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African Review

DECEMBER 2017 /JANUARY 2018

of BUSINESS and TECHNOLOGY

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Chairman: Derek Fordham

Printed by: Buxton Press

Printed in: December 2017

ISSN: 0954 6782

SUBSCRIPTIONS:

Rates for one year (11 issues):
Europe €107, Kenya KSh3400, Nigeria N6600, South Africa R460, United Kingdom £77, US$140

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Editor's Note

As we say goodbye to a turbulent 2017, we can look forward to an exciting, dynamic future for many African countries next year as they continue to diversify their economies and carve out their place on the global stage. We are keeping an eye, in particular, on developments in Zimbabwe since Emmerson Mnangagwa took the helm as president (page 6) and Sudan following the lifting of US sanctions in October (page 4).

In this issue, we also take a look at the growing pre-eminence of the super-rich in Africa and their impact on the private banking market, with an upsurge of financial services for the wealthy, which is expected over the next decade (page 20).

In our cover story, we consider how effective blasting using the right type of explosives is essential for improving profits in the mining sector (page 54).

Elsewhere in this issue, we take a look at the trend of constructing solar-powered airports across northern and southern parts of Africa (page 42) and lastly, we examine some exciting projects involving the stand-by power genset and scaffolding markets (pages 32 & 52).

As always, stay up-to-date with the latest African business and industry news at www.africanreview.com

Samantha Payne, *Editor*

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Time for Sudan to become major player in world petroleum industry

Image Credit: Georgia Lewis

Sudan would be interested in joining OPEC if it can "reach the levels of production".

Sudan minister for petroleum and gas, HE Dr Adel Rahman Osman Abdel Rahman, said that with the lifting of US sanctions, it is time for his country to "introduce itself back to the world petroleum industry".

Sudan lost vast swathes of its oil resources when the border was redrawn after the formation of South Sudan in 2011.

Taking part in a panel discussion at ADIPEC in Abu Dhabi in November, the minister told delegates that there was a desire to move on from being a net importer of hydrocarbons and that the country was "very willing to cooperate" with other countries, particularly with energy security being a major priority. Less than 50 per cent of Sudanese people have reliable access to electricity and the energy mix includes gas oil, thermal and "a little bit of hydropower".

"Renewables are hardly used," Dr Abdel Rahman said, adding that hydrocarbon development will be a main driver for Sudan's energy future. "It is incumbent on us to collaborate with the international community to develop many of the reserves that are available."

Despite Sudan being a net importer of oil, he said he is happy about the international production cuts and said that Sudan would "cooperate to the full extent" with OPEC's decisions. He said that Sudan would be interested in joining OPEC if it can "reach the levels of production".

As well as oil, Dr Abdel Rahman said that developing the Sudanese gas industry is part of the country's "master plan" and that it will be "pursued vigorously with a schedule for implementation".

He emphasised the importance of using gas to help reduce emissions as it is the cleanest-burning fossil fuel, saying, "gas will probably be the saviour of Sudan and possibly the human race."

Dr Abdel Rahman said that Sudan's priority is to attract investment from exploration companies and draw in business from service companies while the country seeks to revive its upstream sector. He said this can be achieved via "liberal agreements and better fiscal terms".

"We are a small country in resources and power," added Dr Abdel Rahman. "We will need the energy to fuel the economy."

FIRST US TRADE VISIT TO SUDAN SINCE SANCTIONS LIFTED

Sudatel and the government of Sudan hosted business people from the US who were visiting Sudan for the first time during the first week of December.

The trade mission was organised by the Corporate Council on Africa (CCA), following the lifting of sanctions in October. The US delegation explored investment and trade opportunities in a wide variety of sectors including industry, agriculture and forestry, health, roads, transportation and bridges, mines, petroleum and gas, water resources, irrigation and electricity, ICT and telecoms.

Florizelle Liser, President and CEO of the Corporate Council on Africa, noted that "Sudan is a country of vast natural and human resources, and presents many opportunities for US businesses," and added, "Corporate Council on Africa is pleased to lead this historic trade mission, and thank Sudatel."

