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"We want SMEs to be the engine of economic growth in Africa"

Felix Bikpo, CEO of the African Guarantee Fund

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Editor's Note

Welcome to our June issue. Major power industry players will be on the idyllic island of Mauritius for the 20th anniversary of the Africa Energy Forum from 19-22 June (page 38). It will be an event not to be missed, and we wish all of the participants every success in helping to take Africa's enery sector to the next level.

In this issue, our economist Moin Siddiqi concludes his special series on infrastructure development on the continent and the role of private financing in pushing the agenda (page 20); looking at the benefits of financing mechanisms such as Public-Private Partnerships (PPPs) and Private Participation in Infrastructures (PPIs).

Elsewhere in the issue, with more than 600 million people still lacking access to electricity in Africa, it is essential to build more transmission lines and upgrade transmission capacity within and between countries (pages 36 and 37).

Finally, Prieska Copper Mine in the Northern Cape is set to reopen after being closed for more than 20 years. This is good news for communities and businesses which will be able to capitalise on the region's economic resurgence (page 56).

Samantha Payne, *Editor*

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Prieska Copper Mine, located south-west of Kimberley in the Northern Cape Province, is set to start production after closing more than 20 years ago.

Inclusive growth and job creation in Egypt

IMF says it stands to help Egypt in the next stage of modernising its economy.

Image Credit: Adobe Stock

"The time has come to take advantage of the hard-won macroeconomc stability and push on to create jobs and raise living standards through sustainable growth," says the IMF first deputy managing director David Lipton on the future economic growth of Egypt.

Lipton made his remarks during a conference with the government of Egypt to look at the next steps to provide greater opportunities for all Egyptians.

He urged ministers to take advantage to "shift growth and job creation into a higher gear" while global economic growth remains at 3.9 per cent this year and in 2019. "That favourable external environment provides a good window of opportunity for Egypt to undertake reforms; a window that may not be open for too long. That is because the medium-term outlook is more uncertain," he continued.

Lipton paid tribute to the country's fund-supported programme, the changes to the foreign exchange market and tightened monetary policy, and said technology was a game-changer for the country as is the case in other advanced economies.

He said the role of the private sector was equally important, encouraging a "business climate where the rules of the game are simple, transparent and respected, in which small businesses can grow into medium-sized and even large companies," adding that greater regulatory certainty would encourage investment and competition as well as "enough labour market flexibility to allow young people to find jobs".

"The IMF stands ready to help, through our programme and beyond, bringing experiences of other countries that might prove useful to Egypt. A big part of what we do is to help disseminate the success stories of our members. I am already often telling others about how ownership and boldness has delivered results here in Egypt. We can help you do the same with regard to reform and modernisation. This is a commitment we meet with our advice, technical assistance and training. Ultimately, it is up to Egypt to face up to the task of building a better country that meets the needs of all Egyptians. Let us see that this conference helps identify and prioritse policies that can advance this outcome."

FAO PROVIDES TRAINING FOR LIBYAN OFFICIALS

The Food and Agriculture Organization (FAO) of the United Nations concluded a 10-day training programme to officers from the Libyan Ministry of Agriculture, Animal and Marine Wealth. The programme, held from 9-19 April, was inaugurated by Michael Hage, FAO sub-regional coordinator for North Africa, and focused on communication and data collection, which is line with another programme to strengthen national capacities in the agricultural sector in Libya.

The training sessions covered topics such as a learning needs assessment; veterinary service planning, development and management; fisheries law enforcement planning and strategy development; agriculture sector planning and organisational restructuring; plant production and plant protection; integrated pest management; mapping of natural resources using GIS; agricultural marketing and market infrastructure agricultural policy development.

DEBATE ON MOROCCO JOINING ECOWAS

The Amadeus Institute, an independent Moroccan think tank with solid expertise on African issues, has since March 2018, launched series of debates about Morocco's accession to ECOWAS. The first two were held in Dakar and Abidjan, in partnership with the Senegalese think tank "Agricultural and Rural Prospective Initiative" and the "Ivorian Centre for Economic and Social Research."

Amadeus announced the third chapter of its West African tour, which was held in Accra. The dialogue took place on May 15 at Mövenpick Ambassador Hotel Accra. The Accra Conference was organised in partnership with the General Confederation of Entrepreneurs of Morocco (CGEM) and the Ghanaian Think Tank IMANI.

Morocco officially expressed its will to join ECOWAS as a full member in February 2017, which has been agreed in principle by the community's Heads of State in June 2017; however, the absence of debate has been noticed in Morocco as well as in the ECOWAS states. In order to reinforce trust between governments and people, the Amadeus Institute aims to offer a platform for all parties to present their own perspectives.

"The conference in Accra was not expected to endorse Morocco's bid without asking critical questions about the political and economic challenges and opportunities ECOWAS member states must deal with," said Franklin Cudjoe, Founding President and CEO of IMANI. The objective of this conference was to listen to the Ghanaian perceptions and analysis regarding Morocco's accession. The speakers were invited to share their views on the way that process can be implemented without disrupting the West African integrationist synergy but rather, by exploring how they can reinforce this exemplary regional community with the best "win-win" approach.

BRIEFS

Image Credit: Adobe Stock

US hosts second US Morocco Strategic Energy Working Group.

2nd Morocco energy group held

The US Department of State hosted the second US Morocco Strategic Energy Working Group in Washington, DC on April 19. Sandra Oudkirk Deputy Assistant Secretary of State for Energy Diplomacy and Amina Benkhadra, Director General National Bureau of Petroleum and Mines for Morocco, led the discussions, which focused on developments in the Moroccan energy sector, including hydrocarbons exploration, renewables deployment, energy efficiency and commercial initiatives.

Image Credit: Adobe Stock

North Africa needs to adapt its payment systems towards digital, says a World Bank economist.

Digital can drive growth across North Africa

Investment in digital transformation for the major cities in North Africa can unlock potential for the service economy to drive growth and job creation across the region, according to the World Bank. To harness the power of technological innovation into internal sources of growth and job creation, the region needs to adapt its internet and payment systems, its regulatory framework, its "tech state capacity" and the financing architecture for start-ups," said Rabah Arezki, chief economist for MNA.

IT FITS, BUT WILL IT DO THE JOB?

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Extra funding for Africa's Talking will boost pan-African expansion plans

Image Credit: Adobe Stock

Africa's Talking is the favourite solution of many Kenyan start-ups.

Orange Digital Ventures Africa, the Orange investment fund's new initiative for Africa, announced its first investment – helping Africa's Talking to raise US$8.6mn alongside the IFC World Bank and Social Capital.

Based in Nairobi, Kenya, Africa's Talking is the leading company providing access to telecom operators' communication and payment APIs (application programming interfaces) for developers. It is now the favourite solution of many Kenyan start-ups and more than 15,000 developers, many of which rely on these APIs including SMS, voice and USSD to design services that are revolutionising financial, energy, health and insurance services among others.

Upon completion, Africa's Talking plans to accelerate its growth to support its clients' expansion strategies. Beyond Kenya, the company has started working in Uganda, Rwanda, Tanzania, Malawi, Nigeria and Ethiopia.

"We are delighted that the first beneficiary of our African initiative is a recognised player providing access to operators' APIs. We believe that it is essential to support every initiative that aims to make these APIs more accessible to entrepreneurs in Africa. The expansion of these mobile services is one of the major ways to help generate new innovations that will have an impact on the continent. What is more, this investment strengthens Orange's position as leader in the ongoing mobile revolution. We look forward to seeing Africa's Talking accelerate its pan-African expansion," said Marc Rennard, chairman of Orange Digital Ventures.

"This new round of fundraising will enable us to grow our pan-African community of Software Developers who are building businesses that consume communication and payment services. In this context, the arrival of Orange Digital Ventures is excellent news for Africa's Talking. We intend to leverage this relationship to accelerate our expansion in countries where Orange is present and launch new products that deepen the engagement of Orange with Software Developers," said Samuel Gikandi, CEO and co-founder of Africa's Talking.

SEVENTH ANNIVERSARY OF RENAISSANCE DAM CELEBRATED IN ETHIOPIA

Diplomats and members of the Ethiopian Community gathered at the Ethiopian Embassy in London on 28 April to celebrate the seventh anniversary of the construction of the Grand Ethiopian Renaissance Dam (GERD).

In his speech, H.E. Dr Hailemichael Aberra Afework the Ethiopian ambassador described the Grand Ethiopian Renaissance Dam as a "symbol of national unity"and "a living monument of self reliance".

He added that since the launch of the construction of the dam, which is now more than 60 per cent completed, Ethiopians supported the project because it was helping the country to reach middle-income status and enhance economic integration with neighbouring countries and beyond.

He said, "As we mark the seventh anniversary of the launch of the construction of GERD, we are reminded that each day leads to more successes in making the finalisation of the dam a historical reality." When complete, the 6,450MW dam will be Africa's largest project signalling Ethiopia's renaissance.

MANCHESTER AIRPORT FLIGHTS TO ADDIS ABABA

Manchester Airport has secured a landmark route into Ethiopia – Africa's fastest growing economies.

Ethiopian Airlines has confirmed it will operate a four-times-a-week service to Addis Ababa. The route will unlock connections to more than 58 countries across the African continent.

The service will start on December 1, initially transiting via Brussels. It will leave Manchester at 7pm, arriving at Addis Ababa Bole International Airport at 6am providing significant onward connectivity options from the African hub. On the return, it departs Addis Ababa at 12.45am and arrives in Manchester at 6.55am.

Manchester Airport CEO Andrew Cowan said,"While we have served a number of African holiday destinations for many years, this service will provide vital connectivity to one of the continent's most important hub airports. That will unlock dozens more destinations across Africa through Ethiopian Airlines' unrivalled network, meaning the north will be better connected to this part of the world than ever before."

Alex Marshall, group marketing and compliance director, Clarke Energy (Liverpool) and Northern Powerhouse Export Champion, said, "With our extensive operations across Africa, we are pleased to learn about this new flight to Addis Ababa from Manchester Airport, giving us extensive new route options across the continent.

Ethiopian Airlines CEO Tewolde Gebremariam said, "We are elated to start services to Manchester. The socio-economic implication of the new flight is immense. With vast investment and trade potentials between Africa and the UK, the flight holds the promise of boosting trade, investment and tourism with business opportunities for investors and business people."

BRIEFS

AIS announces top 50 innovations

Image Credit: Adobe Stock

The Africa Innovation Summit will take place from 6-8 June in Kigali.

The Africa Innovation Summit (AIS) announced the innovators from across the continent who will exhibit their solutions from 6-8 June in Kigali, Rwanda. Among the innovators include Pidson Abaho, PedalTap, Uganda; James Dick, Food Security for Everyone, South Africa; Victor Shikoli, HYDROIQ, Kenya; Immanuel Hango, Chlorine Production Using Solar Energy, Namibia; Venuste Kubwimana, School Water Kiosks, Rwanda; Chifungu Samazaka, Recyclebot, Zambia; Atef Ali, Sign Heroes, Egypt.

Image Credit: Adobe Stock

One water well will provide clean water to a 1,000 villagers for up to 25 years.

Run4Water supports clean water to save lives

More than 700 attendees took part in Wells of Life's Run4Water event on April 22 at Laguna Niguel Regional Park, California to raise US$30,260 for 40 sustainable water wells for rural communities in Uganda. Run4Water featured 5K and 1K runs/walks, sponsor exhibit booths, give-a-ways, and food trucks. Teams were encouraged to raise US$6000 to fund one well that provides clean water to a 1,000 villagers for up to 25 years.

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Water management resource launched for South African farmers

Agri SA has launched a dedicated Water Desk in response to ongoing water access challenges in South Africa. The Water Desk aims to help ensure equitable access to water for farmers across the country, particularly in the wake of challenges such as a severe, ongoing drought, climate change and poorly maintained infrastructure.

Water management policy and legislative proposals will be among the main focuses of the Water Desk. At present, the National Water and Sanitation Master plan and the National Water Resource Strategy are in draft form. The National Water Act, meanwhile, is undergoing amendments, such as ways to determine the cost of water for agricultural users.

It is hoped that the Water Desk will be used to engage with government and other major stakeholders to ensure fair outcomes in reagrd to water access and sustainable water usage.

Additionally, the Water Desk will advise the Water Research Commission on priorities for research and act as a forum for water experts to share their insights.

The Water Desk will be led by Janse Rabie, an environmental lawyer and Head of Agri SA's Natural Resources Centre of Excellence and Gregory Smith, a water scientist.

"The Agri SA Water Desk will be a one-stop-shop for Agri SA members, where they can get up to date information and advice on all things water-related," said Janse Rabie. "Given the complexity of water rights and the fast-changing policy environment, we believe that a dedicated Water Desk is the best way to enable agricultural water users to stay abreast of all legal developments which will have an impact on the way they farm and do business."

Water management is a major challenge for rural areas of South Africa.

Image Credit: Pieter Edelman/Flickr

INNOVATION SUMMIT TO TAKE PLACE IN RWANDA

The Africa Innovation Summit (AIS), scheduled to take place in Kigali, Rwanda, from 6-8 June, has announced the Development Bank of Southern Africa as a sponsor. The summit will focus on innovation as a means of addressing major challenges facing the southern part of the continent as well as wider Africa, such as health, water and sanitation, food security, governance and access to energy. Among the side events will be a special session, "Innovations in Electoral Democracy in Africa". This side event will focus on three crucial areas: using blockchain technology in elections, new tools for the collating and transfer of election results securely, and ensuring widespread participation in elections. The session will provide an opportunity to undertake a dialogue that cut across sectors and interests, identify innovative solutions, share experiences among African countries, and to create coalitions able to advance with the agenda of innovating to address the challenge of organising free and fair elections in Africa.

CLOUD OPPORTUNITIES FOR BOTSWANA ICT SECTOR

Botswana, with internet penetration hovering at approximetely 28 per cent and the number of mobile subscribers growing more than 2,000 per cent between 2000 and 2011, is set to benefit from the opportunities provided by cloud computing.

This is according to Ricardo Flores, senior regional manager of SADC operations, Oracle. In a commentary piece, he writes: "The Botswanan government is committed towards developing the country and looking for more efficient and modern ways to service its citizens. An example of this are the Public Sector Reforms designed to usher in the digital age. Part of the government's efforts include consolidating services and providing modern and specialised software. This will result in a better experience for thousands of civil servants. In turn, these workers will be empowered to deliver high quality and efficient services that will boost the economic productivity and competitiveness of the country."

Mr Flores points out that there is still a "significant disparity" between urban and rural access to ICT services but this is changing due to fibre and satellite rollouts.

In regard to cloud applications, he says that the government will be able to "improve the citizen experience", particularly in terms of accessing services such as education, healthcare, public safety, justice and immigration.

The private sector, led by the financial services, retail and mining sectors, has "shown a willingness to embrace technology innovation and utilise it to build momentum in a competitive marketplace", according to Mr Flores. "With more private sector organisations embracing a hybrid cloud model and people getting used to accessing information remotely, the cloud environment has shown just some of the extent at which it can change lives."

BRIEFS

Namibian diplomats in training in Berlin

Image Credit: Carolos Octavio Uranga/Flickr

Michelle Farmer will train in Berlin.

For the 12th time, a Namibian representative will participate in training for African diplomats. Michelle Farmer will represent Namibia this year. Run by Germany's Federal Foreign Office, the training will take place in Berlin from 4-29 June. The programme has been in operation since 1992 and it has trained young diplomats from more than 170 countries. The invitation of Namibian diplomats is part of the programme to ensure close relations between Namibia and Germany.

Ethiopian Airlines' southern Africa boost

Ethiopian Airlines has announced plans to buy 19 more planes and this is expected to boost the airline's ambitious plans for expansion in southern Africa. The purchases follow on from the 2013 acquisition of a minority stake in Malawi Airlines to serve as its southern base and January's agreement with the Zambian government to relaunch the country's national carrier. Additionally, the airline aims to create a new carrier in Mozambique that it will fully own.

Can Ethiopian Airlines improve Malawi's aviation fortunes?

Image Credit: Cornelius Kibelka/Flickr

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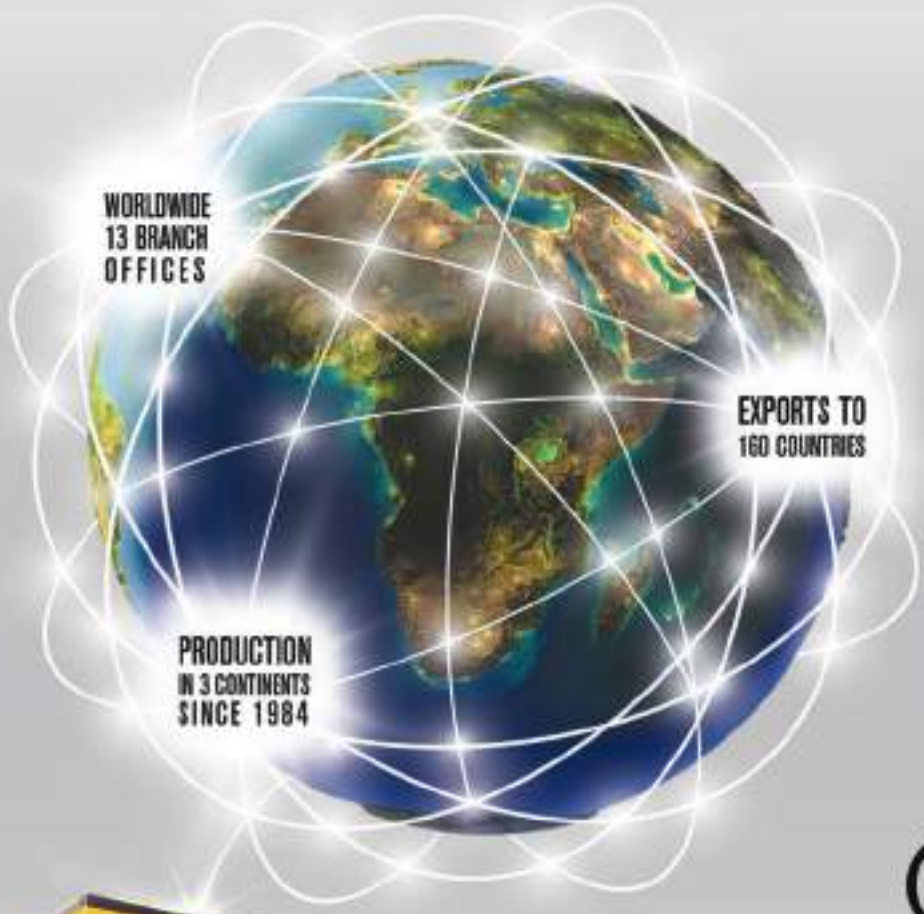

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GE-led Consortium signs interim phase agreement for Nigeria rail concession

An international consortium led by GE has signed an agreement with the Federal Government of Nigeria to proceed with the interim phase of the Nigerian narrow-gauge railway concession.

The consortium is comprised of SinoHydro, a leading infrastructure construction services corporation, Transnet, a leader in transportation and logistics infrastructure management and APM Terminals, a global port, terminal and intermodal inland services provider.

Image Credit: GE

The signing ceremony for the agreement between the Nigerian government and GE.

In the interim phase of the rail concession, remedial works will be carried out on part of the narrow-gauge rail line system to make it technically and economically operable. Additionally, a joint operation will be established between the consortium and the Nigeria Railway Corporation (NRC) with an initial supply of 10 locomotives and 200 wagons to augment the existing rolling stock in Nigeria.

