the statutorily guaranteed three-year tax free holiday for new investors in the sector, 100 per cent ownership of mining projects for foreign investors and the removal of import duties on mining equipment brought into the country.

Additionally, the government has launched a roadmap to develop industrial mineral raw materials for local and export markets and to make Nigeria self-sufficient in the construction industry. Advances in geophysical surveying and geo-information sharing has also enabled mining opportunities to become clearer across the country.

Nigeria, in fact, has 44 mineral types with some of the highest grades of minerals anywhere in the world – and mining companies are already taking advantage of the rich resources available.

Australian firm Symbol Mining/Goidal Resources is mining lead zinc ore with a grading of 22 per cent zinc in the north eastern region compared to the global average of six per cent zinc. Similarly, Kogi Iron in the North Central has developed a process route that can produce viable iron ore concentrate from their high phosphorus iron ore deposit for the production of high quality steel. The minister says this proves that similar iron ore sites in the country can be harnessed to produce steel products locally.

Another outstanding discovery was undertaken by Segilola Resources operating Limited/Thor Explorations Limited. The Segilola Gold Project in Osun State is considered Nigeria's most advanced gold project and has established 862,000 ounces grading at 4.3g/t. The company will commence production of gold in the first quarter of 2020.

"Our mining endowment is not in doubt. We identified those minerals where we know we have a relative advantage in gold, tin, iron ore, lead zinc, limestone, barite and coal. We launched a roadmap of all these minerals to address the issue of import substitution. We import a lot of materials into Nigeria and under no circumstance should we be doing this as we have the raw materials. You just have to look at the example of cement, we have a large deposit of limestone and today Nigeria is self-sufficient in cement. We want to do the same thing with fertiliser and use our phosphate to solve our agricultural problem, use

“ The government has put in place all the necessary regulations to support mining ”

HON. ABUBAKAR BAWA BWARI, MINISTER OF STATE, MINISTRY OF MINES AND STEEL DEVELOPMENT, NIGERIA

our talc and marble to provide materials for the pharmaceutical industry and carbonates to produce lime for water treatment. These are the things that we've imported so we decided as a policy to drive these industrial minerals so that we can provide raw material for those industries that want to be set up – we believe the minerals are there.

"We, of course, have gemstones with blue sapphire in the plains of Mambilla Plateau in the north east. When we went to Tanzania and they were showing us with pride their tanzanite, we told them we have better gemstones and showed them the blue sapphire. They were excited and wanted to come to see for themselves."

Last month, the minister announced the construction of the first gold refinery in Nigeria which is being developed by minerals company Kian Smith in Ogun State and is expected to begin production in 2019, with most of its ore sourced from miners in the country.

The minister and his team have been travelling the world persuading companies to invest in the mining opportunities in Nigeria. In November, 2018, they attended a roundtable event at the London Stock Exchange where investors told the minister to his surprise and delight, that they were waiting to invest in the sector.

"I was really excited when I heard that. I wasn't expecting a response like 'we are waiting for you' from investors. We thought we should be the ones saying it. It was the first time that the mining sector in Nigeria was given the opportunity to have a discussion with mining companies at the London Stock Exchange. This is where we believe the money is and where we can get the much-needed attention for the sector. Quite rightly, the issues were of security and perception. Nigeria has always been seen as an oil and gas destination, not a mining one."

He said the ministry had a clearer picture of investor concerns, adding efforts were already being made to address them. In terms of improving security there will be mining police to ensure investors are protected. It was also working to improve Nigeria's position on the Fraser Institute Index, which ranks jurisdiction by investability, (Nigeria is not even on it), and improving its rank on the Transparency International Corruption Index. The country currently ranks 148 out of 180.

He said, "We don't expect to make the same mistakes in the mining sector like we did in the oil and gas industry. So what we've done is to create a law to try to solve those problems, which we had in the past, namely to do with issues of accountability, transparency, and ease of getting a licence as well as creating buy-ins from the communities and local and state governments."

Mineral title processing will be reduced from 45 days to 15 days thanks to the new upgraded cadastral system, which is a legal land recording of real estate property in the country.

"By March, you won't have to come to Abuja, you can be anywhere in the world to apply for a mining licence," he said.

"What we are trying to do is ensure that there is an understanding between the state and federal government. There are a lot of factors to consider approaching landowners. After getting a licence, we are encouraging miners to sit down with landowners and sign a community development agreement to provide jobs to the locals, water and hospitals. Our message is clear: their decisions should not only be economic in nature but that they'll have a social and political impact as well."

### Artisanal mining

He acknowledges the important role of artisanal miners in the industry. They account for 80 per cent of mining activities in the country and are often seen by investors as pathfinders to where high yields of minerals are located.

He said, "We have organised artisanal miners into cooperatives and have registered and assisted them with funds. They have been given a category licence which limits what they can do and the size of land that they are allowed. This gives us advantages to monitor them so that we can collect royalties for government revenue and to ensure best standard practices. We value our artisanal miners and are offering them soft loans at a very low interest rate from the Bank of Industry."

He continued, "We can accommodate everybody – the large-scale companies and

artisanal miners. We try to know as much as possible to make sure that we have control over them while not interrupting the companies that we are trying to attract."

But he stresses the progress in attracting the big players to Nigeria's mining industry has been slow.

"We have been to so many places; Canada, Australia and China and had encouraging responses, but often the level of participation in Nigeria mining doesn't compare to the responses we have – we thought we would have more activities than what we have now, it's been a bit slow," he said.

"Some investors, however, have brought in proposals about what they want to do along the whole value chain. Others want to go into exploration with their money but that they should be given the right of first refusal. There are those investors who just want to start mining either on brownfields or to take over licences from those who are not doing anything or who really don't have the funds to go into mining. There are investors who want to set up gold refineries and buy gold from artisanal or small-scale miners. We also have investors that all they want to do is trade minerals, like tin or lead, zinc etc. So, we have had all these categories of investors who have shown interest. But we still want more and that's why we were at the LSE in November."

The minister's next big visit will be addressing investors at the 2019 Investing at Mining Indaba in Cape Town on 4-7 February.

"We will say to investors Nigeria is now open for mining. Come and see – there is no country like ours." ■

## From planning to politics

- Born 4 November, 1963 in Niger State
- Began work as a planning officer with the Niger State Ministry of Lands, Survey and Town Planning in 1988
- Graduated with a bachelor's degree in Geography in 1986 and a master's in Urban and Regional Planning in 1990 from the Ahmadu Bello University, Zaria
- Elected member of the House of Representatives for Suleja/Gurara/Tafa Federal Constituency in 1998
- Served as chief whip of the House for eight years between 1999-2007, becoming the longest serving member of the National Assembly Leadership
- Elected vice president of the African, Caribbean, Pacific and European Union (ACP-EU) Joint Parliamentary Assembly
- Awarded Officer in the Order of Leopold (the highest honour bestowed on a foreigner) by His Majesty King Albert II of Belgium
- Appointed Minister of State for Solid Minerals Development on November 11, 2015



Hon. Abubakar Bawa Bwari, Minister of State, Ministry of Mines and Steel Development, Nigeria.

Image Credit: Ministry of Mines, Nigeria

Excavators working at Minergy's Masama Coal Project in Botswana.



Image Credit: Minergy

# Minergy forges ahead with coal mining at Masama Coal Project

Minergy's Masama Coal Project in Botswana — the country's first open pit coal mine — is expected to play a significant role in meeting the demand for coal, which is forecast to rise to 38 million tonnes by 2030.

**B**otswana Stock Exchange (BSE)-listed Minergy Ltd, a coal mining and trading company which owns 100 per cent of the 390-million tonne Masama Coal Project in the Mmambula Coalfield, has confirmed it expects first production to now get underway.

Since the company was awarded a mining licence on 28 August 2018, Minergy Ltd has announced that the mining contract has been awarded to Jarcon, a joint venture between IPP, a South African company, and Giant Plant, a Botswana company.

The Build-Own-Operate-Transfer (BOOT) contract for the washing plant has been awarded to Pentalin Processing. The washing plant washes soil and rock from the coal and crushes the coal into graded sized chunks, stockpiles, grades and prepares it for transport to market.

Build-Operate-Transfer (BOT) or BOOT is a form of project financing, where a private entity receives a concession from the private or public sector to finance, design, construct, and operate a facility stated in the concession contract. This enables the project proponent to recover its investment, operating and maintenance expenses in the project.

The contracts for the provision of site and bush clearing, civil works, power reticulation, water and waste

management, road construction and weighbridges are also in various stages of appointment.

Minergy, which listed on the BSE in April 2017, is now seeking a listing on the United Kingdom's Alternative Investment Market (AIM) during 2019.

"While Minergy is still in the development and exploration phase, we've made considerable progress towards full operational status, and have also invested in infrastructure, including offices in Medie and Lentsweletau," said Andre Bojé, CEO of Minergy.

Mining trucks from Cat and excavators from Liebherr and other brands such as Bell Equipment are already busily working at the mine, located near to the village of Medie.

In addition to breaking ground and having contractors start work, Minergy is actively engaging the local communities about job creation - the mine is set to create more than 400 jobs - there is and upliftment programmes, including

improving the school and the clinic in the village as well as providing electricity.

According to Martin Bartle, managing director of Minergy, a power line reportedly from Lentsweletau will pass through the village to the mine entrance.

Last year he briefed residents about the mine's operations that included blasting and safety issues. He said, "We are not only aiming to empower individuals, we also aim to transform Medie village through the electrification of tribal offices and the local primary school as well as providing internet connectivity to ease communication."

Bojé said that both Botswana and Minergy have a significant role to play in fulfilling the increased demand for coal, with four million tonnes of coal exported from South Africa to the African continent in 2016, which is forecast to rise to 38 million tonnes by 2030. The thermal coal price has also increased 33 per cent over the past

18 months, making it one of the world's top five highest-performing commodities.

With Minergy looking to list on AIM, the sustained buoyancy in the coal market bodes well for the mine, and according to Bojé is set to continue well into the future, given global demand. "During the past 18 months, thermal coal prices increased by 33 per cent, making it one of the world's top five highest-performing commodities."

He added that for investors looking to invest in coal now is the right time. "The price of coal is rising, there is a deficit in supply and a strong demand, especially in the developing world, which is driving up the prices and keeping them high."

Minergy is strategically placed with a quality product, an outstanding resource, capable management in an environment of rising coal prices – all underpinned by regional and international demand.

The mine which has a lifespan of approximately 100 years is aiming to extract 2.4 million tonnes of coal per annum, with the first production expected mid-January to February. ■

**“ We’ve made considerable progress towards full operational status ”**

**ANDRE BOJÉ, CEO OF MINERGY**

*By Meekael Siphambili*



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# Top mining trucks available in the market

Here are four major truck brands that are making an impact on Africa's mining sector.



Caterpillar is introducing the electric-drive 798 AC, with a 372-tonne (410-ton) payload.