AFRICAN PRESIDENTS AGREE ON GROWTH

African presidents reached a strong consensus at the Africa 2017 Forum in Sharm El Sheikh, Egypt to focus on regional integration, inclusive growth and youth empowerment in order to achieve continued and sustained growth on the continent.

President of Egypt Abdel Fattah Al Sisi hosted African heads of state and business leaders including President of the Republic of Guinea Alpha Condé, President of the Republic of Rwanda Paul Kagame, President of the Republic of Côte d'Ivoire Alassane Ouattara, and President of Somalia Mohamed Abdullahi Mohamed.

The business and investment forum entitled: "Driving investment for inclusive growth" was convened to increase intra-African investments and cross-border collaboration. The message sent was that entrepreneurship and private sector would be the driving force to transform the continent.

Al Sisi highlighted the importance of African youth, saying they should be the cornerstone of development plans in the continent as governments strive to promote innovation and technology.

President of Rwanda Paul Kagame, co-chair of the Young Entrepreneurs Day, reiterated the need for more urgency.

He said, "We cannot afford to waste opportunities because of unnecessary red tape and associated delays."

Citing the launch of the Tripartite Free Trade Area in Egypt in 2015, Kagame added it was important that African leaders drive the institutional reform of the African Union in order to get the FTA fully operational.

Heba Salama, director of the COMESA Regional Investment Agency, co-conveners of the Forum, reminded leaders in the room that if your dreams do not scare you, they are not big enough.

Al Sisi used the forum to highlight Egypt's strong bond with the rest of continent.

BRIEFS

BMCE launches final phase of 3rd AEA awards

Image Credit: African Entrepreneurship Award

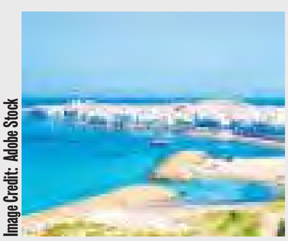
BMCE launches final phase of the 3rd AEAs.

BMCE Bank of Africa in Morocco has announced the launch of the final phase of the 3rd African Entrepreneurship Awards (AEA). Forty finalists were due to go to a boot camp in Casablanca from 6 to 10 December for further training followed by a closing ceremony on 11 December with awards for the best and most sustainable projects.

The initiative supports African entrepreneurs in education, environment and uncharted areas.

DLG completes interior work at Radisson Blu

Image Credit: Adobe Stock



DLG finishes marine-themed interior work at Radisson Blue Resort & Spa in Tunisia.

Draw Link Group (DLG) has completed the interior design work at the new Radisson Blu Resort & Spa in Sousse, Tunisia.

This included renovating 224 rooms, four meeting rooms, a ballroom and two swimming pools.

Daousser Chennoufi, CEO of DLG, said, "Located on the coastal city of Sousse we knew that incorporating a marine design aesthetic would be essential for the hotel's branding, and would echo the freshness of the sea."


VOLVO
YOUR NEW WORKHORSE

Is this the dawn of new prosperity in post-Mugabe era?

The new President Emmerson Mnangagwa has pledged, "We want to grow our economy, we want peace, we want jobs, jobs, jobs." Fundamentals for growth remain strong provided the government could tackle political fragilities and foster nation building around inclusive and competitive investment policies.

A potentially vibrant economy, however, has now become a regional basket case – suffering from decades of economic contraction due to external shocks and poor governance. GDP growth averaged paltry 0.3 per cent/year over 2000-2016, according to the World Bank, while exports plummeted – resulting in acute forex shortages. Domestic crises of 2000-08 nearly halved GDP, the sharpest contraction in a peacetime economy. This raised poverty rates to above 72 per cent, and left a fifth of Zimbabweans in extreme poverty. Public services (health/education) – once regional models – largely collapsed, and the Human Development Index (HDI) in 2016 stood at 154 out of 188 countries. Zimbabwe lags behind several of its Millennium Development Goals (MDGs). Some estimates put jobless rate at 90 per cent – mostly among the youths.