This programme is expected to deliver an increase in the number of available locomotives, thus increasing the frequency of passenger and freight rail services. In addition, freight haulage capacity by the end of the first 12 months of the interim phase is expected to increase roughly ten-fold, from its current less than 50,000 metric tonnes per annum to around 500,000 metric tonnes per annum.

Lazarus Angbazo, CEO of GE Nigeria said, "GE is committed to the sustainable development of Nigeria and as such we are delighted to have reached this crucial stage of the project to revamp and revitalise the country's legacy rail infrastructure system. The consortium looks forward to commencing execution of this interim phase with the continued support of the Federal Government and the Ministry of Transportation. As operations begin, our strong partners, such as Transnet and SinoHydro, will bring their strong operating and development skills to the forefront."

Following the commencement of the interim phase, the consortium will conclude negotiations with the Federal Government on the terms of the substantive phase of the concession agreement that will expand service to up to 200 locomotives and associated rolling stock. This will see to the comprehensive rehabilitation of Nigeria's narrow-gauge rail infrastructure.

NEW SME PLATFORM FOR WEST AFRICA ENTREPRENEURS

SuguLab, a free entrepreneurial service that will be offered to start-ups and SMEs operating in West Africa, particularly Mali, Côte d'Ivoire and Sénégal, has officially been launched.

SuguLab will assist companies that are legally registered, that have a minimum of two years of existence and have an innovative business model with strong job creation potential that aims to provide a solution for the poor. The focus will be on SMEs with founders aged 40 and below, that are facing a specific challenge.

SuguLab was launched by Suguba, a Malian-based regional platform that fosters entrepreneurship and regional integration and aims to become the first sustainable, regionally connected network of locally run communities, workspaces and programmes.

Suguba co-founder Issam Chleuh said, "Suguba's vision is to support and scale the impact of SMEs and entrepreneurs across Francophone West Africa."

TWMA TO PROVIDE DRILL CUTTINGS MANAGEMENT SERVICES OFFSHORE CAMEROON

TWMA, provider of specialised drilling waste management services, is set to deliver drill cuttings management services to New Age Cameroon Offshore Petroleum (New Age) in a two well, offshore drilling project.

20 TWMA personnel will be involved in delivering the project, which will be carried out offshore Cameroon, commencing in May. TWMA's proprietary solutions EfficientC® and TCC RotoMill® will be utilised with EfficientC deployed for bulk transfer and storage, and TCC RotoMill delivering at-source processing of drill cuttings.

TWMA will support New Age in meeting its commitment to operate responsibly and was selected after demonstrating the benefits of TCC RotoMill over conventional skip to ship operations offshore. The TWMA-developed technology splits drill cuttings into oil, water and solids, recycling the recovered oil back into the drilling process and safely disposing of recovered water and solids in accordance with legislation.

Andrew Morris, tenders and proposals manager at TWMA said, "We are delighted to have been chosen to support New Age in their upcoming campaign. TWMA is committed to delivering efficient drilling waste management solutions on an international scale and it's always exciting when we can deliver drilling efficiencies, enhanced safety, and commercial benefits to a new client.

"This project comes on the back of a busy Q1 for TWMA and we are pleased that it underlines our strong operating reputation within the West African region. We are looking forward to developing our relationship with New Age."

TWMA employs more than 500 people and includes office North Africa and West Africa.

BRIEFS

Image Credit: Low Energy Designs Ltd UK

The investment will deliver 40,000 low energy streelights for Lagos.

New UK investment for Nigeria

Renewable energy firm Low Energy Designs Limited UK is launching 'Light up Lagos', a US$52mn investment to deliver 40,000 low energy LED streetlights in the Nigerian capital over the next four years, creating more than 500 jobs. The investment was announced at the Commonwealth Heads of Government Meeting (CHOGM) meeting in London in April. UK companies have already invested US$6.8bn in Nigeria, with bilateral annual trade worth US$4.6bn.

Angola seeks to develop services trade

UNCTAD's Multi-Year Expert Meeting on Trade, Services and Development welcomed representatives from Angola's Ministry of Transport and diplomatic mission in Geneva in May to explore ways to develop services trade for sustainable growth and economic diversification. The meeting focused on water and sanitation, energy and food-related logistic services.

Manuel Quizembo, senior expert on Logistics Platforms, Ministry of Transport, said, "The Ministry of Transport, within the National Development Plan 2018-2022, has put in place a national network for logistics platforms. This is an important instrument that will facilitate the integration of our country through the development of several logistics and transport corridors."

Sierra Leone extends bid deadline of fourth licensing round for offshore blocks

The government of Sierra Leone has announced it will be extending the closing date of the country's fourth licensing round to 27 September to explore more oil and gas potential throughout the continent, according to Raymond Kargbo, director general at Sierra Leone Petroleum Directorate.

In the initial announcement, the bids were scheduled to be accepted between 15 January and 31 May.

The round offers five contract areas featuring a new block system including the areas of undeveloped oil and gas discoveries from previous drilling campaigns, shallow water and ultra deep water.

Image Credit: Scott Schrantz/Flickr

Getech looks forward to concluding Sierra Leone's fourth licensing round.

Commenting on the West African nation's oil and gas licensing round, Jonathan Copus, CEO of the Getech Group, said, "The offshore waters of Sierra Leone contain proven petroleum systems, the understanding of which is supported by an inventory of extremely high quality geological and geophysical data.

"With much of this data being made available for the first time, the country's fourth licensing round has generated significant levels of interest from the international oil and gas industry," Copus added.

Partnering with the government of Sierra Leone, Getech aims to attract international investment via a strong and transparent licensing process, through which the country's people are set to gain near-term and long-term national benefit.

WORLD TELECOM LABS TO PROVIDE POWER TO AFRICA

World Telecom Labs (WTL) announced that it will provide electricity to villages in rural Africa. The provision of power is a natural extension for Vivada Wholesale (Village Voice and Data), WTL's multi-award winning 'Coverage-as-a-Service' system for building wholesale networks in rural Africa.

Vivada can now be powered by solar in off-grid villages and areas with unreliable grid suppliers. Villagers will also be able to charge devices such as phones and powerboxes at the Vivada installation.

WTL has won multiple awards for its work in the sustainable energy sector, including "Best Connectivity Solution" at the AfricaCom awards.

Leigh Smith, MD of WTL, said "We've been ahead with Vivada. It provides a solution for wholesale carriers to build a rural network — and can now be powered by solar with excess electricity shared with villagers."

WTL is already working with wholesale operators in five countries in Africa to build rural networks.

Upcoming Events Calender 2018

JUNE

14 - 16
AFRICA OIL & GAS LOCAL CONTENT CONFERENCE
Luanda, Angola
www.ametrade.org/alc

18 - 20
AIRPORT BUSINESS SUMMIT & EXPO
Abuja, Nigeria
www.airportbusinesssummit.com

19 - 22
AFRICA ENERGY FORUM
Mauritius
www.africa-energy-forum.com

20 - 21
AFRICA INSURANCE & REINSURANCE CONFERENCE
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20 - 22
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21 - 22
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www.ametrade.org/zimeczambia

24 - 26
AFRICARAIL
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www.terrapinn.com/exhibition/africa-rail

24 - 26
AFRICA BIG 7
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AUGUST

3 - 5
WERA WORLD CONGRESS 2018
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www.wera2018.co.za

Propak West Africa set to be biggest show to date

Organisers of Propak — West Africa's largest packaging, plastics, processing and printing exhibition — have confirmed stands for the upcoming event have almost sold out.

With Krones, Snetor Chimie, Piovan, Beaumont Aromatics and Pan-Asia Tech confirming their place at the Lagos event on 18-20 September, this is no surprise following the year-on-year growth pattern from the show. Since it started in 2014, the number of companies represented has increased by 68 per cent to 160.

In a statement, George Pearson, regional director for Afrocet Montgomery said, "We are extremely happy with the show's progress so far, with four months to go we are confident the exhibition will completely sell out. We are working hard to bring to life new features and a world class conference programme to ensure that September exceeds expectations for all in attendance."

Propak is expected to attract 4,000 visitors over three days in September.

New consumer trends and the continued growth in the manufacturing sector in Nigeria and across West Africa have had a significant impact on the printing and packaging industry and in turn, prompting more businesses to take part in the show.

"Our show will look to promote innovative packaging solutions, discuss key issues around market trends and provide tactile advice for industry members," Pearson added.

The show is expected to draw 4,000 visitors over the three days from more than 30 countries worldwide. With onsite networking events and the conference bolstering the added value of Propak West Africa, the organisers, Afrocet Montgomery Exhibitions and Events, said this year's show will offer unparalleled trade opportunities for all attendees.

One of the prominent draws will be the conference, hosting daily free-to-attend sessions with leading experts discussing the latest issues affecting the market and providing exclusive insights. The schedule for this conference is expected to be announced in the coming months.

For more information visit *www.propakwestafrica.com*

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Risky business

Benjamin Mugisha, senior underwriter from African Trade Insurance Agency, speaks to *African Review* about why the continent's strongest insurer continues to be sought-after by governments and financial institutions.

What can you tell us about your role as senior underwriter at the African Trade Insurance Agency (ATI)?

I take the lead in underwriting transactions across several sectors such as energy, mining, telecommunications, manufacturing and infrastructure, and on some strategic accounts involving larger transactions with multilateral development banks and international financial organisations. I am based in our head office in Nairobi.

How did ATI begin?

It was recognised by African leaders, mainly from COMESA, that there was a need to produce a conducive investment environment. On their own, leaders knew they wouldn't have the ability to leverage enough capital for that to happen, so the idea was to have ATI, a multilateral guarantee agency to increase trade and attract investment in Africa. Since 2001, we have insured transactions exceeding US$28.5bn and currently insure trade and investments worth an average of 1 per cent of GDP annually in our member countries.

What are ATI's main products that it offers?

Our products can be split into four categories: credit insurance, investment insurance (political risk), political violence, terrorism & sabotage insurance and surety bonds.

Which African governments does ATI support and in which sectors?

The governments are shareholders in ATI, which means they sign and agree to a series of terms and conditions to support risks in their countries as well as sign up to a preferred credit status. We operate in Benin, Burundi, Côte d'Ivoire, Democratic Republic of Congo, Ethiopia, Kenya, Madagascar, Malawi, Rwanda, South Sudan Tanzania, Uganda, Zambia and Zimbabwe, and the sectors in which we work are agriculture, electricity, gas and water supply and trade and transportation, as well as in finance insurance. We can also do business, on a selected basis, in non-member countries. ATI has a 'A' rating from Standard & Poor's. All our countries are either rated A/B or lower. When we insure a transaction, the lender or the supplier can then transfer the ATI rating to the insured portion. If they suffer a loss and pay a claim then we are entitled to be rembursed by the government for the loss.

What are some of the major projects ATI has been involved in lately?

Last year, we closed a US$159mn deal involving Ethiopian Airlines where we helped the African Development Bank purchase a new airbus. Similarly, we underwrote a transaction in the DRC where we supported investment in a mine, protecting against expropriation, war and civil disturbance. In Zambia, we are working to try and improve decongestion in Lusaka, the capital, where we are working with lenders to help them carry out the government's plan to transform the road network in the capital for buses. The total project costs US$300mn and we are supporting a portion of that.

Image Credit: ATI

Benjamin Mugisha, senior underwriter at ATI.

Why should companies come to ATI for investment risk solutions?

Our insurance policy is good for lenders to receive capital relief and help improve a country's credit rating. Secondly, we add value with our 'A' rating and we are on the ground so we can help clients understand the market better and improve the quality of financing, because of our local knowledge. We are a multilateral agency and a commercial organisation. We also have a DFI mandate and can provide capacity in countries where financing is not so readily available. We've always been able to take tenors in the medium term of between three and seven years. Those tenors for some of those risks would not have been possible if an investment solution like ATI was not around.

Is there anything else you would like to mention about the work of ATI?

Recently, we entered into the energy sector alongside Munich Re and the European Investment Bank, as part of the Energy Guarantee Facility platform to provide significant long-term investment insurance for sustainable energy projects.

The aim is to boost investment insurance availability by providing up to US$1bn in reinsurance capacity for these projects. The facility is expected to mobilise significant private financing in the form of debt and equity from banks and developers that are currently constrained to participate in the African energy sector. ■

By Samantha Payne

"We, as the Gauteng Provincial Government, are very pleased to have won the bid to host this biggest and unparalleled investment platform on the African continent. It's a great platform that will translate Africa's professed potentials into real opportunities and progress."

DAVID MAKHURA

Premier of Gauteng Province on the new Africa Investment Forum launched by the African Development Bank.

"At Africa Blue Economy Forum (ABEF) 2018, we will discuss crucial issues, such as how the blue economy can help create jobs and accelerate sustainable growth and development across the continent. We will also examine which economic policies will facilitate better ocean economy and open up opportunities for investors and entrepreneurs. In Africa, where 70 per cent of the states are coastal, the ocean is not only a key driver for global trade but is also a major source of food and energy."

LEILA BEN HASSEN

Founder of ABEF 2018 and CEO of the event's organiser, Blue Jay Communication.

"In a relationship where two parties don't trust each other, then blockchain makes sense. Seventy percent of Kenyans work in the agriculture sector but only 2 per cent get credit from banks. We want to create an immutable – trustworthy – database of the vendors and suppliers we deal with to help them, and banks to have access to information they can use to negotiate credit."

CAINE WANJAU

Technology officer at Twiga Foods, a Kenya-based food distribution company, welcoming blockchain to store profiles of informal small-scale traders to help them access credit.

"In Malawi, more than 7,000 drought-affected families will receive an insurance payment worth US$400,000. This is the first time that a weather index insurance programme has delivered payouts at such a large scale in Malawi."

BENOIT THIRY

Country director for the United Nations World Food Programme.

"The Government of President Lourenço has taken important steps toward improving governance and restoring macroeconomic stability. The IMF stands ready to help Angola address its economic challenges by supporting a comprehensive policy package to improve governance, accelerate the diversification of the economy, and promote inclusive growth while restoring macroeconomic stability and safeguarding financial stability."

TAO ZHANG

Deputy managing director of the International Monetary Fund.

"Our people, our business community and our youth in particular cannot wait any longer to see the lifting of the barriers that divide our continent, hinder its economic takeoff and perpetuate misery, even though Africa is abundantly endowed with wealth."

MOUSSA FAKI MAHAMAT

Chair of the AU Commission.

"Djibouti has heard the call for improved services, and is committed to using the tools of e-government to respond to it. Working in partnership with the World Bank, we have developed a strategy for modernising our public administration and reaping the benefits of greater transparency, inclusion and efficiency offered by digital technology."

IIYAS MOUSSA

Djibouti's Minister of Economy and Finance in-charge of industry following the IDA's announcement to provide US$15mn to roll out new digital systems for citizens.

"We have, since we assumed office three years ago, made remarkable progress in pushing the frontiers of transparency and accountability in the Federal Government. One of the first things that the President did when we took office was to establish the Presidential Advisory Committee Against Corruption (PACAC), to coordinate our reform efforts in this regard."

YEMI OSINBAJO

Vice President of Nigeria.

AGF: SMEs are the economic growth engine

Felix Bikpo, CEO of the African Guarantee Fund, talks about the importance of financing small and medium-sized businesses in Africa.

The African Guarantee Fund (AGF) operates in 38 African countries and has ambitions to reach the whole of Africa by 2020.

The AGF provides local currency guarantees on bank loans for small and medium-sized enterprises (SMEs) on the continent in order to improve their ability to access credit in risk-averse conditions.

Since it was launched in 2012 by the African Development Bank alongside the governments of Spain and Denmark, the AGF has led the guarantee market in Africa by issuing financial guarantees, worth US$700mn, to 84 Partner Financial Institutions across the continent.

Felix Bikpo CEO of the AGF, which received an AA-rating from Fitch last year, said, "We give guarantees to all finance institutions; banks and non-banks alike. The biggest source of funding in Africa is in the banking system, so that's why we prioritise banks."

The AGF has said it will make available US$1.5bn in credit guarantee facilities to financial institutions in Cameroon, Guinea, Nigeria, Uganda and Zambia for SMEs in the unexploited minerals sector. This financing is expected to enhance the livelihoods of approximately 25,000 people located in some of Africa's most poverty-stricken communities.

According to Bikpo, around US$150mn is needed to help finance SMEs, which currently represent less than 20 per cent of the GDP in each African country because of poor infrastructure, such as power and transport links, and financial constraints. He believes that SMEs could change this, and have the potential to create 80 per cent of jobs in Africa.

"The difficulty in Africa is accessing finance. What AGF is trying to do today is rectify this problem and aim towards plugging this US$150mn hole. Our role is try to reduce this gap so that it will help create more jobs and reduce poverty. We want SMEs to be the engine of economic growth in all countries on the continent."

Image Credit: AGF

Felix Bikpo

In May, the company announced it was in the middle of a fundraising campaign to boost its capital five-fold to US$500mn by 2021. This much-sought after cash will come from existing shareholders that include the African Development Bank, the Danish International Development Agency, the Spanish Agency for International Development Cooperation and the Nordic Development Fund.

Infrastructure financing

Other positive developments with AGF include a partnership with GuarantCo, a local currency firm. It has entered a re-guarantee transaction worth US$74mn with GuarantCo, to increase its guarantee capacity for SME financing. GuarantCo is part of the Private Infrastructure Development Group, and is a global guarantee fund that issued more than US$900mn of guarantees since it began in 2005, with a vision to enable local currency finance for infrastructure.

With this increased capacity, the AGF will be able to support larger local currency transactions for SMEs involved in the infrastructure sector, critical for the economic development of Africa and its competitiveness at a global level.

"The AGF is glad to be joined by GuarantCo in bridging the infrastructure financing gap," continued Bikpo. "This partnership aims to put in place an even stronger collaboration that will work on the entire value chain of infrastructure projects in Africa. We are looking forward to supporting other SMEs that work with major players in the infrastructure sector."

Lasitha Perera, GuarantCo's CEO, said, "We are delighted to be able to partner with the AGF and increase support to SMEs active in the infrastructure sector in Africa. This collaboration between the two local currency focused guarantors offers the potential for us to engage local financial institutions and investors in financing the entire value chain in an African infrastructure project."

Vital link

The AGF wants to expands it footprint across the entire continent. "In the next four years, we want to cover the whole of Africa including frontier markets, which is another reason why our latest collaboration with GuarantCo is so important," Bikpo added. "We are the only non-pan-African bank taking a lead on helping SME financing on the continent, but we need more institutions to come on board so that we can complete what we want to do.

"We want people to know that there is an institution today, which is trying to use public resources to help SME businesses. Our institution is a vital link between the private and the public sectors that can use funds to reduce poverty and solve most of the issues facing the continent."

Last month, the AGF was the platinum sponsorship at the African Banker Awards, the continent's pre-eminent event recognising African's best performing financial institutions. Among the winners were AGF's partners; Ecobank, BGFI, Gabon and CRDB Bank in Tanzania. ■

By Samantha Payne

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Off-grid generation is the future

Rentia van Tonder, head of power for Standard Bank Group, talks to *African Review* about the bank's financial support towards innovative off-grid solutions to meet the future energy needs of Africa.

What are your core business areas within Africa's energy sector?

Given Africa's power deficit, it is important that African countries look to regional solutions in which energy is generated, sold and consumed across multiple countries. Importantly, this will involve multiple energy generation technologies. Given the rapid advance of renewables technology, Standard Bank has a clear philosophical as well as a commercial bias towards supporting the development of clean technologies that include private sector expertise and investment applicable for a specific region.

The future is less likely to see the construction of vast, nationally owned generation and distribution networks. Instead, smaller, localised, and even privately owned off-grid generation, storage and distribution systems are being developed. Some of these are even likely to see the sale of privately generated renewable energy back to the grid through a decentralised model.