Image Credit: Caterpillar

## Caterpillar new Ultra-Class Trucks

Caterpillar continues to expand its mining truck offering to give mining companies the flexibility to choose what meets their needs and

preferences. Following the successful introduction of the 794 AC 291-tonne (320-ton) capacity truck at MINExpo 2016 and investments to further advance the 797F 363-tonne (400-ton)

mechanical-drive truck, Caterpillar is now introducing the 798 AC and the 796 AC. The new electric-drive 798 AC features a 372-tonne (410-ton) payload and will join the fleet of more than 1,000 Cat mechanical-drive 797s in the 400-short-ton class. The new electric-drive 796 AC delivers 326-tonne (360-ton) payload and will be offered in all regions. The 795F AC, in the same size class, will continue to be offered in regions where engine emissions are less regulated. Both trucks will be available in the second quarter of 2019.

full-model change version is powered by a 50-litre engine, compared to a 45-litre one in the preceding model, offering powerful running, supported by ample net power of 1,175kW (1,576HP). It is also equipped with a retarder with the largest volume in its class. When used together with the automatic retarder, the truck achieves safe and high-speed downhill travelling. As a result of shortening the cycle time, it offers high productivity. It is also equipped with a Komatsu Traction Control System (KTCS) designed to optimise performance when travelling on slippery and/or soft surfaces.



Image Credit: Komatsu

Komatsu's HD1500-8 is powered by a 50-litre engine.

## Komatsu HD1500-8 Mining Dump Trucks

Komatsu commenced sales of the HD1500-8 mechanical mining dump truck last year after having fully remodelled its predecessor deployed mainly in overseas mines. The new

## Terex Trucks TA400

The 38 tonne (41.9 ton) TA400 – Terex Trucks' biggest articulated hauler – is designed to meet the demands of the most extreme operations, such as mining. This

high-capacity hauler (23.3 m<sup>3</sup>/30.3 yd<sup>3</sup>) is a straightforward solution to the challenges faced at the toughest sites, delivering a heavy-duty, efficient performance in all conditions.

The robust machine is fitted with a six-cylinder Scania DC13 engine and an Allison HD4560 transmission, which delivers high performance and a fuel-efficient operation. For optimum control and increased safety in adverse conditions such as steep inclines, a modulating transmission retarder is coupled with an efficient exhaust brake and fully enclosed oil-cooled multidisc brakes. The fully adaptable drivetrain is designed to maintain traction and speed on the toughest job sites for outstanding productivity at all times. The planetary gear transmission provides smooth, efficient gear shifting for optimised fuel consumption and low cost of operation. Ground level test points and a fully tilting cab, combined with an electronically raised hood, ensure ease of service and reduced downtime.

**Volvo Trucks**

A robust solution tailored to the unique demands of mining. Mining is tough and the same can be said about Volvo's trucks. A Volvo mining truck is robust, durable and



Image Credit: Terex Trucks

The 38 tonne (41.9 ton) TA400 is Terex Trucks' biggest articulated hauler.

reinforced where it matters. Delivering power and strength for continuous action with heavy loads in the most demanding conditions. Reliably and efficiently. With Volvo, you get industry-leading performance, cost-saving fuel efficiency and precision manoeuvring to keep things moving quickly and safely. In many cases the company offers professional onsite support and service planning to ensure maximum truck utilisation. Its range of mining trucks includes the Volvo FMX, Volvo FM, Volvo FH and Volvo FH16. All form part of a robust mining

solution tailored to make operations more productive and profitable wherever the location. Various unique features include automatic

traction control, dynamic steering, heavy-duty bumper, I-shift with crawler gears and high axle load configurations. ■



Volvo's range of mining trucks includes the Volvo FMX, Volvo FM, Volvo FH and Volvo FH16.

Image Credit: Volvo Trucks



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# Genset power companies respond to Africa's mining needs

Africa's mining sector is a demanding environment and one that requires only the most robust and reliable power solutions.



Kinross Gold airlifted two generators into Ghana to supply reliable power for its Chirano underground mine and its open pit gold mine.

Image Credit: Kinross Gold

**M**ining presents some of the toughest conditions for power companies to operate in. Typically, Africa's mines are located in remote areas, far away from major towns and cities or established infrastructure.

In these cases, diesel generating sets, or gensets, have become the go to option for many mine sites across the continent and, indeed, the wider world.

As a continent rich in natural resources – from coal and bauxite, to diamonds and gold – Africa's mining sector presents a huge opportunity for power companies.

The demand for energy spans multiple areas at any given mine site: lighting systems, ground water pumping, air circulation, conveyor belt systems, underground transport and even the mining face equipment all need safe, reliable power.

With such high power demands, diesel gensets are generally the answer.

While there are huge efforts to electrify Africa, extending grid-based infrastructure to bring power to remote and isolated communities, demand for diesel gensets in the mining sector remains high.

Even with the shift towards renewables and clean energy alternatives, and the thousands of micro solar projects now bringing electricity to remote areas for the first time, diesel gensets provide safe, uninterrupted energy supply for mines – whatever the conditions, wherever the location.

Key players in this niche include the likes of Kohler SDMO, Himoina, Cummins and Volvo Penta, although there are many others in what remains a strongly competitive market.

They all are constantly evolving their products and service to better respond to what is an evolving market.

Cummins Car & General, the Kenyan joint venture of Cummins and its local distributor, for instance, recently showcased its new 500 kVA gensets powered by the QSX15G8 engine, made in China, to customers in Nairobi.

The gensets feature a number of advantages including reduced noise levels, efficient fuel consumption, automatic synchronising, and remote monitoring which allows customers to keep an eye on the performance of the generator from a different location.

## Market moves

KOHLER-SDMO has a long history of supplying generators to the mining sector across the world, both underground and open-cast mines,

as well as industrial mineral processing plants.

Its equipment also offers high efficiency and sustainability for reduced emissions and low noise levels, in keeping with the drive towards improved eco performance.

The company's work is driven by the rigours of what is a very dynamic and challenging mining industry — and one that calls for the utmost reliability.

Ideally, it is better to avoid any period where installations are shutdown so as to achieve the lowest possible cost of ownership, and highest mine productivity.

Its generating sets provide a prime power source to supply machines and facilities, particularly in isolated sites and difficult environments, while also enabling rapid deployment.

At the end of last year, Kohler-SDMO appointed Clarke Energy as its



official distributor for diesel gensets in Tanzania, one of Africa's fastest growing economies and a country with an active mining sector.

The collaboration follows a joint plan to set up a new diesel genset assembly facility in Lagos, Nigeria, on the other side of the continent, which will assemble units up to 700kW.

The moves also gives Clarke Energy – the largest distributor globally for Jenbacher gas engines – a firm footprint in Africa's diesel genset market and demonstrates its continued commitment to the continent, where it has been working for nearly 20 years, with 630MW capacity installed already.

Both gas and diesel generators will be serviced by Clarke Energy's Tanzanian-based engineers, making full use of the company's engineering, installation and maintenance expertise.

"Clarke Energy's existing gas-based power generation plants in Tanzania and partnership with our sister company Kohler-SDMO will allow a greater product offering and power solution throughout Tanzania," said Alan Fletcher, Clarke Energy's Africa managing director.

"In parallel, we are expanding our existing engineering, project management and service capabilities across diesel as well as gas-to-power solutions."

Hervé Prigent, Kohler SDMO's general manager added, "Clarke Energy's strong gas-to-power presence in Tanzania makes them an ideal partner to distribute the



Chirano underground gold mine in Ghana.

Kohler SDMO diesel to power range. We will be working to the highest standards to provide customers with an end-to-end power solution."

#### Local expertise

And there is plenty of work to be had across the continent, certainly in the mining segment.

Another supplier, YorPower announced a "significant contract" recently to supply an undisclosed Australian gold mining company operating in West Africa.

The contract was awarded following a competitive tender process to supply and deliver a number of Perkins powered diesel generators to the mine site.

The fact that YorPower held a stock of diesel generators at its own base in the region was a deciding factor, the company said, as well as its track record in supplying quality UK-built generators for use in harsh climates.

It is also providing ongoing service and engineering support for the equipment and project.

The Australian mining company cited local contact, support and stock as a "great advantage" for meeting its day-to-day needs, and added that, "having the UK operation in the background gives us confidence we are buying excellent equipment at the most competitive rate."

Indeed, the message of local supply and support has not been lost on other industry players.

Plans by Kohler SDMO and Clarke Energy to set up their new genset factory in Lagos — which will later assemble units above 700kW — partly reflect Nigeria's limits on foreign imported machinery.

Nigeria installs around 20,000 diesel units per year but only 15 per cent of the current market share is imported due to import taxes imposed by the government.

The two companies will make use of their engineering, installation and maintenance talent to support sales in Nigeria, with the smaller units to be sold via local distributors.

For some of the largest-scale mine operations, though, gensets are simply brought into the country from overseas, often to fast-track projects where grid-based alternatives may not be available.

Another international miner, Kinross Gold, airlifted two generators with accessories into Ghana to supply dependable power for its Chirano underground and open pit gold mine.

The gensets were brought in from Spain and delivered to the mine site by Allship Logistics Limited in the country's Western Region, 100 km southwest of Kumasi.

Another earlier project, saw Cummins gensets provide a standby power generation solution for the Kinsenda Copper Mine in the Democratic Republic of Congo (DRC).

The 7,500 kVA standby modular power facility — which consists of three fully integrated 2,500 kVA diesel gensets — is capable of providing a reliable alternative power source in the event of an outage within just 20 seconds.

This is a business essential with the ore processing plants running 24 hours a day, 365 days a year. Just 30 seconds of stoppage can result in up to two days of costly downtime. ■

By Martin Clark



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# Transparency in the African mining sector

Dr Nicole Bieske, head of programme – Mining for Sustainable Development at Transparency International, discusses transparency and corruption in the mining sector.



An aerial view of enormous copper mine at Palabora, South Africa

Image Credit: Adobe Stock

**D**r Nicole Bieske has more than 14 years' experience in senior leadership roles in not-for-profits, both in International Non-Governmental Organisations and at the grassroots. At Oxfam, she managed policy, advocacy and campaigns teams within Australia and globally. Prior to her role at Oxfam, Bieske was the CEO at Inner Melbourne Community Legal where she oversaw the provision of legal services to vulnerable and marginalised community members through a range of legal outreach programmes and community partnerships.

## Has transparency in the African mining sector improved in the last decade?

**Bieske:** Transparency International has been tracking people's perception of corruption since 1995 in the Corruption Perceptions Index published annually. The index ranks 180 countries by their

perceived levels of public sector corruption. No African country has ever made the top 20 least-corrupt countries. Rwanda and Cabo Verde have improved, and long-term work in Côte d'Ivoire and Senegal is steadily paying off.

Over the past decade, we have seen steadily growing focus on corruption in the mining sector. The Extractive Industry Transparency Initiative and Publish What You Pay were established in 2002 to promote transparency around natural resource management. The EITI now works in 51 countries and has established a global standard to promote accountable management of oil, gas and mineral resources.

The Natural Resource Governance Institute was established in 2013 to promote

accountable and effective governance in the extractive industries. And of course, Transparency International joined these efforts when we launched the Mining for Sustainable Development Programme in 2016.

There is clearly strong interest in more accountable and transparent mining operations, and stronger pressure on governments and companies to uphold better standards. Indeed last year, the African Union declared 'Winning the Fight against Corruption' to be the theme of its work in 2018. Tackling corruption is hard work and takes time, but there is absolutely no turning back – not when there are more and more people shining a spotlight on corruption and demanding change.

## How transparency initiatives such as yours have contributed to that improvement and how many African countries have joined the initiative over the past year?

**Bieske:** Transparency International's (TI's) Mining for Sustainable Development programme brings together sister organisations across 20 resource-rich countries to tackle corruption. African countries make up almost half of our network. Across the research and the advocacy and policy phase of the programme, our African partners have included organisations in the Democratic Republic of Congo, Ghana, Kenya, Madagascar, Mozambique, Niger, Sierra Leone, South Africa, Zambia and Zimbabwe. More TI organisations in African countries are interested in joining the programme.