The agricultural sector plunged by 4.2 per cent/year over 2000-16 (World Bank data) after the introduction of disastrous land reforms. In 2009, Mr Mugabe signed the Indigenisation and Economic Empowerment Act (IEEA) into law, which stipulated that Black Zimbabweans (mostly political elites) must own 51 per cent equity in companies. The old Zimbabwean dollar was killed-off by hyperinflation. The Central Bank figures showed annual inflation peaked at 80 billion per cent in mid-November 2008. Subsequently, Zimbabwe adopted a multicurrency regime, or dollarization to facilitate business transactions.

The IMF has urged Zimbabwe must act quickly to dig its economy out of a hole and access development aid.

Five ways towards rehabilitation:

*Protracted isolation from the Bretton Woods Institutions blocked aid flows – resulting in a build-up of arrears to multilateral and bilateral lenders. Debt rescheduling on US$9bn of external debt is contingent on policy reforms. "Immediate action is critical to reduce the deficit to a sustainable level, accelerate structural reforms, and re-engage with the international community to access much needed financial support," said IMF mission chief Gene Leon.

*Higher foreign direct investment (FDI) inflows and technological transfers.

In 1980, Zimbabwe had among highest FDI stock in Africa. Inefficient/opaque state bureaucracies have stymied investment. Rejoining the Commonwealth would revive Australian, British and Canadian investors' confidence. Presently, China provides the bulk of FDI, mostly in the mining sector.

*Fostering right conditions for small-medium sized enterprises (SMEs) – engine of job creation and poverty reduction. On World Bank's Doing Business 2018 report, Zimbabwe was ranked 159th out of 190 countries.

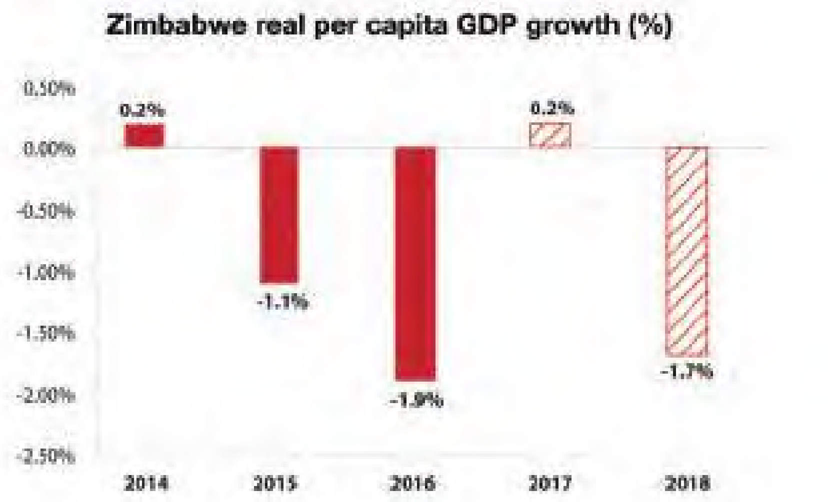
*Revitalising commercial farms – probably with the help of evicted white farmers. Zimbabwe was the world's largest tobacco exporter and breadbasket of southern Africa during the eighties.

*Re-introducing a national currency underpinned by prudent macro-policies and adequate forex reserves, above three-month import cover. IMF estimations indicate Zimbabwe has only two-week of imports' worth of reserves.

Zimbabwe boasts unparallelled mineral resources, rich/fertile land, existing stock of public infrastructure, and relatively skilled workforce. "Realising this will require prompt action to correct fiscal policies, re-stabilise the monetary system, and resolve arrears to international lenders that would allow for a resumption of development financing. It will also require the renewal of capacity in the public sector, and investment reforms," advised the World Bank. It would take concerted efforts to put Zimbabwe on the path of sustainable development.