What is the project pipeline like right now for the bank across the energy sector? Are there any new projects taking shape at the moment?

There are a number of large-scale projects – especially in hydro-power – underway in Africa. These typically have long lead times and, in many cases, still require significant investment in transmission lines in order to distribute this power. In the meantime, Standard Bank is developing a pipeline of innovatively funded off-grid solutions, many of these leveraging new technologies and involving the private sector.

Kenya provides a good example of how new, small, off-grid technologies can become affordable and easily available to private citizens. These technologies also provide remote rural populations with the energy to enable meaningful economic participation without vast government investment in generation and distribution networks.

> "Kenya provides a good example of how new off-grid technologies can become affordable"

Image Credit: Standard Bank

Rentia van Tonder, head of power for Standard Bank Group.

In the power sector, are you seeing increased appetite for major electricity project financing, and/or a shift to smaller and renewables projects?

Since large-scale power generation projects have such high costs and long lead times, developers are looking at smaller projects as they are usually quicker to get to financial close and are easier to fund through affordable end-user funding structures. Renewable technologies normally offer attractive solutions.

Are new financing services and products being developed to accommodate the growing interest in smaller scale solar, wind and other renewable schemes?

As a leading commercial bank in Africa, Standard Bank is heavily invested in developing innovative financial solutions for both large as well as smaller renewables-based energy generation and distribution projects. That said, there is a strong trend for commercial banks in African project financing to find solutions to shorten the tenors. Instead, funders and financial institutions are increasingly working closely with development finance institutions (DFIs) to manage and reduce the risks traditionally associated with long tenors. Part of this trend is also a strong focus on funding solutions that involve private capital in new, smaller, renewable-based projects.

Future trends: Are there any essential developments to watch for in the coming year or so across Africa's energy sector?

There is currently a trend in Africa for banks to work more closely with development finance institutions (DFIs) to develop regionally-integrated generation, transmission and distribution networks across multiple jurisdictions. This trend involves developing the infrastructure and legal, administrative and funding frameworks supporting interconnectivity between countries, entities, government and private and even individual energy producers in Africa. In Nigeria, for example, a lot of energy is produced via private diesel generation, off-grid. Combining this with renewables, for example in captive solar-diesel off grid combinations – and then looking at ways for this off-grid generation to be made available to national and even regional grids – is also likely to become an area of development and growth in future.

Africa is most likely to evolve a regional, multi-national hybrid of on- and off-grid public and private energy generation solutions based on multiple and increasingly renewable sources. These sources will variously reflect a mix of Africa's abundant solar, hydro, wind and carbon-based energy sources in combinations determined by rapidly evolving new technologies and the increasing involvement of private funding, ownership and operation.

If regional integration is blended with renewables and off-grid, the flexibility that results means that banks stand a much better chance of being able to help utilities better manage long-term sustainability. ■

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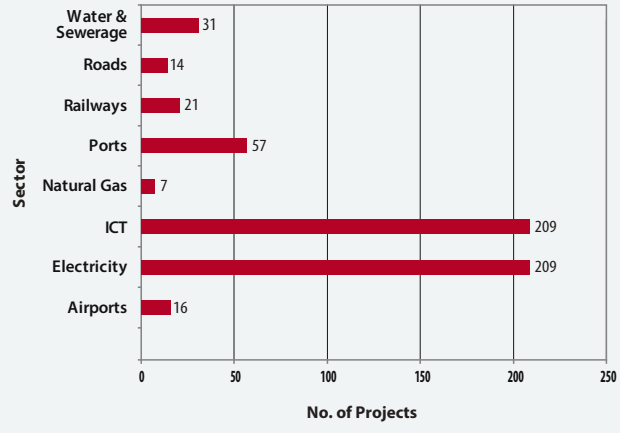
Driving the infrastructure agenda forward via private financing

Economist Moin Siddiqi examines the financing mechanisms available to push infrastructure projects in Africa.

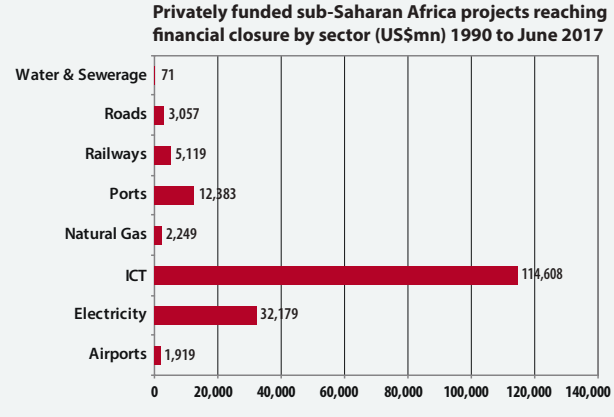
The potential for socio-economic development in Africa, ranging from rebuilding ageing infrastructure to building it from scratch has generated much discussion focusing on actual financing needs, how investment can be mobilised, protected against risk, and what investment structures are needed for potential returns. The continent is set to spend at least US$1 trillion on all areas of infrastructure, such as transport and energy sectors, hospitals and water/waste management over the next two decades, hence new business opportunities.

According to the African Development Bank (AfDB), the annual budget for the region's infrastructure runs to US$130-170bn, but governments and donor funding, at best, cover roughly half of the requirements. Given budgetary constraints and growing demand for public services, the use of private capital can accelerate the delivery of infrastructure projects across sub-Saharan Africa (SSA). This, in turn, enhances growth, wealth/job creation and overall national competitiveness. The World Bank calculated a one per cent hike in a nation's infrastructure stock leads to a direct one per cent hike in gross domestic product (GDP).

Tony Elumelu, one of Africa's most prominent entrepreneurs said, "Africa is getting stronger every day with new business opportunities and innovative ideas, but what is still crucially missing is project implementation. African governments need to work on creating conducive environments to attract investments which are so vital for the continent's growth and development."



Source: World Bank



Source: World Bank

Pre-development work

Finance for African infrastructure projects is, however, hindered by various factors such as complexity, size and viability of projects coupled with weak regulatory frameworks. The lack of investable projects remains a vital constraint, thus reflecting limited local capacity for preparing projects towards bankability and tender stages, i.e. the failure to package/structure projects for financial, technical, legal and environmental feasibility. Fund managers say the biggest challenge may not be raising capital, but finding bankable projects.

Donors are addressing difficulties of low funding for project preparation through instruments, notably the World Bank's Public Private Infrastructure Advisory Facility, the New Partnership for Africa's Development (NEPAD) Infrastructure Project Preparation Facility, Britain's Private Infrastructure Development Group and the Emerging Africa Infrastructure Fund. Such facilities offer technical support and long-term loans for bankable projects facing initial development barriers.

The AfDB advises African countries to adopt effective regimes, including laws for public-private partnership (PPP) operations. In a statement the bank said, "A well-defined policy for investment funding and private involvement in infrastructure projects can improve the attractiveness and bankability of infrastructure projects."

Financing mechanisms

*Private Participation in Infrastructure (PPI) or Public-Private Partnership (PPP) models, where private money and technical expertise are used to design, finance and operate infrastructure assets on build-operate-transfer, build-operate-own and build-own-operate and transfer schemes. The AfDB reported that US$39bn worth of PPP projects were implemented in SSA during 2012-16, though much lower than peer developing regions. In 2017, Ghana and Rwanda received the largest PPI commitment, with US$550mn and US$422mn, respectively," said the World Bank.

The benefits of PPPs are summarised by the International Project Finance Association as follows: "Construction is completed to plan and to budget; repairs and maintenance are planned at the outset and as a result, assets and services are maintained at a pre-determined standard over the full length of the concession. PPPs help the public sector develop a more commercial approach to infrastructure development while allowing them to retain control of the overall project and service."

*Project finance structured on long-term funding where lenders' primary recourse is future cash flows generated by an operating project, rather than the project assets. This facility typically takes the form of limited recourse lending to special-purpose vehicle (SPVs), which build a project and depend on revenue streams from contractual agreements and/or end-users' tariffs once the project is online. Revenues are used to cover operational costs, debt-servicing and pay dividends to shareholders.

*SUKUKS (Islamic bonds) are structured to pay rents or profits in accordance with investors' proportional ownership in tangible assets but not coupon interest rates.

Islamic finance (common in the Middle East) is now featured in the financing of some African projects – mainly in Nigeria and Senegal.

*Some major fund managers, such as Emerging Capital Partners, Qalaa (previously Citadel), AIIM (the Old Mutual-Macquarie joint-venture) and Meridiam are seeking to invest in Africa. In 2015, Meridiam launched the 300mn Euros Meridiam Infrastructure Africa Fund to target greenfield projects in transport, energy and public buildings via PPPs.

Black Rhino (owned by U.S. Blackstone Group) focuses on the development and acquisitions of infrastructure projects across Africa. It has invested over US$2bn mostly in Nigeria, Ethiopia, Mozambique and Togo. Dangote Industries and Black Rhino have agreed to jointly invest US$5bn over the medium-term across SSA with a particular emphasis on power, transmission and pipeline projects.

There are a few government-backed investment funds, notably Lagos-based Africa Finance Corporation (AFC), which possess seed capital to deploy and take developmental risk by supporting potential developers.

*The 20-plus African Sovereign Wealth Funds (SWFs) that have around US$150bn between them, according to research firm Preqin, offer co-financing opportunities and guarantees to attract foreign capital.

Public-private partnerships in Africa infrastructure by country

Date	Project	Country	Current stage	Value (US$mn)	Sector
Jul-16	Bakwena Platinum Corridor Concession	Botswana	Operational		Transport
Jul-17	Kribi Deepwater Port O&M, PPP	Cameroon	Signed		Transport
Apr-18	Second Container Terminal PPP at Port of Abidjan	Cote d'Ivoire	Signed	590	Transport
Apr-18	Doraleh Container Terminal Concession	Djibouti	Awarded	427	Transport
Jul-16	Gabon Rail PPP project	Gabon	Operational	363	Transport
Sep-16	Tema Port expansion	Ghana	Signed	1,400	Transport
Nov-17	Lamu Port-South Sudan-Ethiopia Transport Corridor	Kenya	Signed	590	Industrial, Social & Health, Transport
Jan-18	Concession of Coal Terminal at the Beira Port	Mozambique	Planning	275	Transport
Jan-18	Lekki Port PPP project	Nigeria	Signed	1,500	Transport
Nov-17	Kigali Bulk Water PPP project	Rwanda	Fin. Closure	61	Water & Waste
Aug-17	Gautrain Rapid Rail Link (Johannesburg-Pretoria)	South Africa	Operational	2,418	Transport
Nov-17	Kampala Waste-to-Energy PPP plant	Uganda	Tender		Energy
Jul-17	Chirundu Border to Chilanga in Lusaka (Too2) road	Zambia	Tender		Transport

Source: InfraPPP Infrastructure Knowledge

Some have mandates favouring infrastructure and industrial development of their respective countries. For example, Angola's sovereign fund, FSDEA committed US$180mn to a new deep sea port project using a PPP structure.

*The eurobond market provides a niche for infrastructure funding helped by current low yields on global capital markets, which have increased investor appetite for SSA's debt instruments. Sovereign bond issuances from SSA region rose from US$3.5bn in 2010-13 to US$6.2bn over 2014-17 (World Bank data). South Africa, Côte d'Ivoire, Gabon, Ghana, Nigeria, Angola, Zambia, Kenya, Senegal and Rwanda account for the bulk of total debt issued.

Nations with many citizens living abroad have issued Diaspora bonds (notably Ethiopia). Remittances to SSA totalled US$38bn in 2017, reported the World Bank.

*Pension funds are a potential funding source, although significant participation is unlikely until African pension fund trustees become less risk averse and more familiar with infrastructure asset class. Price Waterhouse Coopers estimated that pension fund assets under management in 12 African countries could reach US$1.1 trillion by 2020. Nigeria's pension market is expanding by US$5bn/year, but prevented from investing in domestic infrastructure bonds because of the issuer's poor credit rating. To address this, Nigeria's Sovereign Investment Authority has joined forces with GuarantCo (local currency guarantee firm) to enhance the credit quality of Nigerian infrastructure bonds.

*Development Capital represents a vital source of funding, for example, the IFC, private lending arm of World Bank Group committed US$413mn in 2016 for telecoms and renewable energy projects in SSA, while Agence Francaise de Developpement is investing US$664mn in equity over five years, with a focus on independent power producers and airports in Africa.

Risk mitigation

The risks associated with developing countries' infrastructure investments are greater, including exchange rate, default and political risks, higher-than-projected costs and shortfalls in forecast revenues. Also, infrastructure assets are illiquid, upfront capital expenditures are hefty and revenue streams could be subject to long delays. Several instruments and new techniques have helped diversify such risks, making infrastructure investments in SSA more safer; these include partial credit guarantees from multilateral organisations and 'full credit guarantees' – i.e. 100 per cent of debt service due. Also, protection is offered from the Multilateral Investment Guarantee Agency (MIGA), which underwrites guarantees against non-commercial risk by charging one per cent annually of the project's value to cover possible losses from debt default caused by political turmoil. SSA accounts for one-quarter of MIGA overall portfolio.

The AfDB's Currency Exchange Fund mitigates currency risks via medium- and long-term swap arrangements. The African continent needs to foster a more conducive environment, one that attracts private capital while limiting investors' risk exposure.

In sum, what is essential for 'game-changing' investments is forging PPPs in a cost-effective manner. Africa needs to tap into institutional investors such as insurers, pension funds, and SWFs. However, such financial flows require appropriate contractual regimes to ensure long-term returns as well as the reform of national and regional legislative frameworks governing institutional investment. ■

Farmcrowdy aims to register 50,000 farmers by 2020.

Image Credit: Farmcrowdy

Bringing farmers and investors together online

Nigerian diaspora have an exciting opportunity to invest their money in farms back home via a new online financial platform created by tech start-up Farmcrowdy. Samantha Payne finds out more.

Farmcrowdy is a revolutionary agri-tech platform helping to boost the £30bn agricultural sector in Nigeria. The Nigerian government is referring to agriculture as the "new oil" and companies, such as Farmcrowdy, are taking advantage of this new opportunity.

The company's ethos is to simply bring farmers and investors, so-called sponsors, together through the use of digital technology. Whereas in the past, investment into agricultural projects may have gone amiss for one reason or another, stemming either from mistrust or dishonesty between parties involved, Farmcrowdy is offering sponsors a transparent system through a mobile phone app where investors can see first-hand how their investment on a farm is progressing throughout the cycle.

It is a win-win situation all round. When the yield is sold at harvest, the sponsor receives their original investment plus 40 per cent of the profit while the farmer and Farmcrowdy receives 40 per cent and 20 per cent respectively.

The main farms currently in operation across the nine states in Nigeria are producing rice, cassava, poultry and maize. Already the company has registered 7,000 farmers since its launch in 2016 and aims to increase that number to at least 50,000 by 2020. To reach this goal, however, it wants more of the Nigerian diaspora living across the world, notably the UK, US and UAE to become a sponsor, especially those who have a passion for agriculture and want to make a socio-economic impact in their communities back home. To date, the Farmcrowdy platform has amassed more than 1,000 sponsors and total investments from Nigeria and its diaspora, now reaches in excess of £1.62mn with a growing number of sponsors in the UK.

Sola Oyawale, VP investment and corporate governance at Farmcrowdy, which has headquarters in Lagos, said he was upbeat about the level of response he had received from some potential Nigerian investors based in the UK. He said, "Nigerians understand how dominant the agricultural market is in the country, but there hasn't been a reliable route to market, in terms of sourcing farmers and making/receiving payments. This is the challenge Farmcrowdy has set out to conquer and we've recorded some strong interest already, not only from sponsors in Nigeria, but also from the diaspora. Some people have a genuine passion to create an impact in their country while others have a renewed enthusiasm for agriculture and the potential for achieving strong returns on investment.

"What makes our business different to other agri-tech firms is that we are more sensitive to the concerns of the farmers and wanting to make their lives better."

Tope Omotolani, VP Operations and co-founder, and her team of specialist agents on the ground look after 3,000 farmers in Nigeria.

She said, "Rural farmers contribute the largest amount of food crops that are grown in Nigeria's economy, yet they have the least amount of resources to cultivate important food crops. In order to increase food production in Nigeria, we have set a goal to work with 50,000 farmers by the year 2020. This is no small goal by any means but we also understand that the impact these would create in the lives of the farmers, their community and in the country as a whole would be remarkable."

She said the company is working hard to equip the farmer as much as it can so that their passion for farming will continue for years to come.

"One of our incentives is that we pay the farmer to work on his farm so they don't have to wait until the end of the cycle," she continued. "We also partner with a range of companies to help the farmers. ASTC, for example, provides tractor services for our project in Jos and a team from Notore works with farmers and advises them about the type fertiliser that should be applied. We also help them to sell their crops for a better price rather than just selling crops for their family to survive."

Farmers have already seen the positive economic difference that Farmcrowdy has made to their lives.

Omotolani added, "One of our farmers told us that she was able to put some money aside to be able to go back to school, so that for me it was a testimony that would not have happened without our intervention."

Farmer Dayo Adeoye said, "Farmcrowdy has made things easy for farmers and has helped increase our production by 50 per cent. I like the flexibility, transparency and integrity. They are also open to feedback and make necessary changes. I am already recommending Farmcrowdy to people and I will continue to do so."

Meanwhile, tractor manufacturer, John Deere and Alluvial have also boosted farmers' confidence in Nigeria after agreeing to lease up to 300 tractors to at least 100,000 farmers in the Niger Delta region. The scheme will help turn subsistence farming into a commercial business by allowing farmers to rent tractors to plough and harvest the land at a competitive rate.

Dimieari Von Kemedi, the founder of Alluvial, told the Financial Times, "This deal is providing mechanisation to smallholders without them having to invest in tractor themselves. This could be an example not just for Nigeria, but for all of Africa."

With such developments taking place, it looks as if the future in agriculture in Nigeria looks very bright indeed. ■

For more information on Farmcrowdy visit www.farmcrowdy.com

> "Nigerians understand how dominant the agricultural market is in the country"
>
> **SOLA OYAWALE, VP INVESTMENT AND CORPORATE GOVERNANCE, FARMCROWDY**

Kenya revenue authority enhances taxpayer experience with cloud solution

Engagement with taxpayers has improved since the KRA rolled out the Oracle CRM solution.

The Kenya Revenue Authority (KRA) has registered a 71.9 per cent increase in its customer satisfication index since it has implemented the Oracle Cloud solution – noticing a reduced call abandonment rate and increased engagement across different channels. Oracle's Customer Relationship Management (CRM) has helped the KRA introduce a standardised approach to taxpayer interactions across integrated platforms.

"We needed to re-engineer processes, realign structures and implement tools that would ensure that the CRM system is delivered on simplicity, convenience and efficiency in service delivery," said KRA Commissioner-General John Njiraini. "Since the implementation of Oracle CRM cloud, our social media engagement rate has doubled, our customer query response time has improved from an average of an hour to only 15 minutes, and the resulting insights have enhanced our understanding of our customers and their needs."

With Oracle CRM, the KRA has created a robust customer engagement platform that allows for service requests, enquiries complaints and compliments to be tracked and logged across various touch points. It also includes an end-to-end issue resolution and escalation framework that was built using the Oracle Cloud platform. The KRA also will soon incorporate the Oracle Customer Analytics System for intelligent insights that can be used to drive exceptional customer engagement.

"Since we rolled out the Oracle CRM solution as part of the Authority's transformation agenda in December 2017, our engagement with taxpayers has significantly improved, and we continue to receive positive feedback," added Njiraini.