As I said, there is a lot of interest and energy in fighting corruption and people want to get on board – including government, business

“ Tackling corruption is hard work and takes time, but there is no turning back ”



Image Credit: Olivier Girard/CIFFOM/Flickr

Ouedrago Alassan,  
working at a gold mine.

and the community.

Our African partners are shining a spotlight on the risks of corruption. They are looking specifically at where and how corruption can occur when a company applies for the right to mine. They are sharing their research with people, government officials and companies, so everyone can better understand how the process works, and where we need to work together to make that process fairer.

Our African partners have been energetically engaged in discussions with vital players - national governments, mining companies and community groups to highlight the corruption risks and discuss strategies to improve the process.

**Give us a sneak peek of the most important project that it has been part of when it comes to the extractives sector in Africa.**

**Bieske:** Mining for Sustainable Development is a globally coordinated, but locally embedded programme that combines locally-led research and advocacy with global engagement. Our network across 20 countries also supports each other by sharing knowledge, skills, resources and contacts, making our impact so

much stronger.

We are specifically looking at the very start of the value chain. By closing the loopholes and strengthening our process, we aim to stop corruption before ground is even broken. We believe that with strong, transparent and accountable foundations, we can set up a better mining process across the rest of the value-chain – a process that takes care of our environment and enables people to prosper fairly.

**What are the three most important steps to be undertaken by both companies and governments to significantly improve their performance in terms of transparency?**

**Bieske:** Commit to transparency: governments should set clear, transparent and effective rules and criteria for mining approval processes; and they should enable the public to access this information. Companies should be transparent about their operations, including their subsidiaries, joint venture partners and where they operate. They should also disclose their project rights and obligations, including contracts, licences, and environmental and social impact and management plans.

**“ Companies should be transparent about their operations, including their subsidiaries and where they operate ”**

**Avoid conflicts of interest:** Governments should implement mechanisms to reduce conflicts of interest – such as a Minister for Mining profiting personally from a mine, or a political party receiving donations from the mining company. Companies can also support better political integrity by refusing to donate to political parties and by disclosing beneficial ownership – i.e. who ultimately benefits from a mining operation.

**Do your due diligence:** governments should do their research on licence applicants to know who their beneficial owners are and whether they are responsible companies – for example, companies that have not been involved in criminal activities, poor environmental performance or social harm. Companies can also go ‘beyond compliance’ where a country’s licensing standards or disclosure requirements are lax and below best practice. Companies

should always operate with integrity, taking care to minimise harm to the environment and local communities.

Dr Bieske will be speaking at the 2019 Investing in Mining Indaba in Cape Town on 4-7 November. It is the world’s largest gathering of the most influential stakeholders in African mining. This year will be the event’s 25th anniversary with the Ghanaian President Nana Addo Danko Akufo-Addo invited as special guest of honour. Thousands of delegates are expected to come from global mining and exploration companies, international investors, African and non-African governments, investment banks to mining equipment companies and law and financial services firms.

Other themes at the conference will look at sustainable development, leaders of tomorrow, and women in mining. ■

For more information visit [www.miningindaba.com](http://www.miningindaba.com).

# Staying in the technology race - avoiding protectionist pitfalls

Charles Bond, Partner at Gowling WLG shares his insights on avoiding protectionist pitfalls.

It is vital for law firms and in-house counsel that they are at the forefront when advising on the specifics and legalities of the technology supply chain, which increasingly relies on mining raw materials for use within the manufacturing process of 'smart' products. However, an acute awareness of the barriers is also essential.

As such, Gowling WLG's Protectionism 2.0 Report highlights how protectionist domestic policies from country to country can stifle the commercial overseas collaboration opportunities that technology offers.

Given the increase in protectionist policies, and the inherent link that exists between these and mining essential raw materials, it is never

been more important that in-house teams work closely with their advisers to anticipate market changes and implement strategies to manoeuvre through what can be difficult events and circumstances.

What is becoming evident, as set out in the report, is that there is a startling correlation between countries that pursue digitally protectionist policies (laws that prevent the overseas collaboration that is needed for technology to properly develop) as well those that are protectionist in relation to their natural resources – in particular China, Russia, India, Vietnam, Argentina and Turkey – six main global players in both areas of the economy. Given that countries like these are the very same which house the essential raw materials that need

to be mined to fuel the development of technology, it is crucial to understand how to anticipate the impact of such behaviour on the technology supply chain.

General Counsel could be forgiven for focusing more on the operational and trading aspects relating to the existing uncertainty surrounding Brexit and global trade – and simply seeing digital protectionism as a sideline issue to focus on at a later date. This would be a mistake, given that these measures pose as much a threat to international trade and development as the more traditional tools of trade protectionism that seem to be most in focus at present.

Not only do the identified countries above have a strong track

record in imposing trade barriers and tariffs on imports, they also have a high number of restrictive data laws and large deposits of the vital raw materials needed to make smartphones, connected devices and batteries for electric vehicles.

While this is happening in real time, many technology focused brands – focused on the manufacturing side of the industry – may not yet have anticipated how this will affect their sourcing and subsequent supply chain partners and processes. This makes it even more important that General Counsel communicate the effect of this on the output of their businesses in order to assist internal relationships or indeed, using the foresight of their selected legal advisers. ■

## Guinea: Bauxite mining with surface miners maximises profitability

West African Guinea is known for possessing the largest reserves of high-quality bauxite in the world. This potential has prompted the country to continually expand its bauxite mining sector in recent years, making substantial investments. Wirtgen surface miners are playing a decisive role in this development process, as many of the country's bauxite mining operations rely on Wirtgen's technology as their standard extraction technique.

Wirtgen supplies surface miners in a variety of performance classes for the selective mining of raw materials, such as coal, limestone, bauxite, gypsum, salt and phosphate. In addition to mining, these machines can also carry out routing operations for the construction of mining service roads and railway tracks, the rehabilitation of roadways and installation of tunnel floors. The range of applications further includes the precise cutting of trenches and channels as well as surface leveling.

In 2001, the first Wirtgen surface miner was commissioned in a mine close to Kindia, a small town 120 km from the capital, Conakry. At this time, drilling and blasting was the main bauxite mining technique in use. Since then, however, the process has shifted to the more economical, safe and



Wirtgen surface miners are used to open routes and develop the infrastructure.

environmentally friendly surface mining, and today Wirtgen surface miners extract 100% of the ore. Since 2001, the Wirtgen technology has proven its additional benefit to the growing bauxite mining industry in Guinea, where 25 Wirtgen machines are currently in operation.

The most commonly used models for bauxite mining in Guinea are the 2200 SM and the 2500 SM. The first is compact yet powerful, with a 2.2 m-long cutting drum and 708 kW of engine power. It is able to cut rock

with unconfined compressive strengths of up to 50 MPa, ideal for medium-sized mining operations. The larger model, the 2500 SM, guarantees higher production rates and offers a cutting width of 2.5 m, 783 kW of engine power and can economically mine rock with an unconfined compressive strength of up to 80 MPa.

Both models demonstrate their advantages in both productivity and product quality, guaranteeing lower production costs per ton compared to conventional mining. On average, 1.25 million tons of bauxite are extracted each year with the 2200 SM and 3 million tons with the 2500 SM. These figures are achieved because the machines work 24/7.

## FLSmidth concludes deal with Crusher Support Services

FLSmidth South Africa has successfully concluded the restructuring of the operations of its Meshcape Screen Media Business Division. The company took a decision early in 2018 to retain the manufacture of core screen product lines, including polyurethane and wedgewire as well as its proven ceramic wear solutions, and to divest from the manufacture of woven wire screens, perforated plate and wire conveyor belts.

The retained product lines are being relocated to FLSmidth's Delmas Supercenter which is being expanded as part of its Phase II development programme. These manufacturing lines will be fully commissioned and operational during January and February 2019.

The Delmas Phase II facility is a R75mn expansion comprising the construction of a 5,360 sq m workshop to accommodate a new heavy machining facility as well as the relocated and optimised manufacturing lines for the retained



Image Credit: FLSmidth

**Reinier Fourie, director of Crushers Support Services signing the agreement with FLSmidth.**

products from the Meshcape Screen Media facility. A total of 31 skilled personnel will relocate from Edenvale to the Delmas II facility. The Delmas II expansion will also create additional new employment opportunities for people from the greater Victor Khanye Local Municipality.

The sale of the divested product lines has been successfully concluded with Crushers Support Services (CSS). CSS is active in the mining and quarrying business sectors, providing service and support of crushing and screening solutions. The sale preserves the full manufacturing capacity for the divested product lines in the original Meshcape Edenvale facility and, in so doing, 79 jobs were preserved. A Preferred Supplier Agreement has also been concluded between FLSmidth and CSS ensuring that all existing customers will continue to receive high levels of support and to focus on future growth synergies.



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## GE Energy Financial Services and GE Renewable Energy to deliver 100MW wind power project in Kenya

GE Renewable Energy and GE Energy Financial Services have partnered to provide technology and facilitate debt financing for its flagship onshore wind project in sub-Saharan Africa.

Kipeto Energy Plc (“Kipeto”) 100MW wind power project is located south of Nairobi, in Kajiado.

GE Renewable Energy will provide 60 of its highly efficient GE 1.7-103 turbines and a 17km (220KV) transmission line to carry the power to Isinya substation in Kajiado County, providing power to the equivalent of approximately 40,000 homes in the region. The Kipeto 100MW wind power project will provide clean energy to the national grid as a significant contribution to Kenya’s Vision 2030 and Big Four Agenda. The project is expected to reach commercial operation in 2020.

Peter Wells, GE’s Onshore Wind regional director for Europe and sub-Saharan Africa, said, “GE is incredibly proud to be a part of this exciting endeavor. The Kipeto project is an important step forward in providing affordable, reliable clean energy to the region, and meeting Kenya’s renewable energy goals. We look forward to working with our partners on the journey for years to come.”

The Kipeto wind power project is funded by equity from Actis and Kenyan company, Craftskills Wind Energy International, alongside senior debt from the Overseas Private Investment Corporation (OPIC), the United States government’s development finance institution (DFI). GE EFS provided advisory support which facilitated OPIC’s financing and will help to enable Kipeto to begin construction of the second largest wind farm in Kenya with GE wind turbines.

Subha Nagarajan, managing director, GE EFS’ Global Capital Advisory, said, “Kipeto represents our ability to identify and connect capital from



The Kipeto 100MW wind power project will provide clean energy to the national grid.

Image Credit: Adobe Stock

leading government agencies to emerging markets, and enable construction of GE’s wind projects in new markets. The project lays the foundation for cleaner and more reliable energy for the local communities in the future.”

GE Renewable Energy will also provide operations and maintenance services for the project. It is anticipated that more than 400 job opportunities will be created during the construction phase of the project and an additional 70 permanent jobs during the operational phase.

The Kipeto project was originally conceived by Craftskills Wind Energy International, with support from GE. AIIM and IFC InfraVentures co-developed the project with Craftskills from 2014 until early 2018, executing a 20-year Power Purchase Agreement (PPA) with Kenya Power and Lighting in 2016.

Kipeto Energy Plc has leased 70 square km of land in the Esilanke area of Kajiado county including reaching agreement for the relocation and rehousing of local families. The local Maasai community will also receive five per cent of annual dividends once the plant opens in 2020.