Medium-term prospects largely depend on the outcome of 2018 elections.

By economist, Moin Siddiqi



Source: IMF.

BRIEFS

EIB funds will help expand the wastewater infrastructure in Lusaka.

EIB supports water infrastructure in Zambia

The European Investment Bank (EIB) has signed a 102.5mn concessional loan with the Zambian Ministry of Finance and the Lusaka Water & Sewerage Company (LWSC) in support of sanitation infrastructure in Lusaka.
The Lusaka Sanitation Programme is part of the urgently needed reinforcement of the wastewater infrastructure in Zambia's fast growing capital.
EIB vice president Pim van Ballekom, said, "We are happy to support the Zambian government."

Closer business ties between SA and DRC

South Africa and the Democratic Republic of Congo are committed to removing hurdles that hinder doing business between the two countries. Joseph Kapika, Minister of State Economy in the DRC, said that the Congolese government's priority was to ensure that the One Stop Shop created for business registrations and investment facilitation has resources to fulfil its mandate for the country and has appealed to South Africa to share its expertise and technical knowledge.

How mobile gaming app is helping drought-stricken Western Cape

Image Credit: Adobe Stock

New gaming app helps residents learn tips to save water during the drought in the Western Cape.

Digitata Insights has partnered with laundry brand Sunlight to create a gaming app in a bid to create 120,000 litres of potable water for households living in the drought-stricken Western Cape.

The app, called Sunlight Smart Water Savers, can be downloaded on any internet-enabled sharing phone, and works by sharing six top tips for easy domestic water saving.

The water saving tips could benefit consumers living in remote or under-served areas by cutting down on the time and effort involved in fetching water for household chores.

Jane Fenner, laundry south Africa director at Unilever, says, “With laundry continuing to be an essential household chore, South Africans are now aware that they do not need to use as much water in the hand washing process. They are thinking about how they can save water and re-use water when they do laundry.

“Initially, the biggest challenge in shifting laundry behaviour was changing the way water was being used in the hand washing process. We had to reiterate that water is a limited resource and place strong focus on ensuring more water is available for generations to come.”

As people progress through the Sunlight Smart Water Savers game, they collect digital buckets of water. Unilever will then match the number of buckets collected by players with actual water.

“In essence, the Sunlight Smart Water Savers game is way for people to have fun while they learn how to help the country,” said Digitata Insights’ chief marketing officer, Henk Swanepoel. “Even if infrastructure were available for every household to have running water, as the 30th driest country in the world, we’ll always need to be super careful with water usage. By gamifying that crucial principle and, in the process, encouraging people to use a water-saving product, digital and washing powder technologies are working together to embed water awareness at every level of society.”

Fenner says Sunlight is aware that saving water is not just the government’s responsibility.

“As a responsible corporate citizen, Sunlight introduced its Smart Foam Technology and now the Sunlight Smart Water Savers game to encourage South Africa to save water. The process proves that it’s possible to affordably mount public education campaigns that can change society fundamentally.”

Liquid Telecom Uganda partners with The Innovation Village to put country on map

Image Credit: Adobe Stock

Liquid Telecom will roll out high-speed internet and cloud-based services to Ugandan start-ups.

Liquid Telecom Uganda has joined forces with The Innovation Village, a hub and co-working space in Kampala, to offer high-speed internet and cloud-based services to Ugandan start-ups.

The deal forms part of Liquid Telecom's African Innovation initiative which is helping African innovation hubs to develop emerging technologies, such as the cloud. The Innovation Village, launched in 2015, has already provided support to more than 2,000 entrepreneurs, covering fields as diverse as fintech, edtech, media, climate and agribusiness. Last year, the hub worked with 820 innovators, with 40 per cent of them being young women, helping to connect many with local partners and investors.

The partnership with The Innovation Village will involve technology developmental programmes, including Liquid's ongoing Go Cloud initiative, which is supported by Microsoft and aims to raise awareness, adoption and usage of Azure Cloud across Africa.