PROTECTING DATA IS VITAL TO DIGITAL ECONOMY

The Internet Society and the African Union (AU) Commission have unveiled guidelines to highlight how privacy protection and the use of personal data are critical factors in building trust online and advancing the digital economy in Africa.

Launched at the Africa Internet Summit in Dakar, Senegal, the Personal Data Protection Guidelines for Africa aims to facilitate the implementation of the AU's Convention on Cyber Security and Data Protection.

The guidelines recommend a range of actions for governments, policymakers and citizens to take at the regional, national, organisational and individual level. Among the recommendations for governments is that they should protect individuals' rights to privacy online and offline.

"Global events have shown us that the lack of protection for personal data can have a profound impact on individuals and society to the point of endangering democratic systems," said Dawit Bekele, regional bureau director of Africa for the Internet Society.

Building a better supply chain in Africa

Dustin Homer, director of client solutions at Fraym – a geospatial data company focused on Africa – explains how satellite imagery can help businesses attract potential customers and improve their supply chain capabilities.

It's well known in the logistics and supply chain game that the last mile of a shipment's journey is inevitably the most expensive – possibly accounting for over 50 per cent of total delivery costs, according to a 2016 report by McKinsey.

Now imagine that last mile is in Africa. It may very well be a pot-holed dirt road, set in the middle of one of the continent's many informal, low income areas, where even a ballpark guesstimate of consumer demand is incredibly hard to come by. Many companies are already pushing their products into these emerging markets, yet most experience expensive blind spots in understanding exactly who they are reaching and where their markets lie. This lack of transparency can see distribution operations sink to new lows when it comes to supply chain inefficiency.

While companies expend much time, energy and resources in finding better ways to reduce excess inventory and maintain desirable stock turnover, understanding and managing demand remains a problem. Refining the supply chain to its most effective form is an ongoing challenge for logistics practitioners, and in today's hyper-competitive and globalised business landscape, finding a way to do so will likely mean the difference between success and failure for many businesses.

And yet, despite these costly frustrations, there's hardly a global business (especially in the retail and FMCG sectors) that doesn't have at least one eye cautiously trained on the continent and its fast-rising potential. Africa already has more cities of more than one million people than North America does, and despite widespread poverty, spending power on the continent is in the midst of a rapid rise that can't be ignored by the international business community. Africa is home to 1.1 billion people and will account for one-fifth of the world's population by 2025. Critically, more and more citizens are entering the consumer class, with tens of millions only recently emerging from poverty and flexing their discretionary income for the first time.

But how do the Unilevers and Procter & Gambles of this world mitigate the challenges of logistics in Africa? How do they assess the size of a certain catchment area, which products are in high demand, and how much people are willing to pay? How do they ensure that just the right amount of that product is delivered to the right communities, at the right times, and at the right prices, to make a move into Africa worth their while? It all comes down to having as much consumer and retailer data as possible – and that's another area where most of Africa presents a tangled conundrum.

With the exception of South Africa (whose citizens purchase around 75 per cent of their groceries from supermarkets), most retail throughout the continent is informal. Trading occurs at kiosks and in community markets with precious little computing power to gather the point-of-sale and stock-control information that is so essential to an efficient supply chain. Our experience working on the continent has taught us that it is a combination of traditional and alternate data collection that creates the most complete consumer picture.

Image Credit: Adobe Stock

Trading often occurs at kiosks and community markets with poor computer access to collect point-of-sale information.

What can you tell about a population by analysing a photo taken from space? If you know what you're looking for, plenty. Satellite imagery is one of the data forms that has the most to offer regarding informal areas. Levels of night-time illumination, road access, traffic patterns, building density, and even the materials used to roof the houses in a particular area, can all form valuable pieces of the consumer puzzle – and help businesses more accurately paint a picture of their potential customers. Viewed in combination with traditional household survey methods, as well as some digital input in the form of access to mobile phones and online spending behaviours, the picture becomes clearer still. Fed into machine learning models as a series of data layers, previously unnoticed associations, patterns and trends begin to emerge, all of which can be used to ensure speed, accuracy and efficient use of resources along the entire length of a globalised supply chain. This is especially useful as both traditional and digital retail continue to boom on the continent.

Africa's historic legacy of limited or incomplete consumer data has often tempted organisations into making do with market research based only on the inhabitants of its largest cities, but a more granular view is needed if markets are to be carved up accurately – and to maximum profit for international businesses. Disparate languages and cultures, poor infrastructure, widespread inequality, and a rapidly expanding middle class means that data needs to be sharp and refined down to the square kilometre if the supply chain is ever to be fully optimised. All businesses need to do is to know where to look – and what to look out for. ■

> "Working on the continent has taught us that traditional and alternate data creates the most complete consumer picture"
>
> **DUSTIN HOMER, DIRECTOR OF CLIENT SOLUTIONS, FRAYM**

Preventing the cracks that can affect productivity

Essential replacement parts such as windscreens and hoses can be unusable when taken from stock if they have not been stored correctly.

Specially designed storage systems from Stodec Trading can prevent the loss in productivity and significant cost that cracked windscreens or split hoses can impose.

A recent installation for Kinross at their Tasiast Mine in Mauritania illustrates how this previously constant problem has been solved in another stage of their site support warehouse facility development.

Windscreens and vehicle windows come in a range of sizes so the backup parts store has to have the correct unit for the on-site vehicles. If they are stored flat then there is a high risk of crushing or damage when they are pulled out.

Image Credits: Stodec Trading

Stodec Trading has designed and installed specialist windscreen racking.

Stodec Trading designed and installed specialist windscreen racking as part of the warehouse equipment which accommodates the wide range of sizes that are used at the Tasiast site. The installation storage equipment is designed to locate all of the items needed for operational support, including pallet racking, mezzanine flooring and heavy duty external racking for major plant items installed by Stodec Trading after manufacture and shipment from the UK.

Screens are separated by vertical dividers so that they are not subject to sideways loading and the shelf surface is fitted above any steel support beam. Kinross have been able to reduce their stockholding and most importantly the in-stock replacement screens are undamaged and ready to use.

All mining and oil production sites have pipes, hoses and belts which again need to be ready to use, without splits or kinks, when replacements are called for.

The systems installed by Stodec Trading include adjustable hanging units and pegs for belts and gaskets. The same type of storage units have been supplied by Stodec to oil drilling rigs where hose storage is essential in a small area. ■

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RwandAir launches Kigali-Cape Town route via Harare

RwandAir expands its operations in Africa with new route launched to Cape Town.

Cape Town has received a boost to its tourism sector after RwandAir launched its second destination to South Africa.

On 16 May, it flew its aircraft to Cape Town International Airport. Since 2004, the airline has been operating flights twice a day from Kigali to Johannesburg, one of the airline's busiest route in Africa.

"We welcome the introduction of the direct route from Kigali via Harare to Cape Town, not only does this facilitate improved business and tourism between the two capitals, but further positions the Cape as a gateway to Africa," said Harris. The Kigali-Cape Town route via Harare, which will operate four times a week, takes the airline's total number of destinations to 26.

"RwandAir studies the market to see where we can spread our wings, and we found a lot of potential in the Cape Town route. This is why we decided to go to this city as an additional destination in South Africa," said Ginette Kadigiri, the airline's customer loyalty manager.

Last year, the airline grew by 20 to 25 per cent in terms of revenue, according to a report in the New Times. "It is exciting flying with the country's carrier, and we the citizens are proud of seeing RwandAir expanding its operations to Africa. It makes it easier to travel within the continent," Passenger Epiphanie Murebwayire told the national daily paper. RwandAir is expected to transport around 1.2 million people in 2018.

HAPAG-LLOYD FOCUSES ON GROWING MARKET IN WEST AFRICA

Hapag-Lloyd celebrated the official opening of its new office in Tema, the largest port city in Ghana and where it will manage all its activities in West Africa.

It has massively expanded its presence in the region with a fast connection from West Africa to Europe via the West Africa Express (WAX) and the Mediterranean West Africa Express services.

Anthony Firmin, chief operating officer, said, "I'm very pleased that our enhanced presence in West Africa is showing initial signs of success. Our West Africa Express (WAX) service from and to West Africa has been operating with extraordinary success for several years and is very well received by customers. With our new East Africa Service (EAS), connecting Saudi Arabia with Kenya and Tanzania, we have entered another new trade. As a result, we are tying Africa even more closely to our global network while benefiting at the same time from positive economic developments in large parts of Africa."

250 BUSES TO BE DELIVERED TO LAGOS

Scania in collaboration with the Brazilian bus and coach firm Marcopolo will deliver 250 buses to Lagos during the first half of 2018.

The buses have been ordered by the company Transport Services (TSL), which will also be responsible for the service and maintenance of the bus fleet.

TSL's CEO Deji Wright, said, "The choice of Scania and Marcopolo as suppliers is in line with our strategy of becoming a leading player within public transport in Nigeria. The companies supply robust and passenger-friendly buses with favourable operating costs."

In Nigeria, like in other West African countries, an improvement and modernisation of public transport systems is underway, representing a great business opportunity for Scania.

"Our strategy for meeting the strong increase in demand is to form partnerships with large cities in the region and offer modern and sustainable transport solutions," said Fredrik Morsing, MD for Scania West Africa.

The 250 Scania buses will be built on Scania's 2-axle low-entry chassis featuring a 9-litre 250 hp engine and will be fitted out with Marcopolo's Viale bus body model. This combination will mean buses with very good operating economy, high passenger capacity and comfort including easy boarding.

In addition to the 250 Scania buses, Marcopolo will deliver 50 buses of its smaller Volare model, built on a Volkswagen Caminhões e Ônibus chassis.

Scania's efforts to boost its presence in the West Africa region began with the establishment in Ghana, where the company has delivered 400 buses and coaches since 2014. Aside from taking responsibility for servicing buses and coaches, Scania has contributed to the design of bus service systems and training of drivers.

BRIEFS

Electric-diesel trains for Senegal

The project will link Dakar with the Blaise Diagne International Airport.

A series of electro-diesel train cars ordered for the Train Express Régional project in Senegal is being tested at Alstom's plant at Reichshoffen in France. The project will link Dakar with the Blaise Diagne International Airport in Diass, serving 14 stations on a 55 km route with a journey time of 45 min, according to Railway Gazette.

"This test run is a significant milestone for Alstom and for the project', said Didier Pfleger, Alstom's Senior Vice-President for Middle East & Africa.

Rwandan government to repair road

The incident has reduced traffic at the customs border by 50 per cent.

The government of Rwanda has intervened to repair a section of the Katuna-Kigali road after it was damaged by severe weather.

The affected area is in Mwanjale, Kabura village, four kilomtres from the border into Rwanda.

Traffic coming in from Uganda were diverted back to Mirama Hills, then onto a Kigali. A truck driver who had spent two days at the Katuna border, told local media, "We are here stuck and our money is getting finished."

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Super Stralis – Iveco

Iveco recently launched the new natural gas-powered Stralis X-WAY for the European Euro VI market. Its sustainable vehicle range for the construction industry was on show recently at Paris Intermat 2018, answering French President Emmanuel Macron's call for a massive conversion of heavy truck fleets to gas. The Stralis X-WAY is also available in the African market with different emissions, Euro III and Euro V. The vehicles offer ultimate flexibility with a home of artic and rigid versions, there engines and three transmissions, a true workhorse in Africa's tough, and varied construction market.

Image Credit: Iveco

Gas-powered Stralis X-WAY is available in Africa with different emissions.

New arrivals – Mercedes Benz

Daimler Trucks brings the latest Mercedes-Benz trucks to more than 40 markets in the Middle East and Africa with the launch of the current generation of Actros and Arocs vehicles. Actros: reliable and efficient for long-distance and distribution haulage operations. Arocs: robust for construction-site and off-road use. "A truck has to help a customer do the best job possible and that is as true in the Middle East and Africa as anywhere," says Stefan Buchner, head of Mercedes-Benz Trucks. "We are now taking our latest Actros and Arocs models to the markets there, with the aim of leveraging the momentum being experienced across these regions."

Image Credit: Mercedes Benz

Latest Actros and Arocs models to be rolled out in Africa.

Knock down kits – Mitsubishi

Japan's Mitsubishi Fuso Truck and Bus Corporation has been quietly stepping up its African footprint in recent times. At the end of last year, it inaugurated its latest Knock Down (KD) kit assembly plant for light-duty Canter trucks in Lagos, Nigeria, together with its local distributor CFAO. "The Canter is particularly popular due to its reliability, ruggedness and low maintenance cost, meeting the economic needs and requirements of Nigerian customers," the company said in a statement. With a capacity of 500 Canter a year, it expects to see further growth in the emerging Nigerian market as well as other African territories going forward.

Image Credit: Mitsubishi

Light-duty Canter trucks are made at a plant in Lagos.

Cab Comfort – CAT

Offering a 45.2-ton (41-tonne) rated payload capacity, the new Cat 745 articulated truck, first unveiled in 2017, features a world-class cab design, completely re-engineered from the inside-out using global operator feedback to advance comfort and ease of operation. Offers dramatic improvement in visibility from the cab and reduced sound levels, while new infrared glass reduces solar heating inside for a more comfortable user experience. A new 'wake up' feature also initiates machine displays as soon as the door is opened upon cab entry.

Image Credit: CAT

Cat 745 articulated truck features a world-class cab.

Happy Anniversary – DAF

DAF Trucks, now one of Europe's most successful truck manufacturers, is celebrating its 90th anniversary this year. To mark the event, it recently released a limited exclusive range of trucks to the market in keeping with original founder Hub van Doorne's guiding philosophies. "When developing his trucks, Hub van Doorne focused on technology, functionality and driver comfort," comments Preston Feight, president of DAF Trucks. The company boasts a wide range of leading vehicles for multiple applications with satisfied customers all over the world. The image here shows the DAF CF 480 FAD at work.

Image Credit: DAF

DAF CF 480 FAD truck is part of a range of vehicles for multiple applications.

Value Added – MAN

With the ever increasing sophistication of commercial vehicles these days, manufacturers are gaining a competitive edge by offering expert training to customers and users. MAN ProfiDrive a value added training scheme from MAN Trucks has added its new offroad and traction course as a further module, specially aimed at drivers of all-terrain construction trucks. MAN says the varied and flexible vocational and advanced training programmes offered by MAN ProfiDrive enables it to provide customers with a sustainable added value service that goes far beyond technical vehicle support. ■

Image Credit: MAN

MAN Trucks has added a new offroad and traction course.

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Tyre monitoring for mining trucks set to boost efficiency

A high-tech tyre monitoring system, iTrack, to be fitted to trucks at a well-known Burkina Faso mine is set to boost efficiency and generate cost savings.

Trucks working at one of Burkina Faso's best known gold mines will soon showcase a new cost saving technology that could hold huge potential for other fleet operators across the region.

A UK-listed company, Transense Technologies plc, a provider of sensor systems for the transportation and industrial markets, recently announced a new contract to supply its state-of-the-art iTrack technology for large haul trucks at the SOMITA operated mine.

SOMITA is owned jointly by a Nordgold subsidiary, High River Gold, together with the Burkina Faso government.

Transense Technologies said that Translogik, its trading division providing tyre management solutions, will supply 16 iTrack II mining tyre monitoring systems for the truck fleet at the mine.

It secured the contract through its Ghanaian partner WATS (West African Tyre Services), a leading provider of earthmover and off-the-road tyre management services to the mining industry.

In a 8 May statement to the London stock market, Transense said that the tyre monitoring systems are to be supplied on a rental and service basis via WATS, which is a wholly owned subsidiary of Rana Motors & Metal Works Engineering Company Ltd.

"This method allows mining companies to benefit from the productivity gains and overhead savings provided by using the system without any of the associated capital cost while providing Translogik with a recurring revenue stream," it stated.

The iTrack II system provides fast, accurate, reliable real-time data on the condition of tyres, combined with live tracking of vehicle location and status. A 24/7 control room also monitors the pressures and temperatures live – this information can be used to ensure tyres do not exceed critical heat thresholds, detect incorrect load distributions, predict suspension failures, eliminate manual tyre pressure checks among other things.

Trucks at Taparko mine in Burkina Faso have been fitted with a high-tech tyre monitoring system.

Image Credit: Nordgold

"Having conducted extensive trials over the course of the last 18 months we have chosen iTrack because its combination of live alerts and extensive suite of data analytics is crucial to enhancing our offering as tyre service providers," said Vibi Chandra, director, sales and services director, OTR Tyres, WATS.

As an independent technical adviser and service provider to mining companies in West Africa, WATS has its own impressive track record.

Its credentials are based on its ability to reduce the cost of earthmover tyre operation for major open-pit miners while maximising production and enhancing safety.

Advanced engineering systems and innovative maintenance, analysis and reporting technologies combine to consistently reduce client tyre costs, typically by 20 per cent or more.

"West Africa is a region with dozens of mines and hundreds of haul trucks and it is our intention to introduce our new enhanced service to our existing portfolio of mines as well as other mines across the region," added Chandra. "We know these mines are very interested in the significant advantages we are now able to offer and we fully expect further advances and new contracts in the future."

According to Transense, all of the iTrack II benefits increase health and safety as well as reducing maintenance and downtime, which maximises the hours a truck is working, which directly correlates to an increase in production.

It says existing iTrack users have reported increases in tyre life of up to 30 per cent and fuel savings of up to 3 per cent. Savings of this magnitude provide a more rapid return on investment, it says, with the iTrack system paying for itself "in a matter of months"; where the rental option is chosen the system can pay for itself from day one.

For Transense's chief executive, Graham Storey, the new iTrack contract is a breakthrough deal into an important new market.

"We are very pleased to have added another mine in a new region to our growing list of iTrack users," he said. "WATS are a well established and highly regarded tyre service provider in West Africa and with their depth of contacts we are hopeful of an accelerated rate of adoption as we move forward." ■

> "WATS are a well-established and highly-regarded tyre service provider in West Africa"
>
> **GRAHAM STOREY, CHIEF EXECUTIVE, TRANSENSE**

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Voith's new centre for hydropower projects in East Africa

Technology group Voith has opened its new East Africa Hub in Addis Ababa – highlighting its commitment to the development of electricity generation from hydropower in the region.

From now on, the technology group will be planning and coordinating projects in nine countries in the east of the continent from this new facility. The opening ceremony was attended by Ethiopia's State Minister of Water, irrigation and Electricity Dr. Frehiwot Woldehanna, German ambassador to Ethiopia Brita Wagener, and Uwe Wehnhardt, CEO of Voith Hydro.

Image Credit: Voith

Symbolic hand-over of the key for the new Voith Hydro East Africa Hub in Addis Ababa, Ethiopia.

In his opening address, Wehnhardt emphasised the potential of hydropower in the region. He said, "Voith has been supporting the development of clean energy generation in Africa since the 1940s. We are reinforcing this commitment through the opening of our facility in Addis Ababa," adding that the hydropower market potential and economic development make Ethiopia an ideal base for the new site.

With a hydropower potential of 45,000 MW, Ethiopia has one of the largest resources on the African continent. Since 2011, the country has been boosting the development of renewable energies and aims to be the energy hub for East Africa in the medium term.

"Due to the longstanding history of hydropower projects in Ethiopia there are a large number of well-trained experts in the country. Some of these experts are now supporting us in our new East Africa Hub," says Wehnhardt. The good logistics are also a point in favor of Ethiopia. For example, all the countries serviced – Egypt, Kenya, Sudan, South Sudan, Rwanda, Tanzania, Uganda and Zambia can be reached by direct flights in just a few hours.