## EXPANDING BEYOND RENTAL POWER, ALTAAQA GLOBAL ANNOUNCES MAJOR REBRAND

Altaaqa Global Caterpillar Rental Power, a global provider of temporary power services, has announced a major rebranding. The company will from now be known as Altaaqa Global Energy Services.

James Shepherd, chief executive officer, said, “The global energy landscape has changed, and so are the requirements of the sectors we serve, like mining, manufacturing, cement and utilities. In order to cater to their demands, and reflect the change in the company business

proposition providing longer-term projects as an integrated renewable and reciprocating solution provider, the new brand reflects the strategic direction the company has taken.”

Transcending its traditional scope of solely providing temporary power solutions, Altaaqa Global Energy Services now offers power plants on flexible short-, medium- and long-term contracts with tailored project financing arrangements, including Build-

Operate-Own-Transfer (BOOT).

Furthermore, the company now delivers cost-efficient, bespoke multi-megawatt power plants comprising a wider range of power generation systems, including reciprocating engines, turbines and hybrid technologies, capable of running on diesel, gas or HFO.

“We aim to be more than just a technology provider,” said Shepherd. “In all that we do, we seek to be attentive and responsive to our clients’ needs – a true strategic power partner. Our aim is to provide a complete world-class, trusted and reliable energy services and, more importantly, to make a difference to the society and to our stakeholders.”

Majid Zahid, group president, Energy at Zahid Group, a global industry conglomerate and the company’s parent company, added, “With this rebrand, we are



not only redefining who we are, but we are also driving change and taking a leadership role in shaping the future of the energy industry.

The Zahid Group’s ethos has always been built on integrity, commitment, hard work and expertise – values that have allowed us to prosper for more than 100 years. We pride ourselves on the relationships we build with our clients and partners, and on the social and economic progress we encourage through our products and services.”

The rebranding includes a redesign of the company’s logo, graphics, communications, and correspondence. The company’s new website was launched at the end of January.



Image Credit: Altaaqa Global Energy Services

Left to right: Majid Zahid, group president, Energy of Zahid Group and James Shepherd, CEO, Altaaqa Global Energy Services.

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# Desert solar plan will turn Africa into power giant

Solar projects stretching across the Sahel region are expected to connect 250 million people with electricity by tapping into the region's abundant solar resource.

The details of the “Desert to Power Initiative” have been outlined as part of the Paris Agreement climate change talks at COP24 in Katowice, Poland.

Energy poverty in Africa is estimated to cost the continent 2-4 per cent GDP annually, according to the African Development Bank (AfDB), which is leading the project.

The initiative aims to develop and provide 10GW of solar energy by 2025 and supply 250 million people with green electricity including in some of the world's poorest countries. At least 90 million people will be connected to electricity for the first time, lifting them out of energy poverty.

Currently, 64 per cent of the Sahel's population – covering Senegal, Nigeria, Mauritania, Mali, Burkina Faso, Niger, Chad, Sudan, and Eritrea – live without electricity, a major barrier to development, with consequences for education, health and business.

By harnessing the exceptional solar resource in the region, AfDB and its partners hope to transform the region.

Magdalena J. Seol in the AfDB's Desert to Power Initiative said, “Energy is the foundation of human living – our entire system depends on it. For Africa right now, providing and securing sustainable energy is in the backbone of its economic growth. A lack of energy remains as a significant impediment to Africa's economic and social development.”

She said the project will provide many benefits to local people. It will improve the affordability of electricity for low-income households and enable people to transition away from unsafe and hazardous energy sources, such as kerosene, which carry health risks.



The Ouarzazate solar complex in Morocco is one of the largest concentrated solar plants in the world.

Construction of the project will also create jobs and help attract private sector involvement in renewable energy in the region.

Many women-led businesses currently face bigger barriers than men-led enterprises to accessing grid electricity, so the project has the potential to increase female participation in economic activities and decision-making processes.

The project has been launched in collaboration with the Green Climate Fund, a global pot of money created by the 194 countries who are party to the UN Framework Convention on Climate Change (UNFCCC), to support developing countries adapt to and mitigate climate change. The programme is designed to combine private sector

capital with blended finance.

“If you look at the countries that this initiative supports, they're the ones who are very much affected by the climate change and carbon emissions from other parts of the world,” said Seol.

“Given this, the investments will have a greater effect in these regions, which have a greater demand and market opportunity in the energy sector.

“Women are usually disproportionately negatively affected by energy access issues. Providing a secure and sustainable electricity creates positive impact on gender issue as well.”

The African continent holds 15 per cent of the world's population, yet is poised to shoulder nearly 50

per cent of the estimated global climate change adaptation costs, according to AfDB.

These costs are expected to cut across health, water supply, agriculture, and forestry, despite the continent's minimal contribution to global emissions.

However, the International Renewable Energy Agency estimates that Africa's renewable energy potential could put it at the forefront of green energy production globally.

It is estimated to have an almost unlimited potential of solar capacity (10TW), abundant hydro (350GW), wind (110GW), and geothermal energy sources (15GW) – and a potential overall renewable energy capacity of 310GW by 2030.

Other renewables projects in Africa include The Ouarzazate solar complex in Morocco, which is one of the largest concentrated solar plants in the world.

It has produced over 814 GWh of clean energy since 2016 and last year, the solar plant prevented 217,000 tons of CO2 being emitted. Until recently, Morocco sourced 95 per cent of its energy needs from external sources.

In South Africa, the bank and its partner, the Climate Investment Fund, have helped fund the Sere Wind Farm – 46 turbines supplying 100MW to the national power grid and expected to save six million tonnes of greenhouse gases over its 20 year expected life span. It is supplying 124,000 homes.

COP24 is the 24th conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC). In 2018, countries were preparing to implement the Paris Agreement, which aims to limit the world's global warming to no more than 2°C. ■

“A lack of energy remains a significant impediment to Africa's economic and social development”

MAGDALENA J SEOL, AFRICAN DEVELOPMENT BANK REPRESENTATIVE



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A telecoms base station in Lagos, powered by Tranos TD-1250 dual generators.

# Powering the telecoms sector

Image Credit: Tranos

Jude Abalaka, CEO of Tranos, talks to African Review on providing services and products to the telecoms sector.

## In terms of this month's general elections in Nigeria, do you think that they will have a positive influence on the power sector?

The truth is that it's a bit difficult to tell. Whichever way the election goes, we won't see it as doom and gloom. But it is hard to know where the direction will be for this market. Our focus will be to continuously add value to the power sector.

## You attended Power Nigeria last year - what were the major trends to come out of the show?

One aspect of what we were trying to achieve at the exhibition was to speak to potential customers and not to necessarily launch products. However, we wanted to raise understanding about our new line of sockets on display at the exhibition. One of our core areas of business is powering the telecoms base stations. Even though we make generators, we do not sell generators to the open market, instead we offer a group of products specifically for the telecoms market. We have done a lot of research and development looking at how to address the pain points of our customers within this sector. We know that they face challenges in having to carry out routine maintenance every 250, 500 or 1000 run hours, so part of the solutions we are coming up with is reducing the logistics and the number of visits people have to make to the cell site. There is also a lot of theft of diesel and batteries as well, so we have tried to find a good way to minimise those issues too.

## What are the products that you offer?

For the telecoms sector, we have three product ranges. The first category is variable speed and hybrid generators where you can connect solar panels and the mains power supply to a genset, and an intelligent controller to automatically determine the most optimal power source based on cost and availability. The other category of generators is designed to provide -48VDC power at fixed speed either as dual generators or single generators per site. These are aimed at replacing regular AC generators running on cell sites. When the telecoms revolution started in Nigeria, there was a situation where telecoms companies were being sold the same residential and commercial generators for use on cell sites, which meant that

they needed a separate rectification system to convert a 230VAC or 400VAC power down to 48VDC, which is what is needed by telecoms equipment. Our target is for our fixed speed, 48VDC generators, to replace the regular generators being used at the base stations.

## What is the third range of products?

The third range of products are our LPG gas power generators which will be launched in 2019. Our long-term aim is to gradually phase out the use of diesel generators on telecoms base stations and move towards gas-fuelled generators – we see them as a game changer for the industry. We are planning to use Liquefied Petroleum Gas, which is easier to transport than natural gas. Many Nigerian homes already use liquefied petroleum gas for cooking, so the gas is available. We have been running some trials for these generators and have noticed that they are a lot more reliable so we can have a site that gives you 100 per cent up-time for months. Another major selling point for our customers is that this eliminates the issue of diesel theft as it is much more difficult to steal gas. Also, gas is relatively cheaper than diesel. The gas engines are developed for longer service intervals – gives you 1.5 times the life of a regular diesel engine – so imagine, having all these advantages without spending additional money on fuel. For example, on a regular diesel generator powered site, you have to go to the site every 10 or 20 days for routine maintenance. But with our gas generator, you only have to do this once in 84 days. There are also the sustainability

benefits of using gas as the air emission is minimised, you also have lower possibility of spillages.

## Where are your engines imported from?

Our engines are imported from Japan. We use Yanmar diesel and Toyota gas engines.

## Do you feel that companies like Tranos have a role to play in providing power?

Yes, absolutely. The Azura Thermal Power Station in Edo State is a good example. The power sector in Nigeria, however, has a fundamental problem with the commercial framework around the industry that is not attracting investors into the market because of the costs involved. Despite this, people are trying to work within the existing policy framework and look at ways of generating power without putting it on the grid or producing it in such a way that you can supply a captive market.

## Who are your main customers?

We deliver power generation equipment not to the telcos themselves but to tower companies. IHS has the largest market share in this space and they are one of our main customers. We are also looking at the distributed generation model and are considering the viability of setting up a power plant in the Ogba area of Ikeja in the future in order to supply power to industries and factories.

## Do you have any other plans for 2019?

We also have our own range of sockets and switches, which are made in Nigeria by us, we plan to officially launch these in early 2019. That is another major step we are taking in the market.

## How many employees does Tranos have?

We have 150 employees based in Ogba.

## How many telecoms sites do you have powered by your equipment?

We have our power equipment powering about 2,300 cell sites. These cell sites are the infrastructure underpinning about 13 per cent of the total telecommunications industry which produces 11 per cent of Nigeria's GDP. So, our responsibilities and reach are enormous. ■



Jude Abalaka,  
CEO of Tranos

Image Credit: Tranos

# Bridging the energy gap with one of world's largest LPG power plants in the world

MYTILINEOS helps Early Power Limited to achieve critical milestone on Stage 1 of Bridge Power Plant in Ghana.

**M**YTILINEOS strengthens its market-leading position in sub-Saharan Africa, with another major energy project which will provide a sustainable solution to meet Ghana's energy needs.

Specifically, Early Power Limited, a consortium formed by Endeavor Energy, Sage Trading Group, a leading Ghanaian fuels company, and General Electric achieved a critical milestone for the Bridge Power Plant in Ghana, with a Notice to Proceed for Stage 1, representing the first 202MW phase of the total 400MW project.

The construction contractor is the EPC Business Unit of MYTILINEOS - METKA, with a contract value approximately US\$363mn. The company has worked with the consortium sponsors, to provide limited recourse vendor financing to the Bridge Project, including through an EPC Contract price deferral mechanism supported by a guarantee provided by GuarantCo (a development finance institution that forms part of the Private Infrastructure Development Group sponsored by five G12 governments). This innovative vendor financing structure will substantially shorten the time required for construction commencement.