"Uganda is home to one of Africa's youngest and most exciting start-up ecosystems," said Hans Haerdtle, CEO, Liquid Telecom Uganda. "Through this new partnership with The Innovation Village, we are delighted to be able to support young entrepreneurs across the country, who will be instrumental in developing solutions to some of society's largest problems."

In October 2017, Liquid Telecom announced that it is supporting start-ups entering insight2impact's (i2i) DataHack4FI innovation competition, which aims to harness the power of data science to develop new evidence-based solutions to improve financial inclusion.

"In Liquid Telecom, we have found what we have always been looking for – a partner with an entrepreneurial spirt and a deep appreciation of innovation that can help local start-ups truly connect to the regional marketplace," said CK Japheth, CEO and co-founder, The Innovation Village. "This partnership with Liquid Telecom will help put Uganda on the regional and global innovation map, which starts with a vibrant start-up ecosystem driven by partnerships and access to a regional footprint. It opens the door for more partners and investors for the Ugandan entrepreneur."

KENYA TO BUILD LARGEST DAM IN EAST AFRICA

The Kenyan government has signed a Ksh 36bn deal to build the largest dam in East Africa.

The construction work on the Thwake dam situated at the border of Mukeuni and Kitui will start next year and be completed in 2022. It is expected to generate 134 million litres of water daily for hydropower and irrigation purposes along with providing water for domestic use.

The dam is being built by the China Gezhouba Group Corporation and is being funded by the government and the African Development Bank.Irrigation minister Eugine Wamalwa, said, "This is one of the mega dams we are doing around the country. More than 60 dams are under construction across the counties which are aimed at improving water services in the country to 80 per cent by the year 2020." Kitui County Governor Charity Ngilu said that the dam will be a game-changer in the region.

"GOVERNANCE IS PRIORITY," SAYS AEC

Delegates from the 12th African Economic Conference (AEC) called for governance to remain a priority of development programmes in Africa.

Speaking at the AEC in Addis Ababa, Ethiopia on 6 December, Adam Elhiraika, director of the Macroeconomic Policy Division of the Economic Commission for Africa (ECA), said that governance was a critical factor in the transformation of economies and inclusive development.

He said, "It is my hope that the outcome of this conference will assist all of us – researchers, policymakers and the three partner institutions – to support Africa's transformation and Africa's efforts to improve governance for structural transformation. The conference cannot be an end in itself. It has to be a means to a greater aspiration, an aspiration of a reformed, prosperous Africa at peace with itself."

The African Development Bank was of the same view. Speaking on behalf of the Bank's vice-president and chief economist, Célestin Monga, Abdoulaye Coulibaly, acting director of the Governance Department, described governance as one of the most important and critical issues, which might strengthen economic outcomes, while improving the daily lives of African people.

He said, "We addressed an issue which is the most important for the development of Africa: the structural transformation of our economies. We come away from these three days of discussion all the stronger as agents of change, to improve people's daily lives."

Lamin Momodou Manneh, director of the UNDP Regional Service Centre for Africa, said, "Good governance remains the crucial factor in the eradication of poverty in Africa." He also stressed the role of the state in establishing strong institutions and the depoliticisation of governance.

BRIEFS

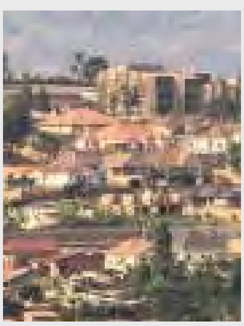


Image Credit: Adobe Stock

Rwanda's economic growth forecast to dip to 5.2 per cent.

Rwanda's growth reduces to 5.2 per cent

The International Monetary Fund (IMF) has lowered Rwanda's economic growth forecast to 5.2 per cent from 6.2 per cent due to the 2016 drought and lower construction output. "It (growth) was modest due to a boom in construction in 2016 that was not repeated in 2017. These things as well as external factors affected the growth rate in the first half of the year," said the IMF's mission chief for Rwanda, Laure Redifer.