Already, Ethiopian hydropower plants with Voith technology are supplying up to 900,000 households in the country with clean, sustainable electricity. One of these power stations is Gilgel Gibe I, which went onto the grid in 2004. Its three Francis turbines from Voith have a capacity of more than 180 MW – sufficient output to supply electricity to more than 120,000 households in the rural Oromia region around 260 km to the south-west of Addis Ababa. For the Gilgel Gibe II power plant Voith also supplied four Pelton turbines and generators and the electrical and mechanical equipment.

ANSALDO ENERGIA SCORES SUCCESS IN TUNISIA

Ansaldo Energia has signed a 240mn EPC contract with Société Tunisienne de l'Électricité et du Gaz (STEG) to build a gas-fired open cycle thermoelectric power station, with an installed power of 625MW, in Mornaguia, south west of Tunis.

The plant will be equipped with two AE94.3A model gas turbines, plus the relative generators and auxiliary systems, built in Ansaldo Energia's Genoa production facilities. Work will take 22 months.

"This new order is the result of concerted teamwork involving the entire company," said Ansaldo Energia CEO Giuseppe Zampini. "I'd like to thank the government institutions involved for their constant and effective support in defence of Italian industry on international markets."

Ansaldo Energia consolidates its historic presence in Tunisia, where it built the "Sousse C" and "Sousse D" plants in the Sidi Abdel-Hamid region and the Rades B plant.

CUMMINS DEBUTS NEW BATTERY LINE-UP

Cummins unveiled its lithium-ion battery portfolio at the Battery Show Europe in Hannover, Germany, 15-17 May. The portfolio includes battery packs and battery modules that can be integrated expertly with Cummins' new electric and hybrid powertrain portfolio, providing customers with a broad range of flexible, scalable power solutions for small and large commercial applications.

"With a 100-year-long track record of powering our customers' success, Cummins is leading the way in transforming the future of transportation with our cutting-edge lithium ion battery line up that's part of a diverse power portfolio," said Andrew Penca, general manager, Battery Systems at Cummins. "Cummins is committed to investing US$500mn in electrification over three years. These investments include innovation of electric and hybrid power solutions that will serve our markets as they adopt electrification."

The BP74E (74 kWh battery pack), BP35E (35 kWh battery pack), BM44E (44 kWh battery module) and BM20E (20 kWh battery module) utilise Li-ion technology with a high energy density and proprietary control technology maintaining a high battery performance for a longer zero emission range. The modular design allows the system to be scaled and aligned with the capability and duty cycle of the application. Cummins broad expertise ranges from low voltage packs (BM44E and BM20E) that power material handling applications to high voltage energy dense battery systems (BP35E and BP74E) that have the energy needed for long range buses and trucks.

Attendees experienced a wheeled loader powered by a Cummins Hybrid Power Plug In system, which combines battery power using the BP35E with a compact engine-generator, using a 4-cylinder Stage V F3.8 engine.

BRIEFS

SA reaffirms renewable energy promise

Image Credit: Adobe Stock

No hint of nuclear energy plans by South African energy minister Jeff Radebe.

The South African government has re-affirmed its commitment to renewable energy as part of the country's energy mix while avoiding any mention of its plans for nuclear energy.

Energy minister Jeff Radebe delivered a keynote address at the African Utility Week conference that kicked off at the Cape Town International Convention Centre on 14 May. He assured delegates the Integrated Resource Plan will be finalised in August later this year.

Image Credit: Adobe Stock

There will be no power blackouts this year, Eskom says.

Eskom says no to power cuts

South African power utility Eskom has said it will not resort to controlled power blackouts this year despite rumours of coal shortages, according to a report by Reuters.

"There will not be load-shedding this year," said Eskoms's acting chief executive Phakamani Hadebe. "I can tell you without any shadow of doubt that we are safe. We are confident that we are on the right trajectory." Eskom appointed a new board of directors in January.

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Economic growth fuels genset demand in the Maghreb region.

Image Credit: Adobe Stock

North Africa shines for genset specialists

Genset suppliers are enjoying brisk business across a resurgent North Africa region.

North Africa's economic growth in recent years has been impressive, driving demand for energy and power services across the region.

This means brisk business for genset makers and their supply chains, and a positive outlook going forward.

That even includes recovering economies like Libya, which was pulled apart by civil war in the wake of the Arab Spring and the demise of its long-serving leader Muammar Gaddafi.

Despite any negative media coverage, business is still being done on the ground, as the country gets back on its feet.

In March, Turkish genset specialist EMSA announced that it had completed a major assignment for the state power utility, General Electricity Company of Libya (GECOL).

"116 units gensets in different power range[s], powered by Perkins engines, were shipped to Libya to support [the] electricity distribution network of the country," it said in a statement.

The hope is that there is a lot more business to come, not just from Libya — still in need of massive reconstruction — but across the entire region.

"The North Africa region has recovered strongly since the Arab Spring in 2010," according to the African Development Bank (AfDB).

Indeed, real GDP growth was estimated at 4.9 per cent last year, up from 3.3 per cent in 2016 — that's higher than the African average of 3.6 per cent, and second only to East Africa.

This improved performance, it noted, stems largely from the greater than expected production and export of oil by Libya, which itself generated huge GDP growth of 55.1 per cent, thanks to an improved security situation after joint regional and international assistance efforts to the country.

But growth prospects for 2018 and 2019 are positive in all countries, the AfDB reckons.

"The growth outlook for the region remains favourable relative to that for other regions (except East Africa) with an average growth projected at 5.0 per cent in 2018 and 4.6 per cent in 2019," it notes.

Fuelling this growth will mean extra demand for electricity services, which spells good news for infrastructure providers and genset companies alike.

In fact, the oil and gas sector is a well established customer for new gensets, not just in a re-emerging Libya, but elsewhere too, across a region rich in hydrocarbons.

> "The growth outlook for North Africa remains favourable"
>
> **AFRICAN DEVELOPMENT BANK**

Italian genset experts Coelmo recently helped one of Algeria's leading oil companies refine its production processes with a bespoke generator solution supported by Perkins 4006-23TAG3A engines.

Oil production remains a fundamental part of Algeria's economy. The oil and gas sector still accounts for nearly 35 per cent of the nation's GDP and around two thirds of total exports.

Much of the industry, however, operates in the tough climate of the Sahara Desert, calling for robust facilities and expert planning.

When presented with a detailed specification for the work — including working in temperatures of up to 55°C — Coelmo's technical team devised a solution comprising 12 Coelmo gensets, each powered by a Perkins engine.

To further safeguard the facilities in the extreme environment, the team installed the units inside robust 20-foot containers.

With each generator able to supply 800 kVA, Coelmo's solution provides all the power and reliability to meet the oil company's base load requirement for multi-phase pumping operations at the upstream field.

The gensets have now been in operation since the end of 2017, and will provide 4,500 hours of dependable power every year.

In a company statement, Coelmo marketing manager Noemi Vitulano said, "We selected Perkins as our engine of choice for the generator set because the company clearly supplies the best combination of quality and cost anywhere in the market." ■

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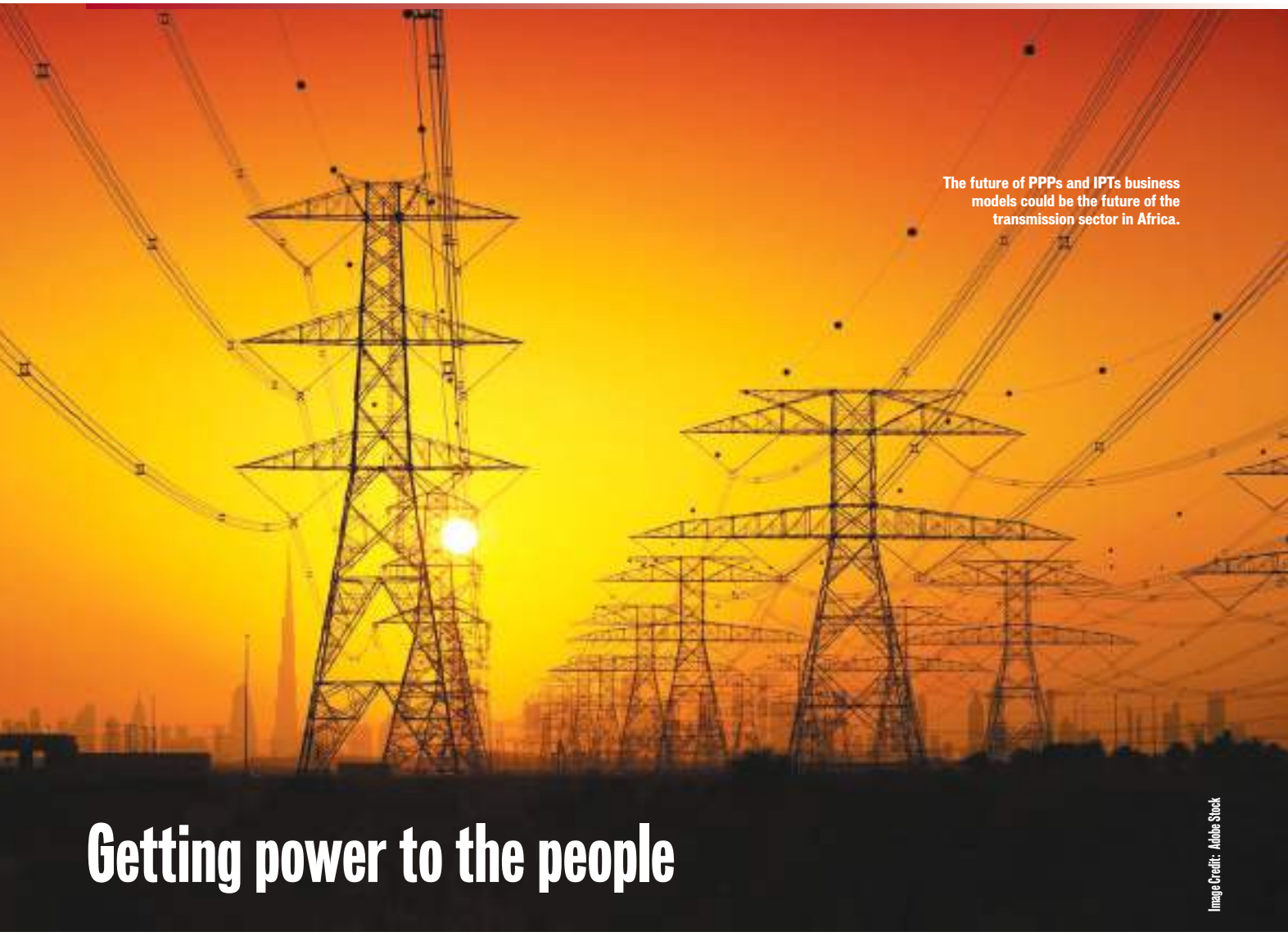

The future of PPPs and IPTs business models could be the future of the transmission sector in Africa.

Image Credit: Adobe Stock

Getting power to the people

More than 600 million people remain without access to electricity across Africa. While there are many factors behind this state of affairs, getting power to the people — via transmission — remains one of the main challenges.

Power shortages and regular outages play a big part in most African lives. And often those experiencing at least some power during their day are the lucky ones. For two out of three Africans, however, no electricity at all is normal. That means businesses, schools, medical stations and homes all suffer as a result. This lack of affordable and reliable energy is one of the major factors trapping millions of Africans in poverty.

The root cause of this situation is all too often the transmission networks; poor quality standards and lack of sufficient funding over many years have led to incomplete, inefficient and poorly maintained infrastructure and a situation that fails to get power to the people.

The World Bank believes that addressing these challenges now requires the involvement of private funding to bolster the gaps often left by inadequate public finances, which vary in availability from one country to the next. Attracting outside private investment is seen as crucial if new infrastructure is to be built and power is to be delivered to Africa's wider populace. One challenge in such an approach, however, is assuring potential private investors that the rewards of getting involved in any African nation's power transmission sector outweigh the many risks of doing so.

In its recent 'Linking up: Public-Private Partnerships in Power Transmission in Africa' report, the World Bank has looked at private-sector-led investments, or public-private partnerships (PPPs) in transmission in other parts of the world and how such an approach might suit the situation in sub-Saharan Africa. However, the World Bank estimates that to deliver the power that is needed across Africa will require 'annual' investments for transmission network expansion of between US$3.2bn and US$4.3bn from 2015 to 2040. That is no small ask. But the report is very hopeful, citing parts of Latin America and Asia where, for example, private sector involvement in transmission networks has led successfully to a reduction in transmission project costs and wider grid power coverage across several nations.

So, it is this new approach of PPP and the creation of Independent Power Transmission (IPT) and distribution models that is now being scrutinised by governments and major utilities across Africa as a way forward to improve power availability, making it more robust and consistent. Outlined in its report, the World Bank is working with major players in places like Kenya and Southern Africa (involving members of SAPP, the Southern African Power Pool); already potential IPT projects are in the pipeline in Kenya, Mozambique, Zambia and Tanzania.

The report goes on to say that almost all transmission investment in Africa is currently financed by state-owned enterprises (SOEs), a situation that was true for the rest of the world until the 1990s. Since then, however, a wave of restructuring across Latin American countries, and many of the member countries of the

Organization for Economic Cooperation and Development (OECD), has led to new business models for financing the transmission of electricity, decreasing the role for public investment and increasing the role for private finance. The same could happen in Africa.

The need

Out of 38 countries in Africa, there are nine which have no transmission lines above 100kV and the combined length of transmission lines in those 38 countries is only 112,196 km. This compares with Brazil, which alone has a longer transmission network than Africa, at 125,640 km. The US, too, has a network over twice the length of Africa's at 257,000 km. As a result, building more transmission lines and upgrading transmission capacity will be an essential part of the overall expansion of Africa's electricity sector, with transmission needed both within and between countries; this makes investments at both national and regional levels essential. On the technical side, infrastructure needs include both alternating current (AC) and direct current (DC) technologies, with a range of voltages.

Currently, SAPP, the most developed power pool in Africa, has an installed generation capacity of 61,959MW, and 75 per cent of this installed capacity is considered available for operations. Its members, such as: Electricity Supply Commission of Malawi; HCB Mozambique; CEC Zambia; ESKOM South Africa; NamPower Namibia; and Zimbabwe Electricity Supply Authority, are planning to commission 32,695MW of new generation capacity by 2022. In 2016, over 60 per cent of the installed generation capacity came from coal, while hydropower was the second source of generation, delivering 21 per cent.

Earlier this year SAPP appointed UK engineering consultant and specialist in African transmission projects, WSP, to develop a proposed 330kV interconnector between Zambia and the Democratic Republic of Congo. This will connect Kolwezi in the DRC to the district of Solwezi in Zambia, through the Zambia Electricity Supply Corporation (ZESCO) network at Lumwana or Kalumbila substation and the future Société Nationale d'Electricité (SNEL) network at Kolwezi NRO substation. A team of engineers will undertake a three-stage feasibility study to develop options and recommend a preferred solution for the interconnector. Work provided includes initial assessment of the routes and substations, data gathering, financial and economic analysis, detailed route surveys and detailed design and specifications. All three phases will be completed within an 18-month programme of works finalising in 2019.

The project has received financial backing from the African Development Bank, the World Bank and the AREP programme.

A bright future

According to the World Bank and a view supported my many in the power transmission industry, introducing the private sector to electricity transmission is an idea whose time has come for Africa, although it is a step that must be approached cautiously and, perhaps, only in selected countries where conditions are right and risks are low. Let's hope the future of PPP and IPT business models in Africa's power transmission sector is a bright one. ■

AEF: 20 years on and still a catalyst for change

The African Energy Forum celebrates its 20th anniversary this year in Mauritius. Some major industry players explain why the forum continues to provide a vital platform for the development of the continent's energy sector.

By providing an annual networking platform for the sector, AEF has been a catalyst for partnerships, project investment and ultimately progress. In 20 years, the forum has grown from two sponsors and 200 delegates to 130 sponsors and 2,000 delegates. During this time the increasing number of power developers and financial institutions, not to mention the growing number of conferences focusing on energy in Africa, demonstrates the continued appetite for developing and investing in projects on the continent.

The road has not been easy, but thanks to the continued motivation and commitment of its attendees, over the course of the forum's lifetime the sector has witnessed the emergence of initiatives such as South Africa's Renewable Energy Independent Power Project Procurement Programme, GET FiT Uganda and the IFC's Scaling Solar programme, with many IPPs coming online and a growing emergency power sector.

But AEF, organised by Energynet, has become more than simply an opportunity to meet up with clients. Many sponsors and attendees use the forum as a vehicle to announce products, major investments, project deals and mergers. At the Copenhagen Forum in June 2017, InfraCo Africa and Standard Microgrid signed a Convertible Loan Agreement for the phased disbursement of up to US$3.5m, with the United States Trade and Development Agency (USTDA) also awarding Standard Microgrid a US$0.75m grant to support project preparation services. These commitments fund the deployment of distributed solar power across Zambia. The World Bank used AEF to launch a report about Public-Private Partnerships in power transmission. Shortly after the Forum, Redox Power Solutions Ltd ('Redox'), the developers and investors in Albatros Energy Mali SA, announced the financial close and imminent start of the construction of the first IPP in Mali.

InfraCo Africa and Standard Microgrid signed a loan agreement for the US$3.5mn with the USTDA.

Image Credit: Energynet

Here are a few words from the the many decision-makers who attend AEF.

David Keith, senior vice president, Tetra Tech, one of the many decision-makers who attend AEF, said, "My first Africa Energy Forum was 2000 in Edinburgh. Our firm had just partnered with the Government of Uganda for a major electricity reform effort, and I was eager to attend AEF to learn from others, and hence benefit our client. With system expansion as Uganda's goal, our work helped to establish the Electricity Regulatory Authority, and opened the door for private sector participation in Uganda's distribution sector. In 2002, at AEF in Lyon, we held a formal bidder's conference for what would ultimately become Umeme.

"All these years and AEF conferences later, Uganda's experience is still a good model. It created an independent regulator, established cost-reflective tariffs, settled the non-payment problem of public sector electricity customers, brokered a win-win deal with trade unions, and paved the way for financial sector sustainability as every AEF conference has advocated, credit-worthy off-takers are the source to attracting investors in generation regardless of the market climate for investment in Africa's power sector, AEF has remained a constant – as a catalyst enabling deals to get done, and as the one event any serious player can't afford to miss."

Martin Haupts, chief executive officer, Phanes Group, added, "Solar energy's contribution to global grids in the last decade has been palpable. Renewable energy accounted for a quarter of the total energy production worldwide in the last 12 months, with solar outgrowing oil, coal and gas combined, as stated in the Global Trends in Renewable Energy Investment 2018 report. This trend is set to continue, too, with net fossil fuel generating capacity declining in 2017, and solar soaring consistently for the last 24 months. Powering Africa will be a joint effort – with government authorities working more closely with the private sector to increase capacity across the board. These conversations must be frank and frequent. Events such as AEF play a major role in facilitating these, which is why they remain an important platform to our industry."

> "Solar energy's contribution to the global grids in the last decade has been palpable"
>
> MARTIN HAUPTS, CHIEF EXECUTIVE OFFICER, PHANES GROUP

And finally, the last word should go to Rod Cargill, founder of the Africa Energy Forum. He said, "AEF started modestly the compact size and possibly the awful Amsterdam weather helped establish the ethos of the forum, which was to serve the African and international power sectors in their effort to promote the essential rollout of power across the continent.

"I don't think it is going too far to say that a bond was formed between delegates to pursue this objective, which led many delegates to return each year. Perhaps the importance of the task reflects the year-on-year growth of the forum. The growth of AEF is also due, in no small part, to the continued loyalty of the participants and the dedicated commitment of the present management to the industry." ■

A special thanks to the partners and contributors of AEF for providing this article.