The unique vendor financing approach taken in this transaction by MYTILINEOS and the sponsors, provides a true limited recourse financing solution with a longer-term tenor, avoiding the "cliff edge" of a "hard" refinancing longstop date. This approach offers project sponsors substantial benefits, including the flexibility to arrange a permanent financing solution with commercial lenders and DFIs in good time and on appropriate terms. It also allows

sponsors to better manage their relationship with the host government as construction can proceed apace during financing negotiations. Long delays to construction commencement can be a considerable source of friction, especially where the EPC Contractor can only proceed with the contracted works after financial close of the main financing arrangement.

Such a structure brings into focus the interplay between the allocation of responsibilities of each of the project companies and the EPC contractor under the EPC contract and the range of project control, approval rights and remedies typically available to project finance lenders under the vendor financing. A bespoke arrangement has been negotiated which balances the interests of the project sponsors, the project company, the EPC contractor and the vendor financier.

## Transformational project

The Bridge Power project, located in Tema, is a transformational project for Ghana, as it will rapidly add much-needed generation capacity to the country.

The Bridge Project will initially run on liquified petroleum gas (LPG), becoming one of the largest liquefied petroleum gas (LPG) fuelled power plants in the world. Later on, when natural gas becomes available in Tema, it is planned for the plant to switch to run on natural gas as its primary fuel, with LPG as "back-up". Of course, the project will also meet the most stringent local and international (World Bank/IFC) environmental requirements.

Not only will the project diversify Ghana's current power generation fuel mix through the addition of

secure, lower cost LPG supply, but it will also create a positive long-term impact with the LPG infrastructure being utilised to enable the supply of environmentally friendly LPG for domestic and other uses in Ghana.

MYTILINEOS is working on some of the most exciting and challenging power projects in the world, bringing its flair for innovation and technical ability to deliver complex energy projects globally.

The first stage of the plant's construction is expected to take 24 months, although power will initially come online in 10 months and the combined cycle portion of Stage 1 will be completed in the fourth quarter of 2020. Apart from the positive impact of such a significant capital investment in Ghana, the project will create hundreds of jobs (majority Ghanaian) during construction, while a further 125 people will be employed as part of ongoing operations of the life of the plant. In addition, approximately 250 indirect (mainly local) jobs supporting the project will be created.

Panagiotis Gardelinos, general manager of MYTILINEOS' EPC Business Unit 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."

## Care for the communities

Alongside its construction activities, whether for the Bridge Project or elsewhere, MYTILINEOS puts strong emphasis on supporting local communities. In this context, the company has already donated much needed facilities to St. Nicholas' preparatory school, located in the port of Tema New Town.

## MYTILINEOS presence in Ghana

Given its strategic focus on expanding business operations in sub-Saharan Africa and West Africa in particular, the EPC Business Unit of MYTILINEOS - METKA has completed a 250MW Fast Power project with ten General Electric TM2500+ mobile gas turbine power generating sets in the region of Takoradi, already in operation since February 2016. Currently MYTILINEOS is also constructing an additional 200MW combined cycle dual fuel power plant in Takoradi for Amandi Energy, while simultaneously carrying out full operations and maintenance services for the Takoradi mobile power plant. ■

*Contributed by Mytilineos*



Image Credit: Mytilineos

# Powering up the continent

Elsewedy Electric has been operating in Africa since 1938. Ashraf ElAssal, general manager of Elsewedy Transformers as part of Elsewedy Electric Industrial sector, tells *African Review* about their business outlook for 2019.

## Can you tell us where your transformer factories are based in Africa?

We have five different manufacturing facilities in five different countries, which are: Elsewedy Transformers at 10th of Ramadan Egypt, Elsewedy Electric Nigeria Ltd in Badagry Nigeria, Elsewedy Electric Zambia in Ndola Zambia and Elsewedy Cables Algeria in El Biar, Algeria.

## What type of transformers are on offer in Africa and for which industries?

We offer oil immersed power transformer to the African markets with a wide spectrum up to power rating of 250MVA and voltage rating of 220KV. This type of transformer is suitable for generation power plants, transmission substations and heavy industries with their own captive grid, such as steel and petrochemical industries.

We have transformers operating in substations feeding the new administrative capital in Egypt (175MVA – 220KV), National Grid of

Ghana GRIDCO (66MVA – 161KV), National Grid of Zambia ZESCO (52MVA – 132KV), Angola (70MVA – 63KV), Libya (20MVA – 66KV) and Sokoto cement in Nigeria (50MVA – 33KV).

The other products are oil immersed distribution transformers and cast resin dry transformers. The oil immersed distribution transformers are a popular type of transformer in Africa. All our manufacturing facilities offer various specifications, such as a hermetically sealed and floor mounted transformers. Our range covers up to 5MVA and 36KV and is used by distribution utilities.

Our reference list includes thousands of distribution transformers supplied to Libya, Cameroon, Guinea, Ethiopia, Angola, Madagascar and Ghana. In addition to Algeria, Zambia and Nigeria where our facilities exist.

Cast resin dry transformers are suitable for places where people gather or where fire can spread quickly and widely, such as schools, hospitals, stadiums, wind farms and



Elsewedy Electric's latest technology in operation.

Image Credit: Elsewedy Electric

high-rise buildings.

We produce up to 15MVA and 36KV. It has lots of advantages, such as low flammability, environmentally friendly, high-life expectancy, and smaller by 20 per cent compared to an oil immersed distribution transformer, plus a high loading profile and humidity-proof.

## What does the business forecast look like in 2019 for Elsewedy Electric?

In 2019, Elsewedy Electric's offerings to customers fall under five main business sectors: 1) Industrial sector; covering wires and cables, transformers and electrical products. 2) Engineering and contracting; power generation, power transmission and distribution, renewable energy (solar, wind and hydro power generation), construction and infrastructure, water solutions and oil and gas. 3) Technology; data centre, smart city and AI, cloud offering, big data analytics and blockchain. 4) IPP (Independent Power Plant). 5) Development and logistics; industrial, logistics and utilities.

## Are you launching any more transformer products?

We are upgrading our facility to suit the production of 330KV transformers which are widely required by African markets over the coming two years. We are working on

considering the package substations as one of our standard product lines.

## What makes your transformer business different to other providers in the marketplace?

We are one of the largest manufacturers for oil immersed power transformers in Africa. We are accredited to do routine and type tests and many of the special tests for our range of products. We are customer-oriented and focused on innovation and quality. In addition to our dedicated and highly qualified after sales team, control the industry inputs, the process and the outputs by adopting the quality best practices and effective partnerships.

We are also known to have the longest number of customers of an African manufacturer, the latest software that allow our R&D team to continuously enhance our products and have offices in many African countries to be near to customers.

## Any other major message you would like to share with African Review readers?

We are proud to be African serving the African markets. The communicated strategic plan of our top management highlights the importance of meeting the needs of the African customer. We believe in the bright future of many African nations, especially when they are focused on high-quality products. ■



The local workforce makes the company's products.

Image Credit: Elsewedy Electric

## VOLVO LAUNCHES EC210D EXCAVATOR FOR AFRICA AND MIDDLE EAST

The EC210D crawler excavator from Volvo Construction Equipment is designed with Volvo's expertise for ultimate productivity and efficient operation in a wide variety of tasks. This machine features a robust frame combined with optimal engine power and hydraulic pressure to provide superior digging forces and fast cycle times for excellent productivity in all operations.

A powerful Volvo engine works together with the machine's proven hydraulics to provide high torque at low rpm for the ultimate combination of performance and improved fuel efficiency. For fast cycle times and optimum fuel consumption, the EC210D is equipped with intelligent work modes, including the new G4 work mode. Operators can choose the best mode to suit the task at hand, selecting from I (Idle), F (Fine), G (General), H (Heavy) and P (Power max)



EC210D crawler excavator is ideal for African markets.

Image Credit: Volvo CE

mode. Choosing the correct mode according to working conditions ensures added versatility and increased productivity.

The EC210D features increased hydraulic flow for responsive, accurate control in grading and

combined operations. Operators benefit from smoother, easier movement when travelling and lifting simultaneously as well as better grading quality from the harmonised boom and arm movement.

For a productive work shift, this excavator is equipped with a spacious and safe operator environment, offering enhanced all-around visibility, an adjustable seat and ergonomic controls. The improved cab interior features a new I-ECU monitor that displays a range of information for efficient operation.

The Volvo EC210D is designed for optimum profitability. Featuring best-in-class fuel efficiency and Volvo's ECO mode, this excavator lowers fuel consumption and reduces operating costs. Excellent service access and a durable design guarantee a long machine life.

## Operators warning over poor quality pumps

Tough operating conditions are the norm in the mining sector, and even more so when it comes to slurry pumping applications. If incorrect pump choices are made in these demanding applications it can lead to high maintenance and repair costs and even catastrophic failures.

Colin Adams, managing director of Integrated Pump Technology, says the company often receives enquiries from African-based mining operations who have already made the mistake of not specifying high quality OEM products.

"Slurry pumps need to be up to the task of handling high volumes of abrasive material, and when this is not the case these failures lead to costly production downtime with the obvious knock-on effects," he says. "For a number of years we have been cautioning the market and urging mine operators to carefully consider the overall total cost of operating slurry pumps when making decisions on which units to install."

Integrated Pump Technology is the authorised distributor for Grindex submersible pumps and included in its product line-up is the well-respected Grindex Bravo range. Adams says these robust, durable and high performance pumps offers a good return on investment as the units are engineered to achieve lower operating and maintenance costs.

Commenting on why a submersible slurry pump is a better option for slurry pumping, Adams says that submersibles offer several benefits over dry-mounted pumps. They do not require any support structure, need less space for operation and are very easy to install.

The Grindex Bravo range are produced to operate over the complete pump curve, not just one specific duty point. This means that the pump can be used in many applications within its range.



Grindex Bravo slurry pump on display at Electra Mining Africa 2018.

Image Credit: Integrated Pump Technology

## SRK TOPS MINERAL INTELLIGENCE RANKING

As a leading author of mineral resource and reserve estimation reports, SRK Consulting will again join project champions and dealmakers at the 2019 Investing in Mining Indaba to promote sustainable growth in mining.

With more than 40 offices staffed by engineers and scientists, SRK heads the RSC Mineral Intelligence ranking of the 25 top practices generating these reports; the documents are the bedrock of geological and related data on which the international mining industry is founded. According to the ranking, SRK has produced more than 150 resource estimation reports since 2014, and 50 reserve estimation reports.

Formed in South Africa in 1974, the company today provides high-quality technical studies and services for clients active in Africa and worldwide, including major players in the USA.

"Our leading position has been built as much on our independence and integrity as it has on our highly-regarded expertise and professionalism," said Andrew van Zyl, partner and principal consultant at SRK Consulting. "We have no equity investments, take no equity as payment and aren't involved in construction of plant or sale of equipment - all as part of our focus on being as independent as possible."

He highlighted the importance of addressing technical risk in every aspect of the mining project life-cycle.

"While political and regulatory risk is a concern in the mining sector, the technical risk remains important in the life of mining projects," said Van Zyl. "It is no simple matter to find experienced people to study, plan and implement a mineral project in a remote region of Africa, for instance."

## Kenyan government will spend US\$11.7mn to develop city roads

The Kenyan government will spend US\$11.7mn to rehabilitate and upgrade 600km of roads in Nairobi.

According to *Daily Nation*, the project will be carried out by the Kenya Urban Roads Authority (KURA) and the Kenya Rural Roads Authority (KERRA).