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Moving towards distributed generation

Waldemar Wiesner, head of power plant sales MENA Region from MAN Diesel & Turbo, speaks to *African Review* about the continent's energy future.

Africa's energy landscape is changing, what are the major trends?

Like the rest of the world, Africa is focusing on moving towards green energy and is investing in low-carbon technologies. In general, Africa has a high potential for power generation and is very rich in energy resources. In addition to conventional energy reserves, there are the substantial and diverse renewable resources.

There is a distinct move towards distributed generation – which has the ability to bring more people into the energy fold – as well as the increased appetite for renewable energy in emerging markets across Africa where Burkina Faso, Morocco, Senegal, and Zambia are good examples.

Other broad trends reveal a need for smaller grids that can support the transmission of power to currently non-serviced areas and reduce the widespread lack of access to electricity. Investments in battery storage that can be coupled with solar photovoltaic plants for storage of energy are also growing.

Meanwhile, new oil and gas discoveries across the continent raise significant hopes among governments and citizens of access to energy, jobs and growth – even export opportunities that could represent a major boost for African economies.

What are the major challenges to Africa's energy infrastructure development ambitions?

Africa is very rich in natural resources but suffers as a result of low levels of development. Energy consumption in Africa is among the lowest worldwide with around 3.5 per cent of total global energy usage. Power production is nonetheless insufficient to meet demand. This is due to challenges such as a deficiency of modern utility services (especially in rural areas), poor infrastructure, the continued dependency on traditional biomass to meet basic energy needs and the significant growth in population. Power companies also struggle to produce electricity at a widely affordable price.

Image Credit: MAN Diesel & Turbo

Waldemar Wiesner says MAN Diesel & Turbo alongside its partners "will drive the transition towards a carbon-neutral world".

In some countries regulatory frameworks allowing private investment – through Independent Power Producer (IPP) agreements for example – are not properly set up and this could be improved. This is required to reduce risks and make projects bankable, which will consequently attract finance.

A lack of energy constrains development and growth. The availability of power will make investments in other segments possible, will support local entrepreneurs and as a result will provide economic and social stability.

What can Africa's policymakers do to support energy development?

The main challenge is first to mobilise financing and there are some great examples to be seen in Africa. For instance, the Bénin Révélé or Revealing Benin plan is made up of 45 projects across nine sectors, including energy. The programme acts simultaneously in institutional, economic and social areas and works with various private sector partners.

Within the energy sector, the programme is focused on four central elements including ambitions to secure the competitiveness of thermal electricity generation, develop renewables and restructure the national operator and its grid as well as more effectively manage energy consumption.

As a result of this policy initiative, last September MAN Diesel & Turbo and consortium partner BWSC signed a contract covering the construction of the 127 MW Maria Gleta dual-fuel power plant located near the city of Cotonou. Initially fuelled on HFO, the plant will switch to gas once a supply is established.

Benin is just one of a number of African nations that are initiating similar policies to support their development goals. Burkino Faso, Mali and Senegal have all recently awarded private sector power development contracts, while Gambia is planning to issue IPP tenders this summer.

How does MAN Diesel & Turbo technology support African energy development goals?

Our mission is to convert energy into sustainable progress and prosperity. Together with our partners we drive the transition towards a carbon-neutral world.

A reliable partner in all aspects of power plant construction, we offer a complete range of engine and/or turbine-based power plant equipment from a single genset to turn-key EPC power plants. For example, MAN Diesel & Turbo provides decentralised, flexible and highly efficient CHP solutions by utilising surplus heat from gensets to produce hot water, steam or chilled water or a combination of all three with efficiency rates above 90 per cent.

MAN Diesel and Turbo is one of the leading energy solution providers, including dual or tri fuel engines, gas and steam turbines, LNG infrastructure and storage, renewable integration and battery storage solutions.

Along with the latest in advanced energy production technology, MAN Diesel & Turbo provides all necessary services associated with

> "MAN Diesel & Turbo has more than 3GW of installed capacity operating across the continent"

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their installation and use, from consultancy during early development phases through to long-term spare parts and operations and maintenance services for the operational facility. Indeed, MAN Diesel & Turbo has been providing extensive services right across the continent for decades.

How can Africa benefit from long-term OEM engagement?

With the first MAN Diesel & Turbo engines operating in Africa as far back as the 1950s – in Mali and Senegal – today MAN Diesel & Turbo has more than 3GW of installed capacity operating across the continent. As a result, MAN Diesel & Turbo not only has an elaborate footprint on the African continent, but also looks back on more than six decades of history.

Around 300 employees at a network of sales and services centres in major locations in South Africa, Nigeria, Senegal, Kenya, Angola and Namibia, ensure the company's complete product portfolio is available across the continent.

This long-term commitment is seen elsewhere, too. For example MAN Diesel & Turbo is training staff at the 119MW Cap Lopez power plant, located close to Port Gentil in Gabon, at its facility in St. Nazaire, France – one of two such centres the company operates. The Cap Lopez power plant and its sister plant Alénakiri together account for approximately 20 per cent of Gabon's overall generation capacity.

How can state-of-the-art technology help accelerate Africa's energy infrastructure build-out?

With an increasing share of renewables like solar and wind power and therefore a growing dependency on intermittent or daytime-only power production, Africa's grids will require flexible and responsive power sources like decentralised reciprocating engine or turbine power plants and MAN battery storage systems. As the region looks to realise its future energy strategy, MAN Diesel & Turbo acts as a technology partner by supporting grid stabilisation and allowing more renewables to be added. The characteristics of our advanced engine technology makes them a perfect fit for this purpose. With very high efficiency, even in part-load scenarios, such machines are able to instantly ramp up the power as requirements change and are not affected by harsh site conditions like high ambient temperature or elevation.

Similarly, in line with the oil and gas discoveries in the continent, it is expected that in future most African countries will have access to gas, which is the cleanest of all fossil fuels.

The 96MW Tobene Power Plant in Taiba Ndiaye, Senegal.

Image Credit: MAN Diesel & Turbo

MAN Diesel & Turbo engines such as these inside the Tobene Power Plant in Senegal have been operating in Africa as far back as the 1950s.

Moving towards dual fuel engines now will ensure operational flexibility over time.

Will Africa's long-term energy ambitions be realised?

MAN Diesel & Turbo is witnessing a rise in activity right across Africa. Alongside growth in renewables and the need for more flexible solutions we also note constant growth in conventional power plants, where our technologies are the preferred option to be used for baseload power.

Having had a presence in South Africa since 2008 and in Dakar since 2010, reflecting this growth in activity the company opened a new sales and service office in Lagos, Nigeria, in 2015, and is currently building power plants in Gambia, Eritrea, Niger and Burkina Faso.

All these successes are based on more than 60 years of doing business in Africa – during which more than 3.2GW of generation capacity have been installed across 37 African countries. MAN Diesel & Turbo's more efficient and responsive technology and the flexibility to operate on liquid fuel or gas is supporting development and, by increasing access to and lowering the cost of electricity, it is helping to realise Africa's energy ambitions. ■

Image Credit: BBOXX

The rise of battery storage

James D Simpson Jr, partner & global co-chair, Project Finance Practice, and Christopher Shelton, associate, Winston & Strawn talk about battery storage providing alternative power generation.

The upward trend of renewables has grabbed headlines over the last few years, particularly due to the falling costs of solar photovoltaic (PV) power and countries increasing their renewable commitments in the wake of the Paris Agreement.

Renewable energy sources like the sun and wind are affected by location, weather, and time of day. It therefore follows that renewables energy generation (particularly solar and wind) creates a variable supply of energy. Intermittent renewables are challenging as they disrupt the conventional methods for daily operation of the grid. The power fluctuates over multiple time horizons, forcing the grid operator to adjust its day-ahead, hour-ahead, and real-time operating procedures. Battery storage may provide the solution, smoothing out the inconsistent output from renewable sources by increasing the reliability of energy supply and storing excess energy when demand for power is low. Batteries also reduce carbon dioxide emissions and can respond in milliseconds to increased grid demand, unlike fossil fuel plants, which can take up to a few hours to ramp up.

Battery prices have fallen by almost half since 2014, causing large-scale battery projects to emerge around the world. According to Bloomberg New Energy, in 2017, developers announced lithium-ion battery projects with a total capacity of 1,650MW per hour, four times the total announced in 2016.

Battery storage and renewable energy generation in Africa

Battery storage can be incorporated "behind the meter" as part of a hybrid power plant helping to smooth generation output, or "in front of the meter" providing grid operators the ability to store energy prior to dispatch. With the cost of batteries falling, the demand for batteries being used "behind the meter" in combination with renewable energy plants like solar PV, onshore, and offshore wind has increased.

Battery storage technologies have been widely hailed as a crucial tool to enable widespread integration of renewables, unlock grid flexibility, and bolster grid reliability, and are widely anticipated to have the greatest impact on the African energy sector. Traditionally, African countries have depended on fossil fuel-based plants and unreliable grid infrastructure to generate power. Battery storage may well facilitate renewable energy by evening out the distribution of electricity while breaking Africa's dependency on unreliable grid infrastructure through the development of off-grid renewable plants. Small, renewable, off-grid solutions combined with battery storage is arguably the new sustainable alternative to the traditional centralised generation model.

While the use of battery storage on a utility-sized scale may still be a few years away for Africa, the off-grid sector of the energy storage market has progressed in recent years with the support of export credit agencies and development banks. In October 2017, BBOXX, a company specializing in the distribution and financing of plug and play solar systems across Africa, announced its success in closing a deal on a US$5mn facility in Rwanda. BBOXX is currently the largest off-grid utility in Rwanda and Essential Capital Consortium, a fund managed by Deutsche Asset Management (of the Deutsche Bank Group), will finance BBOXX to further develop its off-grid solar and battery system in the country. The US$5mn facility will be managed by Banque Populaire du Rwanda. Furthermore, in the summer of 2017, the World Bank announced that it would provide US$150mn in credit for the funding of off-grid solar energy in marginalised communities of Kenya.

Financing battery storage

Regardless of scale, there will always be a degree of technology risk that comes with financing storage assets like batteries. In particular, battery life is a crucial bankability aspect of the energy storage sector. The cycle life of a battery is the number of charge and discharge cycles a battery can complete before losing considerable performance. Current battery schemes are said to operate at 80 per cent of capacity after five years. Nevertheless, technology risk, such as declining battery performance, can be mitigated, through for instance: creditworthy suppliers that stand behind extended contractual warranties of 10 years; operation and maintenance agreements from a reputable provider such as AES Energy Storage, Stem, Renewable Energy Systems (RES), and Advanced Microgrid Solutions (AMS) who specialise in storage asset management; and good technical advice, which will all play a factor on financial institutions' lending decisions.

While energy storage projects attract financing from developing finance institutes (DFIs), the financing of energy storage projects is new for commercial banks in Africa. So far, Standard Bank, Africa's largest commercial bank, has only financed power generation based on independent power purchase contracts without on-site storage facilities. However, Standard Bank is aiming not only to provide local currency financing for working capital, but to take on the challenge of financing start-up and higher risk projects involving new technologies, such as battery storage. According to Maureen Harrington, head of the client coverage department for power and infrastructure, Standard Bank has set up a team to explore various project financing options for different kinds of distributed power, off-the-grid, and energy storage projects. Leveraged public financing from African governments and international or regional development banks should help reduce the financial risk perception of local commercial banks.

Battery storage has been touted as the path to making renewable power (wind and solar) economically and technologically competitive with conventional power. New financing models will be required to accommodate this new sector in Africa, and commercial banks and other financing institutions have started trying new ideas — the International Finance Corporation has indicated that it is working on the development of the first large-scale, grid-connected battery storage in Africa. As for off-grid projects, the cost reduction in batteries will ensure continuity in the development of this market and its innovative efforts in financing such projects. ■

> "Off-grid solutions with battery storage is the new sustainable alterntive to the traditional generation model"

Murray & Roberts eyes potential acquisition of Aveng

Murray & Roberts Holdings, a construction firm focusing on the mining, oil and gas and power sectors in Southern Africa, has announced its intention to acquire the entire issued share capital of Aveng.

It is believed the acquisition of Aveng, a construction contractor in the Middle East, will create a large multinational engineering and construction business, with the accompanying benefits of additional scale in Murray & Roberts' major markets. Its mining business, Moolmans, is one of the largest surface mining contractors in Africa, involved in all aspects across the mining value chain.

Booysendal Platinum Mine, Border of Limpopo and Mpumalanga provinces.

In a statement released, Henry Laas, group chief executive, Murray & Roberts said, "The primary objective of the potential transaction is to establish a large multinational engineering and construction group with the scale necessary to compete more effectively in relevant markets. In this context, the Group believes that the strategic rationale for the potential combination of Murray & Roberts and Aveng is compelling for both Murray & Roberts and Aveng stakeholders. The boards of directors of Murray & Roberts and Aveng have agreed to enter into formal negotiations with regards to the potential transaction."

In addition to the potential share offer, Murray & Roberts proposes to early redeem Aveng's outstanding convertible bonds maturing in 2019.

NIGERIA SIGNS US$6.7BN RAIL CONTRACT

The Nigerian government has signed a US $6.7bn contract agreement for the Ibadan-Kaduna segment of the Lagos-Kano rail line with the China Civil Engineering Construction Corporation (CCECC).

Minister of Transportation, Rotimi Amaechi, reportedly said the line will pass through Oshogbo-Ilorin-Minna to Kaduna, with a single track branch line from Oshogbo to Ado-Ekiti. It will be completed in upto three years time.

The work will be part of the Lagos-Kano rail modernisation project, which started in 2006. The 185km Abuja-Kaduna section of the railway was completed and commissioned by President Muhammadu Buhari in 2016. The opposition Peoples Democratic Party hailed the move at the time saying, "We are excited that President Muhammadu Buhari has commissioned our project." The second leg of the Lagos-Kano line is due for completion by the end of 2018.

FAIRFAX AFRICA TO INVEST IN INFRASTRUCTURE

Fairfax Africa Holdings Corporation has announced that it has agreed to invest ZAR300mn (US$24mn) in Consolidated Infrastructure Group (CIG), a leading pan-African diversified infrastructure group by way of a convertible loan to build electrical infrastructure, and has agreed to underwrite a ZAR800mn (US$64mn) rights issue to shareholders.

It will strongly position CIG to grow its pan-African infrastructure business by providing the company with sufficient liquidity to support its construction business Conco and by providing additional capital for other growth initiatives.

"We are delighted to announce Fairfax Africa's strategic platform investment in CIG, a pan-African diversified infrastructure group with a focus on electrical infrastructure and a presence in 21 countries in Africa," said Michael Wilkerson, chief executive officer. "Infrastructure represents a tremendous growth opportunity in Africa, and we are confident this attractive investment will create substantial value for Fairfax Africa's shareholders. We look forward to working closely with CEO Raoul Gamsu and the CIG management team over the long-term as they continue to build their leadership position in electrical infrastructure development in Africa."

"We are very pleased to have CIG as a partner and look forward to supporting its strategy of acquiring, building and operating infrastructure assets that are shaping Africa's energy future," said Paul Rivett, vice chairman of Fairfax Africa.

The initial term of the convertible loan will be for 12 months and will bear interest at a rate of South African Prime plus 4 per cent (currently 14 per cent).

Fairfax Africa's objective is to achieve capital appreciation, while while preserving capital, by investing in public securities in Africa.

BRIEFS

President Kenyatta wins award for road building

Kenyan President Uhuru Kenyatta was awarded the Super Prize Great Builder trophy.

HE Uhuru Kenyatta, President of Kenya, was awarded the Super Prize Great Builder Trophée Babacar NDIAYE of The Africa Road Builders 2018. He was commended at the annual meeting of The Africa Road Builders on 2 May for his personal leadership and the transformation of the road network. Kenya was also praised for its railway development, simplified air transport system and the efforts made to its public lighting. His trophy presentation happened on 23 May.

Construction industry in SA remains weak

The construction industry grew by 0.3 per cent in 2017.

The South African construction industry is expected to remain weak over 2018-2022, according to a latest report.

In the Construction in South Africa Market report, the industry grew by 0.3 per cent in 2017. This was preceded by an annual growth of 0.7 per cent in 2016 and 1.7 per cent in 2015.

This slow growth can be attributed to low commodity prices, weak government policies and ongoing political uncertainty.

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Redefining industry standards

Taking performance and innovation to new levels, Bobcat is launching the R-Series mini-excavators from 2-4 tonne.

The E35z is part of Bobcat's new range of excavators being launched in Europe and Africa.

Image Credit: Bobcat

The new range of five compact excavator models — the E26, E27z, E27, E34 and E35z — offers a best-in-class mix of high digging forces, superb stability and smooth controllability of working functions, complemented by low weights for easy transportation.

The new excavators offer enhanced levels of quality and robustness. They utilise newly developed flexible machine platforms that allow different configurations of models and specifications to suit a wide range of applications and customer needs.

Jarry Fiser, product line director for Bobcat mini-excavators in Europe, the Middle East and Africa, said, "The current Bobcat compact excavator line-up has been one of the most respected products in the industry. Now backed by nearly five years of development work, we are raising the bar even further and we are confident that we are now offering the best-in-class machines available."

Built around the operator

Designing products around the operator is part of Bobcat's essential DNA. That is why a new cab has been introduced throughout the whole of the R-Series range. The larger operator space and premium interior deliver best-in-class comfort with an improved entry/exit thanks to ergonomic 3D handles and a wider door. The upgraded cab also features significantly larger windows and narrower pillars giving boosting all-around visibility.

Inside, the low noise-low vibration cab, the operator has the benefit of new joysticks and new optimised metal travel pedals. The operator benefits from up to five independent auxiliary hydraulic circuits and a new industry unique 'Selectable Auxiliary Control' (SAC) system for customisable joystick controls. Another unique feature is the revolutionary Cylinder-Inside-Boom (CIB) design concept which provides strong protection for the boom cylinder as part of a reinforced workgroup designed to minimise free play and improve durability. The excavators can also be equipped with a deluxe control panel display offering extra information for increased troubleshooting and additional functionality of the new optional selectable auxiliary control system (SAC).

Clive Kilford, R-Series program manager, said, "Creating something better than the current series was the real challenge as it has proved to be one of the industry's best. Yet by looking at every part we implemented over a hundred improvements — always having the operator in mind."

New models tailored for specific audiences

The new generation of the popular E26 is an easy-to-use, robust machine optimised for specific rental industry needs while introducing the next level of operator comfort and features required by demanding owner-operators. The E27z model enhances the performance characteristics of Bobcat's E26 machine, with the largest cab for this size of machine on the market.

Moving to the E34, this is a new generation 3.4 tonne conventional model offering higher stability coupled with excellent performance and enhanced controllability. The E35z, a new generation model in the 3.5 tonne machine class offers the additional benefits of ZHS design. ■

Utility compactors released on market

Caterpillar has released new utility compactors for the African market.

The CB1.7 and CB1.8 utilise a weight-based nomenclature that signifies its standard operating weight in metric tonnes, making it easy for customers to choose the machine that best fits their needs. These models provide excellent versatility in the 1.7 mt to 1.8 mt size class. Typical applications include: bike paths, courtyards, patchwork, parking lots, driveways, town centres, and shoulder work.

Easy to operate

Simple operating features include toggle-type switches for quick and easy activation of machine functions. The mechanical propel lever provides quick reaction for precise control, while vibrant LED lights on the console simplify operation in low light conditions.

Simple to transport

Moving to a new job site has never been easier. The single point lifting option and durable hitch design makes hoisting these machines onto transports quick and easy. The foldable ROPS option provides a short height and enables the machine to move under and around low structures when performing compaction procedures.