KURA has set aside US\$12.6mn to upgrade 588km of road in the city, and KERRA has allocated US\$1.6mn to build 21.2 km of road.

Kenya Roads Board (KRB) revealed the plans in the Annual Public Roads Programme (APRP) for the financial year 2018/2019.

Under the programme, Jogoo and Lusaka roads have been allocated US\$101,205 to be upgraded, while Landhies Road will receive US\$37,193 in investment.

Another US\$411,087 will be used on the northern and eastern bypasses covering about 60km.

Other roads targeted by KURA include Spine and Manyanja roads in Kayole, Bogani East, Baba Dogo, Peponi, Josep Kang'ethe, Utawala and Kasarani-Mwiki.

At least 18 major roads, 29 streets and five lanes will be upgraded by the urban road agency in the city centre. Some of the roads to be upgraded are Dubois, Tsavo, Temple, Haile Selassie, Lagos and Taveta.

KRB executive director Jacob Ruwa explained, "The fuel levy fund managed by the Kenya Roads Board is shared with the road agencies where Kenya National Highways Authority (KeNHA) gets 40 per cent, Kenya Rural Roads Authority 21.8 per cent, Kenya Urban Roads Authority 10.2 per cent, county governments 15 per cent and Kenya Wildlife Service one per cent. KRB retains the remaining 10 per cent which it allocates to road agencies on a case-by-case basis and another two per cent for its operations."

Three Chinese companies, China Wu Yi, Sinohydro Corporation and China Roads and Bridges Corporation, have won tenders to upgrade the roads.



Image Credit: Adobe Stock

The Kenyan government will be upgrading 600km of roads in Nairobi.

## KWAGGA RANGE HIT WITH CONSTRUCTION INDUSTRY

The increasing demand for fibreoptic cable infrastructure has seen a Durban installer acquire eight Kwagga rammers from Hire It. This is testament to the success of the cost-effective range of small plant for the construction industry.

The range is focused on portable power generators, compaction, and concrete. It comprises generators, rammers, plate compactors, power floats, drive units, vibratory pokers, concrete/asphalt cutters, scarifiers, diaphragm and water pumps.

Richard Fraser, Hire It sales director, says, "The machines have come in for a few services, and we can see that they are handling the workload well. We have sold virtually all of our initial consignment, and so far have had no major comebacks."

By importing premium Honda engines, and assembling them with machine kits locally, Hire It is able to offer its Kwagga range at a much lower price point. "We believe the engine is the heart of the machine, which is why we have opted for Honda, one of the leading air-cooled petrol engines on the market. Our products are well-suited for the African market, especially as we have kept them as simple and as robust as possible, but with a premium engine," Fraser explains.

Apart from the boom in sub-contractors needing small plant for the niche fibreoptic cable installation market, Hire It is also supplying equipment to the Umhlanga Arch premier mixed-use development through its Broad-Based Black Economic Empowerment (B-BBEE) company Majozi Bros Tool Hire.

"Virtually all of the small plant used on the Umhlanga Arch project has been ours," Fraser highlights. Other flagship projects include the OceanDune development, also in Umhlanga, and the extensions to the Sun Coast Casino and the Gateway Theatre of Shopping. Kwagga compaction equipment is also used for cellphone tower installation.

## NO FUEL WASTED WITH NEW VOLVO EC200D

The EC200D crawler excavator from Volvo Construction Equipment (Volvo CE) is the perfect partner for general-purpose applications. From road construction and building projects to agriculture, landscaping and utility work, the EC200D delivers optimum swing speed, excellent combined operation, powerful digging forces and fast cycle times. The latest addition to the D-Series line-up also offers outstanding fuel economy, helping customers improve their total cost of ownership and maximise the profitability of their business.

The intelligent feature optimises the hydraulic system to reduce the loss of flow and pressure, without compromising digging power or swing torque. The hydraulics work in harmony with the Volvo D5 engine, delivering high torque at low rpm for the ultimate combination of performance and fuel efficiency. The EC200D's combination of high fuel economy with a design, that is perfectly matched to the needs of general construction mean Volvo CE expects the new machine to become a popular choice.

## ► BRIEFS

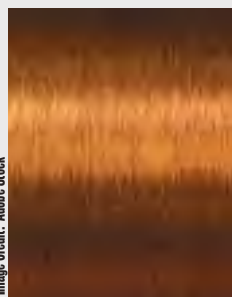


Image Credit: Adobe Stock

Zhejiang Huayou Cobalt Co will invest US\$147.2mn to build a copper project in DRC.

### Firm to invest in copper project

China-based Zhejiang Huayou Cobalt Co has announced that it will invest US\$147.2mn to build a copper project in Democratic Republic of Congo.

The latest announcement comes as the company plans to extend the exploration of its mining assets in the country. The project will be in Lukuni and will have an annual electro-deposited copper production capacity of 30,000 tonnes. Electro-deposited copper is a raw material used in the electrical equipment sectors.




Image Credit: Adobe Stock

The 158.7MW wind farm in Dakar will be completed in 18 months.

### Senegal wind farm gets underway

Eiffage Energia has announced that the construction of a 158.7MW wind farm is underway in Dakar, which will give electricity to around 150,000 households, according to media reports. The project in partnership with Vestas Wind Systems will consist of 46 pieces of V126 wind turbines with a capacity of 3.45MW each and be completed in 18 months. "Projects like this consolidate the international presence of Eiffage Energia in renewable energy," the company said.

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# Cranes for tankhouses

A buoyant market for tankhouse cranes is being driven by strong demand from Africa's copper industry.



Image Credit: Condra

One of the manufacturing and assembly areas at Condra's factory in Johannesburg.

The African market for tankhouse cranes is flourishing, with strong demand in a geographical band stretching from the Equator to the Tropic of Capricorn. For end-users of this type of crane, the main concern remains the same: prompt and effective after-sales service.

Tankhouse cranes are double-girder electric travelling overhead machines that lift and position copper plates and slabs during electrolysis, the fourth and final step of the pyrometallurgical refining process used with certain types of copper ore.

In this fourth step, anodic copper slabs which have already attained 99 per cent purity during three prior processes are hung in large tanks filled with an electrolyte solution of copper sulphate and sulphuric acid.

Small, thin sheets of pure copper are then suspended

between these anodes and an electric current is applied.

Positively charged copper ions leave the anodic slabs and move in solution through the electrolyte to place themselves on the cathodic sheets.

After some weeks, the slabs have disappeared and the sheets have grown to become thick copper plates of 99.99 per cent purity, ready for removal by the tankhouse cranes for rinsing and despatch to factories that produce copper wire, tubing and other products.

“ The South African company has manufactured tankhouse cranes for the copper and cobalt leaching plants at the Ruashi mine near Lubumbashi in DRC ”

## Market demand

One leading crane manufacturer, Condra, reports that tenders for as many as 30 tankhouse cranes are currently under evaluation.

Eight are for mines in the Phalaborwa and Rustenburg areas of South Africa itself, and 22 are for the Central African Copperbelt – 10 for mines in Zambia and another 12 for the southern Democratic Republic of the Congo (DRC).

The crane capacities are all around five tons, with a dual bottom-block system on each one to

keep the sheets level while they are moved. Condra reports that the total value of all these tenders is worth some R120mn (approximately US\$8.2 million).

The tankhouse cranes are technically advanced machines usually priced at about R2.5mn (US\$170,000) each, excluding cabins, air conditioning and the special ergonomics usually ordered as extras to cater for the very high crane speeds – about twice as fast as the average man can run.

Previously, the South African company has manufactured tankhouse cranes that include three double-girder overhead machines for the copper and cobalt leaching plants at the Ruashi Mine near Lubumbashi in the southern DRC, and an undisclosed number of machines for similar plants at a copper mine in Zambia.



Phalaborwa, South Africa is where Condra has tenders for tankhouse cranes.

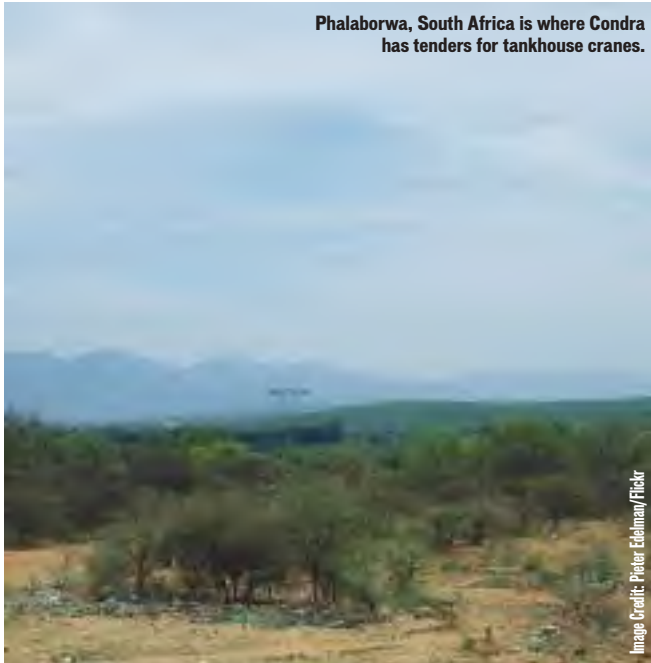


Image Credit: Pieter Edelmann/Flickr

### High efficiency

To achieve effective levels of production during electrolysis, Condra designs these cranes to achieve high long-travel speeds of between 100 and 140 metres per minute (the standard speed for overhead crane long-travel is around 30 metres per minute).

The company also keeps an eye on the corrosive nature of the tankhouse environment, offering a pressure test on crane girders in addition to the special paint specifications usually requested by the end user.

Pressure applied internally to the girders allows weld seams to be checked for pinhole leaks, with a temporary application of liquid soap showing bubbling if seam integrity has been compromised.

The test ensures protection against internal corrosion caused by corrosive fumes being sucked into the girder as it expands during the heat of the day.

### Service and support

There must also be effective crane service and maintenance which, according to Condra, is lacking among many of its European competitors because of the absence of local agents with spare parts holdings and a qualified service ability.

Spare parts ordered from Europe can take up to two months to arrive, it says.

By contrast, Condra's agent for the Copperbelt, Kitwe-based EC Mining, holds readily available stocks of spare parts and carries out machine maintenance at all installation sites.

As an example of the problems that poor after-sales service can cause, Condra points to a Copperbelt mine where spares and maintenance is no longer available for two cranes supplied by a northern hemisphere competitor.

The company is currently in talks with the management about this mine about converting the installed cranes to Condra standard so that they can be better maintained.

A similar situation at a Cape Town zinc plant recently resulted in three overhead cranes undergoing this type of conversion at Condra's Germiston works, outside Johannesburg, to facilitate effective maintenance into the future. ■



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# Top ten tips for buying a new excavator

When purchasing a new excavator, Franco Invernizzi, senior business director for Case Construction Equipment, Middle East and Africa, says there are many important items to consider.

## 1. Operating weight/size, Application



It's important to match the right size machine to the required tasks. Crawler excavators are generally grouped into three size-classes: compact/mini (0-6 metric tons), mid-size (6-10 metric tons) and standard/full-size (10-90 metric tons). Knowing how the machine will be used, the spec requirements for the job (bucket capacity, etc.) and the size machine you need are the first things you need to decide when making a buying decision.