Efficient compaction performance

The high amplitude vibratory system combined with large diameter drums and the exclusive, eccentric weight design delivers excellent compaction performance.

Closely monitor

These models are designed to easily fit in the rental fleet. Product Link capability enables close monitoring to keep owners informed of machine location and service needs. The simple control panel and spacious platform offer comfort to suit a variety of operators. Durable components and the fuel efficient engine maximise uptime and lower lifetime operating costs.

Image Credit: Caterpillar

CB1.7 can be used for applications such as town centres and shoulder work.

Straight-forward service

Full access to remote drains, sampling ports, and filters makes service fast and easy. Long service intervals for the engine oil and vibratory drums keeps the machine on the job site longer for optimal operational needs. ■

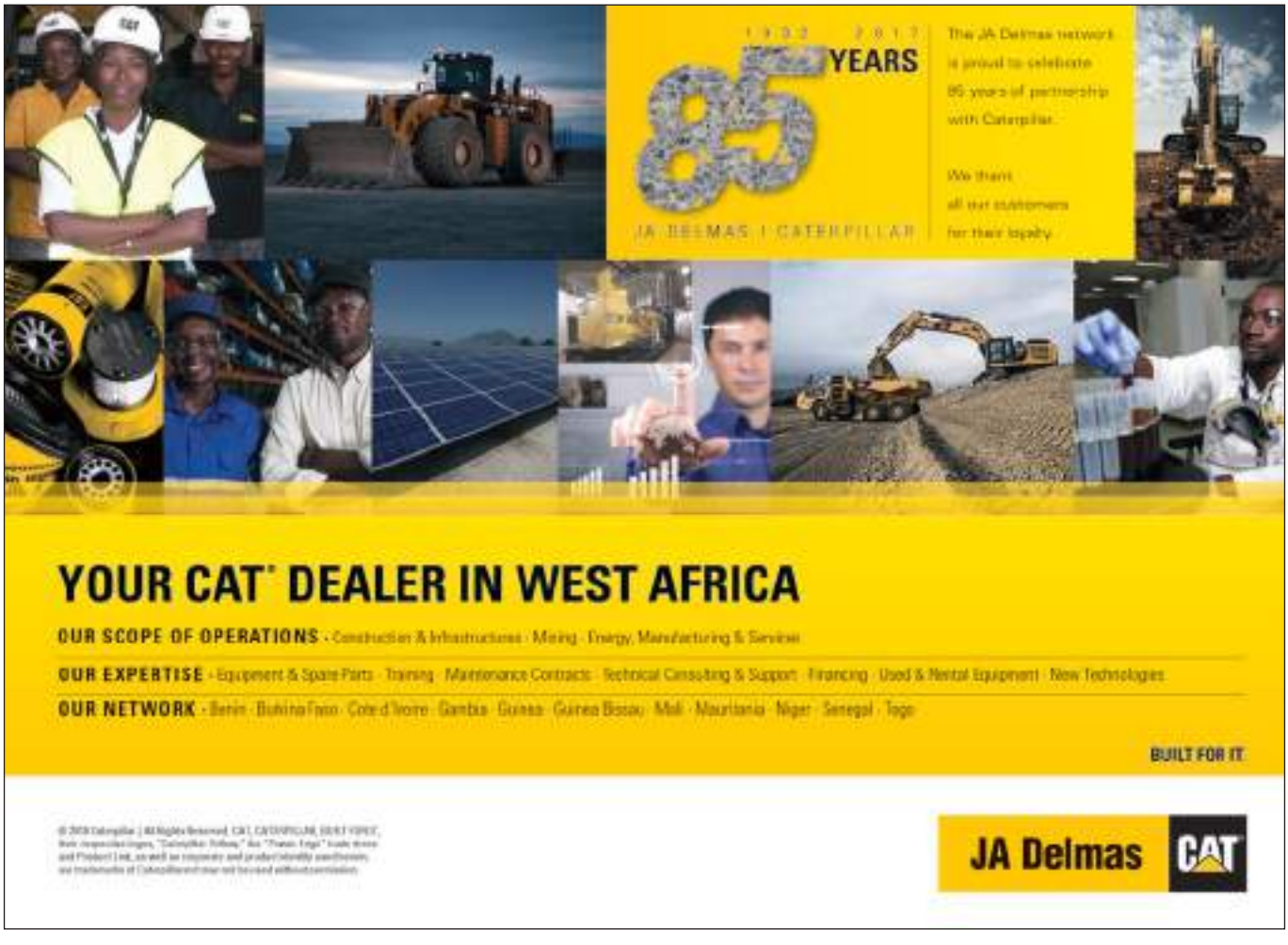


Image Credit: Adobe Stock

Roads ahead

Nawa Mutumweno examines the massive construction projects underway to upgrade Zambia's road network.

There are massive construction works going on in Zambia currently, with roads on top of the government's agenda as the country seeks to change its landlocked status to land-linked.

Thanks to an ambitious roads development programme, the Patriotic Front (PF) government has won over critics with its flagship venture since it came to power seven years ago.

Since 2011, the country has seen massive road infrastructure development initiatives come to fruition; Link-Zambia 8000, Pave Zambia 2000, L400 (Lusaka) and the C400 (Copperbelt).

The accelerated road construction and rehabilitation programme has created more than 6,000 job opportunities for the local people, led to a reduction in vehicle maintenance costs and travel times, as well as creating an economic hub in the outlying area of our country, according to the Ministry of Finance.

There has been massive support for the road sector in recent years, evidenced by generous allocations of the national budget. For instance, in 2015, out of a total national budget of K43bn (US$4.2bn), the road sector took K5.4bn (US$527mn) (13 per cent), while in 2016, the sector was allocated K6.6bn (US$644mn) (12 per cent) of the total K54.3bn national budget (US$5.3bn). K8.6bn (US$840mn) was allocated to the sector in 2017 out of the 2018 national budget of K64.5bn (US$6.3bn) (13 per cent); and K8.6bn (US$840mn) out of K71.6bn (US$6.9bn) (8.3 per cent).

"Emphasis will be on the construction of roads that support economic growth and foster regional trade. These include the Chingola-Solwezi, Kitwe-Chingola dual carriage way, Lusaka-Chirundu Link 4, Mpika-Chinsali, Chinsali-Nakonde and Solwezi-Kipushi," former Finance minister, Felix Mutati told Parliament in his 2017 National Budget address on 11 November 2016.

In 2016, the 34km Mongu-Kalabo road, valued at K2.9bn (US$286.9mn) was commissioned, the most expensive road in the history of the country.

A construction marvel, this road's scope of works included massive earthworks for a 35km embankment, the construction of 26 bridges and a 1,022m long bridge across the Zambezi River. It has provided a shorter link between the towns of Mongu and Kalabo and reduced the cost of doing business. Previously, the people of the two areas used boats and canoes to cross the flood plain. This road has the potential to enhance trade between Zambia and its western neighbour, Angola.

On top of this, in the western part of the country, President Edgar Lungu launched the K108mn (US$10.5mn) Sioma Bridge, which was the missing link on the Sesheke-Senanga road, connecting Namibia and consequently, the port of Walvis Bay.

Project	Cost	Scope
Link Zambia 8000	K55bn (US$5.3bn)	Upgrading to bituminous standard; construction of 8,201km
Pave Zambia 2000	K6.9bn (US$668mn)	Improving the condition of 2,000 km urban road network using paving technology
L400	K3.6bn (US$348mn)	Rehabilitation of 408km township roads in Lusaka
C400	K5bn (US$492mn)	Rehabilitation of 400m township roads on the Copperbelt

Source: Road Development Agency (RDA)

Another mammoth project is the construction of a dual carriageway between Lusaka and Ndola, which is scheduled to ease the flow of traffic on the Great North Road. Recently launched, the K12bn (US$1.2bn) Lusaka-Ndola dual carriageway is economically one of the most important roads. The project consists of two phases; Phase I will be the construction of the road, while Phase II will involve the construction of auxiliary infrastructure which includes hotels, toll gates and service stations.

Other roads under the PPP model include the upgrading of the Ndola-Kasumbalesa roads to dual carriage way and works on the Kasomeno-Mwenda road, connecting Zambia to the Democratic Republic of Congo (DRC).

The rehabilitation of the Great East Road from Luangwa Bridge to Mwami Border in Eastern Province by the government and its cooperating partners, the African Development Bank and the European Union has recorded significant progress. This is under the Nacala Road Corridor Project, which aims at supporting economic growth in the Southern African Development Community (SADC) and fostering regional integration through reliable, efficient and seamless transport infrastructure that increases sub-regional trade and the global competitiveness of the region.

The 70km Pedicle Road from Mokambo Border Post on the Copperbelt to Mwanawasa Bridge across the Luapula River in Chembe, Luapula Province via the DRC, worth K297mn (US$2.9mn), is also being upgraded. Once completed, the road will create a shorter link between the Copperbelt and Luapula provinces and beyond to include North-Western and Northern provinces, to neighbouring countries such as Angola, the DRC, Tanzania and Malawi.

On December 21, 2015, the RDA signed a contract worth K239mn (US$23.4mn), with Chinese province Henan for the rehabilitation of the remaining section of the Lusaka-Chirundu Road, a gateway to the south.

Another road worth of note is the 122km Kawambwa-Mpororokoso Road in northern Zambia valued at K1.4bn (US$142.2mn).

"The government is vigorously pursuing an economic diversification agenda to move the country away from copper dependence to other viable economic sectors such as tourism, agriculture and manufacturing. For this agenda to be realised, infrastructure such as roads becomes very critical," President Edgar Lungu said last July. Once completed, the road will boost tourism and agriculture in the Northern and Luapula provinces.

"All these roads we are constructing are strategic links to open Zambia to more opportunities and trade with its neighbours. They will give us the impetus to push our development agenda forward. Good roads are a catalyst for national development," added President Lungu.

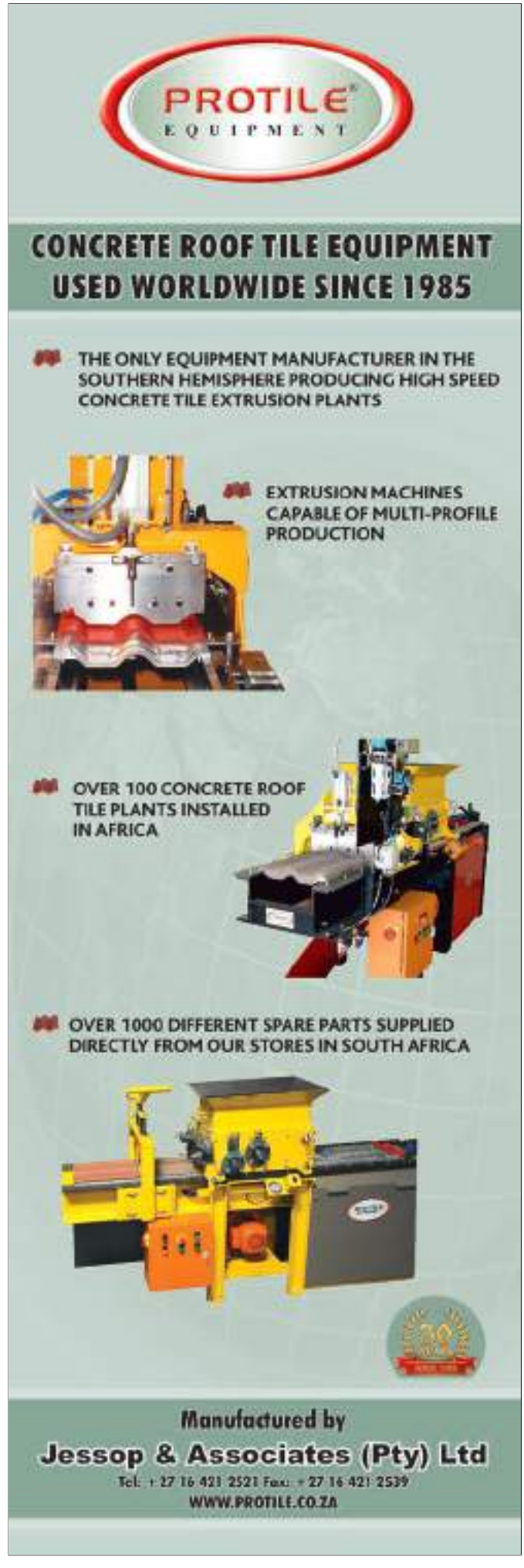
Work on the K2.4bn (US$240mn) Lusaka City Traffic Decongestion Project financed by cooperating partners is already underway. This is aimed at redesigning the major road network in the capital to reduce traffic jams, travel time, and travel distances and saving on fuel. It is co-financed by Government (15 per cent) and Exim Bank of India (85 per cent).

The National Road Tolling Programme has been instituted to raise revenue for road maintenance and rehabilitation, with the first eight months of 2017 creating K490.5mn (US$47mn). This is a sustainable way of ensuring that the road network is well-maintained.

For many years, lack of easy access to the coast has caused a bottleneck in trade facilitation. With the massive construction of infrastructure underway, Zambia's unique position is now seen as a blessing.

The new transport policy on the drawing board will transform the country into a regional transport hub, placing Zambia in a position to reap abundant business opportunities.

"Zambia ought to exploit its geographical vantage point by creating a regional hub for investment, considering that it taps into the Great Lakes region," said Transport and Communication minister, Brian Musimba. ■



Intermat Paris: construction machinery at its finest

More than 173,000 people visited the Intermat show in Paris, France from April 23-28. Here we take a look at some of the latest engine and machinery innovations on display at the exhibition.

John Deere Power Systems 13.6-litre engine

John Deere Power Systems showcased its Stage V ready industrial and generator drive engines, including a 13.6-litre engine which complies with EU Stage V / EPA Final Tier 4 emission standards.

There are up to 15 innovations including Hydraulic Lash Adjusters (HLA) which decrease valve wear and provide longer engine life, available in single or dual-turbo configurations, low noise and vibrations thanks to the HPCR fuel system and balanced crankshaft and a rear gear train.

Arnauld Blanchard, market and product planner, said, "We have increased the power by 14 per cent from 448 kWh to 510 kWh, with 11 per cent more torque to 3,050nm.

"We have achieved 500 kVA prime node with this new product, which is a key power node in Europe as well as in Africa and the Middle East.

"The 13.6-litre engine will work well in South Africa, especially for the genset market. It can also be used for a wide number of applications, such as mining." Blanchard added, "We have very high and very low tier configurations in order to serve all markets, however the generator drive market is particularly huge in Africa."

Image Credit: John Deere Power Systems

CASE 570T backhoe loader

"The 570T backhoe loader have quickly become CASE flagship machines in Africa and in the Middle East, especially in the Maghreb region and South Africa," said Riccardo Balma, Africa marketing manager. "The 570T is the ideal machine both for big municipalities and for 'one-man-band' customers, even for small machinery rental businesses, that are particularly developed in North Africa. The 86 HP 570T, as well as the slightly bigger 97 HP 570ST, are specifically produced for Africa and Middle East customers, while the range is completed by four higher-HP models that are distributed in Europe with a different engine, due to the European regulations in terms of pollution. Basically, all the construction equipment produced by CASE is available in EU and AME version, mainly differing one from the other in the engine and exhaust treatment.

Image Credit: Case Construction

"In regard to wheel loaders, for which we are celebrating the 60th anniversary of production, we sell the F-Series in Africa and the Middle East, while in Europe we distribute the G-series, the latest wheel loader offering from CASE with a horsepower span from 142 to 347 and bucket payload ranging from 3.9 to 10.2 tonnes.

"CASE mini excavators can be sold in both markets in the range up to 3.7 tons. We also have three AME specific models of graders, made at our plant in Belo Horizonte, Brazil, which are among our best-sellers in Africa and the Middle East."

"These machines have come a long way since the original models, and reflect the practical innovation CASE builds into its equipment to maximise performance and dependability," said Jose Cuadrado, vice president CNH Industrial Construction Equipment for Europe Africa and Middle East.

South Africa is CASE's biggest market for construction equipment in Africa, followed by the Maghreb. "We sell in all the African countries through a dealer network and are constantly looking at improving our coverage, especially concerning the after-sales service to our customers. We have recently started up a new dealership in Angola and other new distribution points, especially in Western Africa and the sub-Saharan region, will follow," Balma added.

Deutz off-highway hybrid drive

Deutz exhibited its first off-highway hybrid drive for construction and infrastructure. Combining a TCD 2.9 diesel engine, a 55kW electric motor and a battery pack, the new concept is the first result

to come out of the E-DEUTZ programme, and opens up significant potential for efficiency gains for drivetrain technology. The mechanical connection between the e-motor and the diesel engine is achieved by means of a transmission

Image Credit: Deutz

with integrated decoupler, allowing the diesel engine to be disconnected from the electrical system, and provides the option of powering the vehicle by electricity.

Dr Frank Hiller, chairman of the DEUTZ board of management, says, "The power output and capacity of each component can be scaled to meet customers' requirements. Customers will be able to choose whatever is the optimum combination of conventional and electrical drive components for their particular application."

Hatz 3H50T

The new H-series three-cylinder diesel engine the Hatz 3H50T engine developed according to the rightsizing principle is characterised by its small size, low weight, with high performance and power at low speeds. The H-series engine generation is predestined for operation in

Image Credit: Hatz

compliance with the EU Stage V emission standard. It has a maximum output of 18.4 kW without any exhaust emission after-treatment – such as diesel particulate filter (DPF), exhaust gas recirculation or diesel oxidation catalyst (DOC). The Hatz 3H50T is the engine with the highest torque in its class in the market today with a displacement of only 1.5 litres, no charge air cooler and an output of 130nm.

Wirtgen Group WS 250 tractor-towed stabiliser

Thanks to the milling drum assembly's practical attachment system, tractors can be effortlessly converted into soil stabilisers using the WS 250. This combination makes such applications as the homogenisation of non-uniform soil

Image Credit: Wirtgen Group

mixtures possible. Even heavy, coarse-grained or sandy substrates are reliably transformed by the tractor-towed stablisers into soil with good paving and compacting properties.

Hamm GRW 280i

Hamm, one of Wirtgen Group product brands, unveiled the world's first pneumatic tyre

Image Credit: Wirtgen Group

roller, the GRW 280i. This roller uses the innovative operating concept Easy Drive, which ensures safe operation. It is used in the tandem rollers of the DV+ and HD+ series and in the single drum compactors of the H series. The pneumatic roller stands out due to its flexible, further optimised ballasting concept. ■

TOP FIVE TECH INNOVATIONS TO MAKE CONSTRUCTION SAFER

The complex nature of construction sites means they can be a health and safety nightmare with electricity cables, moving objects and working at height, not to mention the multiple movements of some serious heavy construction equipment. Here we look at the ways in which innovations are helping to make construction sites a safer place to be.

1. Boost manpower with robotics

Construction is a major offender with the rate of work-related musculoskeletal disorders 16 per cent higher than in any other industry. But as automation takes off, robots are now being employed on sites to do the heavy lifting. Where once it would take six or seven workers to carry a 200kg reinforcing rod, for example, Japanese constructor Shimizu has invented a robotic arm to take the load. This machine aims to do the job in half the time with half the effort – and cut the risk of worker injury at the same time.

2. Stay connected and avoid falls

Slips and trips are the most common source of injury on UK construction sites – causing a third of accidents. Meanwhile, across the pond a sobering 40 per cent of fatalities on site are caused by tripping or falling. Prevention is vital – keeping walkways clear of obstructions, ensuring all structures are in good working order, putting equipment away after use and wearing the proper kit will help keep workers on their feet.

Image Credit: iStock.com/dorian2013

Robots are now being tasked to take on the heavy lifting.