## 2. Hydraulics



Consider the attachments you need to use and understand the hydraulic flows required for each. Equipping your excavator with the correct attachments will give you the versatility you need to get the most out of your investment. Remember to ask the supplier about the

machine's hydraulic line requirements. This will often help determine the scope and variety of attachments you can use with the machine.

CASE excavators provide an ideal combination of power, durability and control. The hammer and crusher can each be set to five different flows. This means they can perform the toughest tasks with minimal effort and ultimate precision.

## 3. Transportation/Access



When purchasing a new machine, transportation is always an important consideration. Depending on the size of your current fleet, a larger trailer may be needed to haul your new excavator. If you need to travel on weight-limited roads bridges, you must provide the necessary certification for your drivers.

Buying the right size of excavator for your application and region is essential. Ancillary transportation and owning/operating costs of a new machine will vary from country to country.

## 4. Controllability and performance



Controllability and performance are crucial to the operation of an excavator. Due to the complex nature of the work they are used for, being able to deliver precise power is essential to completing the job.

CASE excavators allow the operator to adjust the machine to their preference, resulting in maximum performance and manoeuvrability. Every component works together in harmony, resulting in industry leading cycle times and superb energy savings,

## 5. Operator comfort and ergonomics



When you're in the cab of an excavator for ten hours a day, comfort and ergonomics are critical for productivity. Look for features in the cab that

will keep your operators comfortable and focused on the job.

CASE excavators feature best-in-class cab space. This also comes with independently adjustable armrests and an adjustable lumbar system.

## 6. Tracks and undercarriage



It's important to understand the many track options available to you, as well as the impact that they can have on the productivity of the machine. With most compact excavators, rubber tracks will come as standard. They are designed to minimise surface damage during travel and operation in the residential, street and in-building applications where they are often used. Rubber tracks wear out more quickly than steel, so there are a large variety of aftermarket track types available with varying widths and tread depth.

Mid and full-sized excavators are usually equipped with steel tracks and also come in varying sizes, widths and depths. When discussing track options with your equipment dealer, consider the ground conditions and the type of applications in which you intend to utilise the machine. Wider tracks with deep grousers offer the most traction for heavy digging in softer ground conditions.

Look for a rugged undercarriage with features that make it easy to keep clean and maintain. CASE excavator undercarriages are built with high-tensile strength steel, meaning they offer long term durability even in heavy duty applications.

## 7. Energy Efficiency



Energy efficiency, as well as power and control in an excavator allow you to reduce your operating costs without having to sacrifice production levels.

All CASE excavators are built to deliver best-in-class energy savings. In addition, they are fitted with electronically-controlled common rail engines. These engines deliver high torque at low engine speeds, with a low-sound exhaust muffler for reduced noise levels both inside and outside the cab. CASE excavators can also be fitted with a hot climate cooling system so they can operate in temperatures above 45°C.

## 8. Additional features



Today's excavators are loaded with additional features, so you need to know what's available to you before you decide to make a purchase. Features like selectable power modes and auto-idle can have improve fuel savings and overall operating costs.

Look for available options like LED lighting kits and rear- and side-view camera packages. And check where the access points are for daily maintenance procedures – excavators should be designed to provide easy ground access to service ports and other key service items.

Finally, if they are available in your country, consider investing in advanced technologies such as telematics and machine control. Some manufacturers – CASE included – now offer telematics hardware as standard on their new models. If you're interested in a machine control system, it will be more cost-effective to have it installed as part of the initial purchase as opposed to taking the machine out of service for installation later.

## 9. Choosing the right dealer



Choosing a dealer is a long-term commitment that needs careful consideration. You will rely on them for support throughout the lifetime of your equipment when you need parts, service and repairs.

Look for a knowledgeable dealer with a robust service department, who has partnered with manufacturers that have reliable parts distribution networks. The best manufacturers provide regular training for their dealer technicians and sales staff; they also always have training resources available. In addition, manufacturers with a direct presence in your region represent additional security on your investment.

## 10. Maintenance contracts and warranties



When you're ready to purchase your new excavator, talk to your dealer about machine warranties and available extended maintenance contracts. When it comes to purchasing new equipment, protecting your investment is one of the most important considerations. Most manufacturers offer standard warranties on their equipment, but a premium service/maintenance program will make a significant impact on your overall total cost of ownership. ■

## A BRIGHT YEAR AHEAD FOR MORRIS SITE MACHINERY

This year, Morris Site Machinery is looking forward to introducing new and existing customers to its growing range of British designed and built lighting towers.

With SMC lighting towers serving over 25 countries worldwide, including Ghana, international business director, Phil Winnington flew over in September to visit service partners Equipment Africa and see how the SMC TL90 tower lights were performing in hot conditions and tough terrain.

The lighting towers with their 4 x 320 Watt lamp heads were consistently providing 117 hours uninterrupted run time with a 100 metre light spread. Powered by a Kubota Z482 engine, the model is proving ideal for a wide range of industries including road, rail and mining. Equipment Africa reported that customers and associates alike had commented on the improved light performance and run times of the TL90 in comparison with older more basic metal halide models.

On returning from Ghana, Phil said, "Seeing our equipment in action, supporting industries with important work across the region and working closely with Mark Bacon at Equipment Africa only strengthens our resolve to continue supplying quality equipment. We work hard to build long term



A SMC TL90 lighting tower at work in Ghana.

Image Credit: Morris Site Machinery

relationships and are very proud to have supplied our lighting towers for over 15 years overseas."

Mark Bacon, managing director of Equipment Africa said, "It was a pleasure to welcome Phil to Ghana and show him the valuable work here. We strive to offer our customers the best product and SMC lighting towers are proving to be a high quality lighting solution. There's an exciting future ahead for Ghana and we're pleased to have this robust, reliable site equipment from Morris Site Machinery on board."

## PUTZMEISTER LOOKS TO THE FUTURE WITH 'ONEIT'

With a large-scale transformation programme, this year the Putzmeister Group with its headquarters in Aichtal wants to continue its 60-year company success story and strengthen its worldwide leadership in the concrete construction industry. "Cost pressure, increasing competition from Asia and the digitalisation of the concrete-processing construction industry are challenges that we as a premium provider must face in the future," says Martin Knötgen, Managing Director of Putzmeister Holding, explaining the reason for the worldwide initiative that started this year.

Hundred and fifty dedicated employees in 16 workstreams from 15 countries are working on around 500 minor and major initiatives such as "OneIT", which is about Putzmeister 4.0. Furthermore, the change programme is intended to increase economic efficiency and focus more on the customer. The programme also provides the necessary framework for investing in future markets. In this regard, there may be new demands on the employees.

"If in future we cannot cover the required competences with the existing staff, new jobs will be created," confirms the CEO. "Should it not be possible to accommodate certain employees internally as required in the course of the change programme, which is set to last for five years, it is our declared aim to ensure that all measures are implemented in a socially acceptable manner."

The Putzmeister Group is negotiating with the Works Council. "I cannot comment on the possible number of employees affected who will become part-timers or retire, or who will use up their overtime hours," said the company director.

## E10 mini-excavator reaches 10,000th unit

Bobcat has announced an achievement in 2018 for the company's market-leading E10 one tonne mini-excavator with the 10,000th unit rolling off the production line in the same year as it celebrates its 10th Anniversary. The E10, now renamed the E10z, is ideal for a variety of applications including rental, construction, demolition, refurbishment and drainage work.

The launch of the E10 mini-excavator in April 2008 was a landmark moment in Bobcat's history and in the development of the company's compact excavator range. The E10, along with the E08, were the first excavator models designed and built from start to finish in Europe. The goal was to replace and greatly exceed previous models by meeting the expectations of customers in Europe

and beyond. The 10,000 plus sales and the reputation the E10 has earned over the last 10 years confirm that this objective has been more than achieved.

The E10 is now called the E10z to reflect that it is a zero tail swing mini-excavator with a maximum digging depth of 1.82 m and a machine weight of 1066 kg. Bobcat's E10z is designed and engineered to provide the best combination of high performance, stability, operator safety, ergonomics and durability in this segment of the mini-excavator market and offers the ability to retract itself to easily pass through standard 80 cm door openings.

The main feature which differentiates the E10z from other machines on the market is the patented side adjustable consoles which accommodate hydraulic pilot pressure controlled joysticks. This design is unique in its class, allowing the operator to enjoy the comfort and feel of larger machines, while being able to adjust the width of the consoles for easy passage through narrow openings.



Image Credit: Bobcat

Bobcat E10 mini-excavator passes landmark 10,000 sales.



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## Course Overview:

In order to add real value to an organisation, HR has to show that we are not just an expense - "a necessary evil". To do this effectively, we need proof, not anecdotal evidence or inferred cost savings, but instead, hard facts and numbers. Many HR departments find this difficult as they themselves are not in agreement as to what value they offer the organisation. In order to help HR do this there are two major questions that we need to answer:

- What is the most important thing that HR is there to do?
- What should we measure to see how well we are doing it?

The solution seems obvious, HR needs to learn to speak in quantitative, objective terms, using numbers to express their activity and the value it adds. This three day Training Course will explain how to do this and give you a framework for developing a set of HR measures and analytics to help show the real value of HR to your business. HR professionals will learn how to drive organisational change around human capital activities by linking evidence based data to business strategy and performance, as well as learn to apply HR analytics to a broad spectrum of human capital activities. From facilitating outcome-based conversations, to interpreting and benchmarking organisational results, this course provides HR professionals with hands-on expertise that will help to acquire the confidence needed to build consensus and acceptance around human capital measures that support operational goals.

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## DOOSAN DISPLAYS POPULAR EXCAVATORS AT RENTAL SHOW

Doosan Construction Equipment will display two of the company's most popular excavator models for the rental industry on its booth – 5301 – at the Anaheim Convention Center during The American Rental Association Show in Anaheim, California, from 17-20 February.

The Doosan DX85R-3 and DX140LC-5 excavators will be on-site during the show, and Doosan staff will be available to walk visitors through the capabilities of the machines. As a member of the increasingly popular 8 tonne class of excavators, the DX85R-3 is the perfect rental machine for a contractor who needs a compact excavator but has a job that calls for a slightly heavier piece of equipment that can still be easily towed. The DX140LC-5 is a 14 tonne, conventional tail swing excavator known for its trusted reliability – a chief concern for rental companies.

The DX85R-3 comes standard with rubber tracks to minimise ground disturbance. The DX140LC-5 will be outfitted with rubber pads on its steel tracks, which is an optional feature that enables operators to minimise damage when working on concrete or asphalt. They will also be equipped with a hydraulic quick coupler,



Image Credit: Doosan

**The DX85R-3 comes standard with rubber tracks to minimise ground disturbance.**

which allows operators to change the excavator attachments without leaving their seats.

### DX85R-3 Compact Excavator

The Doosan DX85R-3 is a powerful machine which leads the industry in bucket force but is also light enough to be easily moved between worksites by most contractors. Its reduced tail swing design allows operators to work in tight spaces, and its excellent slew performance makes it an ideal machine for working on slopes.

The DX85R-3 offers best-in-class cycle times due to its cylinders, which are sized precisely to match pump capacities. It offers a smooth, predictable operation with fingertip boom swing control via a simple thumb switch on the left joystick. The comfortable joystick controls reduce hand fatigue and include two way auxiliary hydraulic control.

Inside the cab, a multi-language deluxe colour panel displays fuel level, coolant temperature, day/time, throttle position and engine rpm. Operators can select auxiliary hydraulic flow modes and rates from the panel. For increased security, an integrated password protection system may be used to prevent theft.

The Doosan DX140LC-5 excavator is designed for long life with an extra-sturdy frame and reinforced superstructure. The conventional tail swing overhang on LC models gives the operator strength and leverage for general construction and traditional excavating applications. The DX140LC-5 comes standard with permanently sealed and lubricated track links, and the workgroup bushings and hard-wear disks are designed for reliability as well as extended service intervals to increase uptime.

## FIVE MACHINE INNOVATIONS PROMISING TO CUT FUEL EMISSIONS

With the rise of fossil fuel prices and the pressure to lower carbon footprints many consumers and companies are demanding more fuel-efficient vehicles. Volvo CE explores the truth behind some of the advancements in engine design to the adjustments of wing mirrors to see how innovations are plugging the drain on fossil fuels.

**1. Cameras instead of side mirrors:** In 2016, Japan made it legal for car manufacturers to eliminate side mirrors and replace them with cameras. It is also a controversial decision and one that has not necessarily caught on in other parts of the world. The main argument against removing side mirrors in passenger and commercial vehicles is safety. Road users are used to mirrors and, although a simple idea, they are highly reliable. It is also very easy for law enforcement to notice a damaged side mirror, but it is near impossible to quickly detect broken side view cameras. However, there is also an argument that cameras could

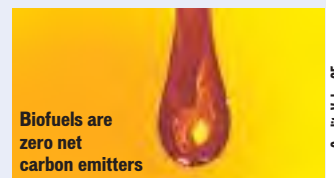
actually make driving safer as it could eliminate blind spots that occur with conventional side mirrors. But Japan's decision is an important one as eliminating side mirrors is estimated to improve fuel efficiency by as much as 5 per cent. As the drain on fossil fuels becomes more intense other countries might follow suit. Maybe its time to look forward?

**2. Engine design regulations:** In 2019 the EU Stage V emissions standards for off-road machinery will be implemented. To assist original equipment manufacturers (OEMs) in making this transition effective, Volvo Penta has created a Stage V off-road engine range although in Africa, emission regulations are less stringent.

**3. Biofuels:** Biofuels are renewable and clean burning fuel made from living matter, which work by sucking carbon dioxide out of the air as they grow. Although relatively underused, biofuels have been around as long as cars have. In the

very earliest diesel engines, for example, peanut oil was used as the primary source of fuel. When burnt in automobiles, they release carbon dioxide, but as it is the same carbon that the plants absorbed while growing, biofuels are known as zero net emitters. However, the reality is slightly more nuanced. It takes energy to grow biofuels; it takes fertilizers, tractors, transportation, and energy to convert the plant to liquid fuel. But if we select the right non-commercial clean crops that do not need a lot of fertilizer, water or other resources then we can create fuel that is cleaner than petrol.

**4. Vibrating foot pedals:** Bad driving habits, like hard acceleration, have been shown to be responsible for 25 per cent of overall fuel consumption. But old habits die hard and sometimes we all need a little helping hand to identify what we could do better. The good news is that technology is here to help you. There have been recent developments in intelligent haptic



**Biofuels are zero net carbon emitters**

Image Credit: Volvo CE

gas pedals that provide feedback to drivers, in the form of vibrations and resistance. For example, the pedal might vibrate when you exceed the recommended speed, prompting you to ease off a bit.

**5. Auto engine shutdown:** Construction machines can be idling for 40-60 per cent of its operating time. This puts a strain on your wallet and the environment. One way Volvo Construction Equipment has cut down on excessive fuel consumption is by introducing the an automatic engine shut-down option. This reduces consumption without impacting on productivity - by automatically cutting the engine off when it's been idling for more than four minutes in a stationary position. The system will boost fuel efficiency by up to 10 per cent.



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## GROWING READYMIX MARKETS WITH CHRYSO TECHNOLOGY

Leveraging its admixture technologies and its growing range of value-added products, CHRYSO Southern Africa is helping its readymix customers expand their markets despite the flat conditions in the construction sector.

According to Deon Klopper, sales manager readymix segment at CHRYSO Southern Africa, the slow economy continues to pressurise readymix suppliers, but the answer lies in offering end-users more options to reduce their costs while delivering quality results.

“This is where the role of CHRYSO’s research and development efforts – leading to ongoing technology advances – is becoming so important to the readymix sector,” says Klopper. “Working closely with both the readymix supplier and the end-user, we ensure that we understand what both parties require.”

This allows CHRYSO to share information with end-users about a range of cost effective options, which they then purchase through the readymix supplier.

“End-users need to produce their concrete at a certain optimum cost per cubic metre to remain competitive, while retaining the required quality,” he says. “At the same time, readymix producers can use our value-added products to help grow their markets by offering more solutions to the end-user.”

CHRYSO Southern Africa has continued to expand its range to include technologies such as fibres, mould release oils, curing compounds, decorative concrete, permeability reduced watertight concrete and dust suppressants.



Image Credit: CHRYSO

**CHRYSO Quad and Optima technologies provide solutions that are most important to customers – concrete strength, slump or open time.**



Image Credit: CHRYSO

**Readymix suppliers look to admixtures and technology for growth.**

“While the readymix supplier was in the past expected just to deliver what the customer ordered, they can now offer their customers more, by servicing other site requirements and make useful cost saving proposals,” he says.

Among CHRYSO’s admixture developments, for instance, is CHRYSO QUAD 20, which allows end-users to utilise lower grade sand, where sand and aggregate quality has become more variable. CHRYSO Quad 20 is a unique formulation which increases the viscosity of cement paste with limited impact on concrete slump and slump flow.

He also highlights CHRYSO’s focus on providing fit-for-purpose solutions that suit the specific priorities of any given project.

“We ask customers what is most important in each of their projects – such as the concrete’s strength, slump or open time – and can then manufacture an admixture specifically for their readymix concrete,” says Klopper. “Our CHRYSO Optima 1000 technology, for instance, represents a formula that adjusts to match customers’ demands, with unprecedented flexibility for maximum robustness, reliability and precision. It offers up to seven hour workability retention and up to 50 per cent water reduction for an optimal dosage per cubic metre.”

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## CAT 990K AGGREGATE HANDLER OFFERS 25 PER CENT PAYLOAD INCREASE

Caterpillar introduces the 990K Aggregate Handler, designed to handle greater payloads in aggregates yard applications. With as much as a 25 per cent payload increase, as compared to the standard 990K, the new Aggregate Handler enables customers to load trucks and railcars faster and to move more material in load-and-carry and stockpile management tasks.

The Cat 990K Aggregate Handler has a payload of 22 tons (20 tonnes) and a full turn static tipping load of 96,426 lb (43 738 kg). Additional counterweight maintains machine stability, and robust 990K structures ensure durability in the Aggregate Handler configuration. The loader makes best use of general purpose and coal buckets for increased volume.

The 990K Aggregate Handler is available in standard lift configuration with 13.5-ft (4108-mm) dump clearance and in high lift configuration with 15-ft (4569-mm) dump clearance. Increased capacity and high dump clearance enable customers to load railcars and large trucks with a better pass match for faster material handling at lower cost per ton.

The 990K Aggregate Handler complements the smaller 986K and 988K Aggregate Handlers in



Image Credit: Caterpillar

**CAT 990K Aggregate Handler.**

the Cat large wheel loader line. The Aggregate Handler, however, is not designed for use in quarry face or other shot rock applications.

### Building on the 990K

The new 990K Aggregate Handler is built on the proven features of the 990K Wheel Loader. The 990K powertrain provides powerful operation with superior fuel efficiency. The Cat C27 engine powers the loader and delivers net power of 699 hp (521 kW). Lower engine speed helps drive economical fuel use. Additional fuel savings accrue with the ECO Mode (on-demand throttle), engine-idle shutdown system, and engine-idle kickdown/auto-resume system.

The Cat exclusive, field-proven impeller clutch torque converter uses a lock-up clutch, providing direct drive to boost fuel economy, trim cycle times, and reduce heat especially in load-and-carry applications. The system allows operators to balance rimpull and hydraulic power for optimum loading efficiency. Positive Flow Control implement hydraulics use a variable displacement, electronically controlled pump to precisely apportion oil flow based on operator control inputs.

A number of drivetrain options are available. The integrated axle cooling and ride control options are beneficial in load-and-carry work.

The operator station features the Cat Vital Information Management System, VIMS™ 3G, which provides customisable operator profiles, a cycle timer and an integral Payload Control System, which provides on-the-go payload weighing. The graphical information display is easy to use and keeps key information in front of the operator. The Cat Comfort III seat provides integrated seat-mounted controls for smooth and comfortable operation. Transmission controls, integral with the STIC™ steering lever, allow convenient travel control.

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# Are flexible workplaces the future of work?

Hausmann Group, a leading commercial interior design and building company, is introducing a new workplace concept *AfricaWorks* to help start-up businesses and entrepreneurs across Africa.

**A**s cities like Nairobi evolve into a technological hub so does the demand for unique office space to accommodate the influx of start-up firms and entrepreneurs.

Step in Hausmann Group. It has just launched *AfricaWorks*, a new workplace concept for companies to grow their business on the continent.

Effectively, it is a flexible working space where start-ups and entrepreneurs can easily find a place to work, gain access to a local network and reduce the cost of buying an office and other overheads.

Gregoire Schwebig, CEO of Hausmann Group, said, they were already targeting corporate firms.

He said, “Co-working space refers to the sharing of open plan offices – where you have freelancers and creative people working. Our model, from a design point of view, is targeting the corporates more. It is what is called ‘service to office’ so there is an element of flexibility in that, but it is a closed office in a very modern contemporary design. It has closed offices because if you are a Fortune 500 corporate and want to use five and ten people at *AfricaWorks*, you want to have confidentiality and restricted access, that’s why we call it a flexible work place solution. It is a

“ We are able to cut the price of buying an office dramatically ”

**GREGOIRE SCHWEBIG,  
CEO OF HAUSSMANN  
GROUP**



Top to bottom: Examples of offices designed by Hausmann Group

very popular trend that we see in the real estate corporate market everywhere in the world. Although it is smaller in Africa, it is a

product even more suited to the continent than anywhere else. For the simple reason that the headcount per company is very

low. One of our clients, for example, Loréal, have only 10 to 20 employees in Côte d’Ivoire, therefore there is a big mismatch between the demand for space and the offer.”

In Europe, Schwebig stated, the size of the workplace in a contemporary office can be anywhere between 5-8 sq m per person, but in Africa it can be as much as 15-25 sq m per person.

He said, “The outcome of this is that it costs an absolute fortune to operate offices across Africa. In Nigeria, on top of that, you need to pay two to three years of rent in advance, which creates an enormous barrier to entry in the market because of this mismatch. It does not make any business sense and it’s not good for the development of the country. We offer companies 5-7 sq m per person so we are able to cut the price of buying an office dramatically while offering a much better look and feel, as well as give access to services and communities around that.”

He said, “What we want is to ultimately fast-track the learning curve of any people coming into these markets and make it easier to set up a business, as normally to do business in Africa, it is based on having informal knowledge about how it all works.”

Last year, Hausmann Group opened three offices in Nigeria, South Africa and Côte d’Ivoire and there are plans for 50 offices to be set up in Africa. “We have raised US\$1.5mn in equity for the brand and want to raise funds to create even more centres,” he added.

Hausmann Group has carried out projects for international corporates, such as Uber, Mitsubishi and Amadeus. ■

Image Credits: Hausmann Group

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