3. Keep it down

Technology such as noise cancelling headphones has been available for years, but innovations are continuing to be developed. Volvo Construction Equipment has conceived a machine for the future where excavators, haulers and wheel loaders can generate significantly less noise. The company's concept research prototype EX2 100 per cent electric compact excavator, for example, would be able to produce 10 times lower noise levels.

4. Reach new heights with mobile apps

While surface trips are the most common cause of injury, falling from a height is the most common cause of death in the USA Telematics like the NIOSH Ladder Safety App provide visual and audio cues to help workers know exactly when their ladders are positioned at the safest angle of 75.5 degrees.

5. Arm workers with vibration-busting tech

One of the most overlooked threats to construction workers is hand-arm vibration syndrome. Wearable technology however can help reduce the risk. Monitoring bands such as HAVWEAR keep a record of a worker's day-to-day activity and highlights when they are at risk of exposure, allowing a supervisor to make adjustments on the ground.

BUILDEXPO: IDEAL FORUM TO BRING BUSINESS INTO EAST AFRICA

Stakeholders in the construction and mining sectors in East Africa received a massive boost in business opportunities after attending Buildexpo Africa.

The 21st edition of Buildexpo Africa, which was held from 3-5 May at the Kenyatta International Convention Centre (KICC), had exhibitors from 40 nations.

Organisers said the exhibition had grown this year, with an array of visitors from the construction industry including builders, architects and manufacturers.

The exhibitors showcased products from important sectors; mining, construction and many more. The exhibition took place at an opportunistic time as the President Uhuru Kenyatta's 'Big Four' agenda gets underway in regard to housing and construction.

Germany, China, India and Italy were among the dominant countries in attendance, alongside several leading international brands looking to build a solid foundation in the region's market. Metallurgica Abruzzese S.P.A. (Italy), Bauer Maschinen Gmbh, Mbk Maschinenbau Gmbh(Germany), Masa Gmbh (Germany) Everest Industries Limited (India), Jet Granito Pvt. Ltd (India), Roser Co., Ltd (Korea) and Nordimpianti System Srl (Italy) were some of the market leaders in their respective industries.

Additional 50 companies from Kenya also attended, including major players such as Apex Steel, Elite Tools Ltd, Matrix Precast, Tononoka Steel.

Image Credit: Expogroup

Major players in East Africa's construction industry attended the 21st edition of Buildexpo in Nairobi.

This year, the event was officially inaugurated on 3 May by the Cabinet Secretary for the Ministry of Industry, Trade and Co-operatives, Mr. Adan Mohamed, EGH. Other dignitaries to attend the mega-event included Hon. Senator Philip S. Mpaayei, MP Kajiado County, and Hon. Joseph W. Manje, MP Kajiado North Constituency along with Hon. Dr. Swarup R. Mishra, MP Kesses Constituency.

Over the years, Buildexpo has grown in stature and now caters to the business communities of the entire East African region. It is projected as the ideal forum for companies to bring their business to the vast markets of East Africa.

Duncan Njage, regional marketing director, exposure events & publication, expressed his view by saying, "As the mediators of the economic development in East Africa, we are extremely excited that our business community and relevant stakeholders are now taking full advantage of such platforms created for their growth opportunities through their active participation."

For more information visit buildexpo.expogr.com

LEADING A CLEANER WAY IN THE CEMENT SECTOR

AfriSam has long led the charge in the cement sector for a cleaner environment, and continues to develop and conduct a range of initiatives to maintain the momentum toward a greener planet.

This has a special significance as South Africa is among the world's largest and fastest growing carbon emitters, according to Nivashni Govender, environmental specialist at AfriSam.

"The country is one of the top ten CO_2 emitters in the world, when measured per capita," says Govender. "This places a huge responsibility on the cement manufacturing sector to be proactive, as South Africa has committed to reduce greenhouse gas emissions by 34 per cent by 2020."

Having established its own environmental department as early as 1992, and developed an environmental policy just two years later, AfriSam has gone on to innovate a number of air quality management improvements. Upgrades in cement kilns and emission filters have led to the lowest dust emissions in Africa.

"Our ongoing focus on alternative fuels and resources (AFRs) has allowed us to steadily reduce the amount of coal burnt in our cement kilns, which in turn contributes to lower CO_2 emissions," she says. "For instance, we have developed a way of burning old tyres in our Dudfield plant – a strategy that also contributes significantly to addressing the environmental hazards posed by tyres when they are disposed of in landfill."

AfriSam has introduced Biodiversity Management Plans at all its mining operations.

Energy conservation is an ongoing programme, which has included the progressive installation of energy efficient lighting across the company's range of cement, readymix and aggregate quarry facilities. As water scarcity becomes a more pressing issue for countries like South Africa, water conservation has also featured high on AfriSam's environmental agenda, says Govender.

"Our programmes focus on reducing the amount of water per tonne of cement produced, or per tonne of readymix prepared," she says. "Our readymix plants, for instance, have strict re-use and recycling processes, and must recycle at least 50 per cent of their grey water generated, on-site."

The focus extends to the treatment of waste generally at all operations, where the waste stream of products such as used oil, conveyor belts and pallets must be recycled to a large extent, and waste must be segregated on site to allow for more environmentally friendly disposal. Disposal to landfill is the last option.

"Rehabilitation and biodiversity at our quarry sites is also a priority, and as early as 1986 AfriSam formed the first trust of its kind specifically to cater for rehabilitation costs on closure – even before this was a legislated requirement for mines," she says. "Our current strategy of concurrent rehabilitation – in which we conduct rehabilitation as we mine rather than waiting for closure before we start – has proved very effective both from an environmental and ecological perspective, as well as a cost perspective."

Caterpillar produces 5000th 793 mining truck after more than 20 years of operation

Caterpillar has completed the assembly of the 5000th Cat 793 mining truck.
Caterpillar data show that the milestone production figure far exceeds the manufacture of any other brand of 250-ton size class truck. In production since 1991, truck number 5,000 represents the fifth generation of the 793.

One of the longest-running 793s was built in 1992 and has accumulated 173,000 operating hours.

"The 793 mining truck is the core of Cat surface mining vehicles," said Jean Savage, Caterpillar vice president with responsibility for the Surface Mining and Technology Division, during a ceremony at the Decatur, Illinois, United States manufacturing facility. "The 793 has been an integral part of making Caterpillar the leading supplier of surface mining equipment. I thank the assembly team as well as those who developed the truck and those who support the trucks working in mines around the world.

"The success of the 793 supports our belief that it is the most productive and cost-effective mining truck in a wide range of applications," said Sudhanshu Singh, global product manager, large mining trucks. "The 793's success is a direct result of collaboration with customers, Cat dealers and cross functional teams within the Caterpillar organisation who have worked to optimise the performance of Cat trucks in a wide range of applications. Our very first 793 truck, placed in service 27 years ago, is still in service delivering best-in-class cost per ton."

The 5000th 793 truck will be delivered to a mining customer in Australia. The largest populations of 793s are operating in Australia, North America and South America where the trucks work to mine iron ore, copper, coal, gold and other minerals.

The most recent generation, the 793F, has been the truck of choice for autonomous operation. More than 100 793F trucks are operating via command for hauling, the Cat autonomous truck operations system, which is a part of Cat MineStar.

Interest in autonomous haulage continues to grow, because Cat autonomous trucks have delivered productivity increases of more than 20 per cent while improving safety and reducing costs.

MINISTER REJECTS RULING ON BLACK OWNERSHIP

South Africa's mining minister Gwede Mantashe will appeal a court ruling on mining companies that stated mining firms do not need to comply with the 26 per cent black ownership threshold, the Department of Mineral Resources announced, according to report by Reuters.

In a statement the department said, "The judgment has dire implications for the economic transformation imperatives of the Constitution, the mining sector and South Africa at large. It further has the potential of extending regulatory and policy uncertainty."

The Chamber of Mines said it respected the government's decision and would continue to negotiate outside of court the third version of a Mining Charter. The charter stipulates certain criteria companies have to meet including black ownership requirements to secure and maintain mining licences.

IMPROVING CONDITIONS FOR ARTISANAL MINERS

Representatives from the World Diamond Council (WDC) have met with stakeholders in the Democratic Republic of Congo (DRC) to discuss the Kimberley Process (KP) and improve the traceability of artisanal miners.

Stephane Fischler, acting president of the WDC and Marie-Chantal Kaninda, executive director of the WDC, had meetings with the chairman of the working group on Artisanal and Alluvial Production (WGAAP), the minister of mines, the Center for Evaluation, Expertise and Certification (CEEC) chairman, the deputy chair and team, the Diamond Development Initiative (DDI), as well as mining companies to work through the KP.

The meetings primarily focused on two topics: the support from the DRC in regard to KP reform and the establishment of the Permanent Secretariat, and the process of registration and traceability of artisanal miners in the country.

Fischler said, "It is a process that requires time and discussions with both those that are impacted and those that implement the Kimberley Process in their countries. These productive discussions help us identify where progress is being made and where there remains room for necessary improvement."

All the local actors praised the very successful formalisation drive by the DDI that has resulted in 200,000 artisanal miners so far being registered with the support of the Ministry of Mines.

Outcomes from these discussions brought to light improvements and challenges that need to be addressed.

A new mining code, "Code Minier," was enacted in the country and improved provisions in favor of artisanal mining.

The main challenge being tackled now is improving working conditions for the artisans and involving the miners' communities in discussions on the future of diamond mining in the DRC.

BRIEFS

Barloworld profit up by 14 per cent

An uptick in mining has led to more sales of heavy equipment in Southern Africa.

Barloworld reported a 14 per cent rise in first-half revenue thanks to an increase in mining activity, prompting sales of heavy equipment.
Reuters reported the company as saying that the biggest profit came from its equipment businesses in Southern Africa, with mining machine sales in South Africa, Mozambique and Zambia. "The improving global economy and commodity prices have resulted in improved mining output in our region," said chief executive Dominic Sewela.

Zimbabwe's mines need to revamp

Mines in Zimbabwe have to modernise their equipment.

Zimbabwean mines need US$11bn to modernise their equipment for better efficiency, the Zimbabwe Chamber of Mines has revealed, according to a report by Reuters.
Batirai Manhando, Chamber of Mines president, said the machinery at most mines was more than than 50 years old and was operating below its installed capacity. "The mining industry is operating below capacity on the back of capital shortages," Manhando said.

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Northern Cape's rebirth as a mining destination

Orion Minerals is planning to restart the Prieska zinc-copper mine after it was closed more than 20 years ago. Managing director and CEO Errol Smart talks to *African Review* about the company's plans this year.

Orion Minerals has begun exploration work to restart the Prieska zinc-copper mine that is expected to become one of the biggest zinc-copper mines in the world.

The then Preiska Copper Mine closed in 1991 after 20 years of operation. At its peak, the mine employed around 4,000 people and milled 46.8mt, producing >460kt copper and >1 million tonnes zinc in concentrate.

Located in the desert, 270km south-west of Kimberley, Orion Minerals has ambitious plans to bring the mine back to life and has already started a hard drilling programme to evaluate the large volumes of mineral resources. From the last official statement released in April, the total mineral resource increased to 29.4 million tonnes, containing 1.13 million tonnes (zinc) and 0.36 million tonnes of copper.

> "South Africa is going to be a re-emerging story"
>
> **ERROL SMART, CEO OF ORION MINERALS**

"We are hoping to extract around 35 million tonnes of ore. It is going to be one of the world's biggest zinc-copper mines," said CEO Errol Smart. "We are busy working on a bankable feasibility study, which we want to complete at the end of October this year, alongside environmental impact assessments, to take advantage of the substantial historical database from mining and processing at the project."

The company has applied for mining rights so that the construction of the mine can begin in the middle of 2019, with the aim of starting production in 2020.

Image Credit: Orion Minerals

The portal of the Prieska copper-zinc mine.

"We are two years from production," Smart continued. "We have opened the old shaft and inspected it and checked the engineering work, which is still in very good condition, with only 15 per cent of it having to be replaced. This will bring capital costs down and timelines closer. It is also a relatively low environmental impact mine because there is no new footprint. It can be built within the existing one."

Infrastructure

The other benefit of the location is the mining infrastructure that is already in place, including a regional power grid feed, bitumen access roads, access to treated water supply and a 1,900 metre landing strip. It is also located just 48 kilometres from a railway siding at Groveput with an open-access railway line connecting the site to the world-class export port of Saldanha Bay.

The site is also an independent power production hub in South Africa the biggest renewable regeneration place in the country. ABB is one of the power producers and Juwi Holding AG is planning to build a 600MW wind power plant, according to Smart.

"It will be a big modern mine powered by renewable energy instead of the grid," he said. "We've also signed a MOU with a local municipality to investigate how to build a power plant to help provide us with energy."

Drilling will be undertaken in two major phases before any open pit mining begins, which is expected to last for 18 months, followed by underground mining.

Smart said, "Caterpillar and Bell will be the obvious suppliers of any earthmoving equipment. But South Africa has a well-entrenched mining and supply industry, so there will be a lot of local suppliers helping us too. Groups such as DRA and Shaft Sinkers will make refurbishing shafts easier and will all help towards cost-savings and meeting maintenance challenges."

During the peak years of the mine's operation, around 900 houses were built, including schools, clinics and petrol stations. But when it closed it left nothing for the surrounding community. With the new scaled-down mine, which will only have 450 employees, people will still have the option to live in their homes wherever they are based and go home for decent periods of time.

He said, "Orion Minerals plans to be at the Prieska project for at least 15 years, but we don't want to come in and have a short-term impact. We want to create business opportunities, start an education programme and establish a digital procurement hub that can be widely used in South Africa. There will have to be life after the mine.

Future of the Northern Cape

"The Northern Cape is one of the unsung stories that is starting to emerge at the moment. Vedanta is busy building massive zinc mines up the road 300km from us. In its time, the cape was where you produced copper, zinc, and lead, and was one of the largest producers of manganese. There is a rebirth of the Northern Cape as a mining destination. The mining minister Gwede Mantashe carried out his apprenticeship at the Prieska mine until 1982. There is a lot of interest in making sure the Northern Cape gets developed, and for us it is a great opportunity because it has exceptional mineralisation. There has not been any modern exploration on this property for more than 30 years. So, South Africa is going to be a re-emerging story. As Goldman Sachs says, it will be the foreign investment destination of the year. We've been the prairie of the world for too long." ■

By Samantha Payne

UNLOCKING THE POTENTIAL OF REAL-TIME DATA IN MINING

With the quantity and complexity of data collected in the mining industry, the ability to handle these large data sets is critical. This has highlighted the need in the mining industry for easy-to-use solutions such as Pitram, according to MICROMINE South Africa regional manager Renier Strydom.

Pitram is a fully configurable solution that captures, monitors, and reports on operational and production data. It provides real-time analytical capabilities to enable improved decision-making on critical areas such as safety, development, and asset utilisation.

The company says the major advantage of Pitram is that it is both scalable in its approach and agile by design, providing a world-class customised solution for any mining operation, irrespective of existing systems or infrastructure.

"Data is king, and it's how we interpret, manage, and analyse that data that delivers the real benefit for clients and industry," Strydom said. "In this regard, the latest trend is for intuitive solutions that are not only user-friendly, but that also promote integration among different software solutions. This trend is becoming prominent due to increased Human Machine Interface (HMI) applications in the mining industry.

Image Credit: MICROMINE

Pitram has a 100 per cent deployment success.

"The use of assisted-control equipment is more and more common, while fully autonomous equipment is common in haulage and drilling operations," He said.

Additionally, health and safety is boosting the need for smarter analytics, with PPE now incorporating sensors to transmit information about potentially hazardous working conditions, for example.

He added, "I believe that ongoing advances in digital technology has the potential to unlock new ways of managing variability and enhancing productivity in the mining industry. Of course, the greatest benefit of this trend will be derived when such technology is integrated across the entire supply chain. This, in turn, will allow for more informed decision-making, as well as more consistent mining operations,"

KAL TIRE SHOWCASES COMMITMENT TO SOUTHERN AFRICA

One year after acquiring the underground mining expertise of Tyre Corporation, and combining it with the surface mining expertise, tyre management innovation and culture of Kal Tire, Kal Tire's Mining Tire Group, has become a respected force in Southern Africa.

Image Credit: Kal Tire

Kal Tire has been operating in Africa since 2009.

At the upcoming Electra Mining Africa conference on 10-14 September, Kal Tire looks forward to showcasing its expanded team's unique strengths, approach and technology. "Team members from Tyre Corporation have such an intimate knowledge of underground mining, and we knew they shared our passion for service," says Dan Allan, senior vice president, Kal Tire's Mining Tire Group. "Pairing that expertise with our decades of international experience, resources and innovations has allowed us to meet customer needs in an integrated, forward looking way that enables us to contribute to the value chain on a deeper level than ever before."

Kal Tire, a tyre management and supply leader in many countries, has had a presence in Africa since 2009. Now with more than 1,500 team members servicing more than 80 mine sites throughout Southern Africa, the company is able to build on its strong reputation and deliver 'source to scrap' services that extend value and tyre life.

Six tips for compliance with EU data privacy laws

The European Union's General Data Protection Regulation (GDPR) came into force on 25 May. African businesses that collect, process or store personal data about European citizens will need to comply, especially if they're SMEs.

The GDPR sets out the minimum requirements for the treatment of all personal data. Personal data can be defined as any data identifying or relating to an individual, including things, such as physical appearance, biometric data, an individual's record on a customer relationship management system, or even something as simple as website tracking data collected via cookies. Here are six practical steps your

- African business can take to ensure that it complies with Europe's stringent new data law.

Pieter Bensch, executive vice president, Africa and Middle East Sage.

1. Get informed

The first step towards complying with the GDPR is to understand the demands the regulation places on how your business collects, manages and stores the personal data of European citizens and residents. There is a wealth of information available online; a good place is the EU GDPR Portal: www.eugdpr.org

2.Do an audit

The GDPR is an opportunity to evaluate why you collect and store personal data, as well as the data you are already holding in your databases. If you find that you are gathering data for which you have no real business need, delete it. This will help you reduce your exposure to risk, as well as show a commitment to responsible usage of your customers' data.

Also look at how long you retain data, as well as how you store and secure it. You might consider a GDPR audit from legal and technological standpoints. Only once you understand what you are doing today, can you start to revamp your systems and processes to align them with GDPR.

3. Review your consent mechanisms

EU data protection legislation has always required that customers must give specific and informed consent to organisations that gather their data. GDPR takes this a step further by demanding that customers give their consent with a statement or other clear affirmative action. If you are still treating silence as consent, or using pre-ticked consent boxes on your websites, you will need to review your processes.

4.Refresh your privacy policies and contracts

You will need to update your privacy notices to provide the additional information required by the GDPR, and you may well need to relook at the portions of any contracts with EU residents and citizens that deal with their data rights.

5. Train your extended workforce

Ensure your employees and partners are aware of the GDPR and secure training to prepare them. Remember the GDPR makes you responsible for third parties who process personal data for you.

6. Appoint your data protection officer

According to the GDPR, organisations processing large amounts of personal information or particularly sensitive personal information should have a data protection officer (DPO). The DPO needs to have expert knowledge of data protection law he or she could be an employee or a service provider. Laws such as POPI in South Africa also expect companies to have an information officer so it makes sense for the same person to hold both roles.

Closing words

GDPR is one of the biggest shake-ups ever seen in regard to how data relating to an individual should be handled, and many African organisations that process the personal data of individuals who are based in the EU are not yet ready for it. Time is running out for them to get their houses in order and there are serious implications if you are a business not taking this seriously. ■

By Pieter Bensch, executive vice president, Africa & Middle East Sage

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