Image Credit: Ethiopian Airlines

Tewolde GebreMariam receiving SKTRAX four star airline award

Ethiopian Airlines given four star rating

Ethiopian Airlines has been awarded SKYTRAX four-star certification at a ceremony in London. SKYTRAX is one of the most prestigious international air transport standards and quality rating organisations.

Tewolde GebreMariam, group CEO of Ethiopian Airlines, said "The four-star recognition by SKYTRAX is a significant milestone in the long history of Ethiopian Airlines. This rating certifies the global standards of products and service."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in the Egyptian Desert
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Senegalese ambassador identifies investment opportunities for UK

Panellists at the launch of the Senegal-UK Chamber of Commerce outlined the opportunities available to international investors in Senegal.

They agreed Senegal's security, stable democracy and observation of the rule of law made it an appealing country for investment, with an anti-double tax agreement between Senegal and the UK providing an extra incentive for British companies.

Image Credit: Adobe Stock

Many areas of investment identified at the launch of the Senegal-UK Chamber of Commerce.

HE Professor CA Dieng, Senegalese ambassador to the UK, named agriculture, in particular fishing; business tourism; arts, crafts and textiles; mining; building and public works; and oil and gas as the main industries where investors could potentially benefit from significant returns, as well as boosting the Senegalese economy.

Aliou Diallo, representing the Senegalese Embassy at the event, said that fishing off the West African country's coastline is a "main export product" with markets in Japan, India, France and Canada, and added that there was room for further exports to the UK.

Michael Amaning, representing Invest In Africa, recommended investing in the country's many infrastructure projects.

"Right now, there is a huge appetite for investment in infrastructure [such as] universities, dry docks, social housing and railways," he told guests at the launch in London on 20 November.

Amaning also said there were "huge opportunities" in agribusiness, using the example of cashews as a crop which could boom in Senegal with prices increasing by 30 per cent.

NIGERIA SIGNS EUROPEAN TRADE AGREEMENT

Nigeria has signed a joint declaration on economic cooperation with the European Free Trade Association (EFTA) in Buenos Aires, Argentina on the sidelines of the World Trade Organisation 11th Ministerial Conference.

The EFTA-Nigeria declaration is an instrument that allows both parties to work on a framework that facilitates increased trade and investment flows. It will be implemented by a joint commission of both parties.

The areas of cooperation include trade in goods; customs and tariffs and trade facilitation; trade in services; investment; protection of intellectual property rights including enforcement; trade and sustainable development; digital economy including ecommerce; trade and investment related issues to small and medium-sized enterprises; and other areas of cooperation as mutually agreed by the parties involved. EFTA members include Norway, Liechtenstein and Iceland.

Upcoming Events Calendar 2018

JANUARY

22 - 23

UGANDA & TANZANIA LOCALISATION FORUM
Kampala, Uganda
www.getenergyevent.com

24 - 25

REGIONAL ENERGY COOPERATION SUMMIT
Abidjan, Côte d'Ivoire
www.regional-energy-cooperation-summit.com

25 - 26

MOZAMBIQUE ASSEMBLY
Maputo, Mozambique
www.getenergyevent.com

FEBRUARY

5 - 8

AFRICAN MINING INDABA
Cape Town, South Africa
www.miningindaba.com

19 - 23

NIGERIA INTERNATIONAL PETROLEUM SUMMIT 2018
Abuja, Nigeria
www.nigeriapetroleumsummit.com

MARCH

13 - 16

BAUMA CONEXPO AFRICA
Johannesburg, South Africa
www.bcafrica.com

19 - 21

SOMALIA OIL, GAS & MINING
Nairobi, Kenya
www.somaliasummit.com

20 - 21

SECUREX WEST AFRICA
Lagos, Nigeria
www.securexwestafrica.com

27 - 28

POWER & ELECTRICITY WORLD AFRICA
Johannesburg, South Africa
www.terrapinn.com

28 - 29

EAST AFRICA OIL & GAS SUMMIT
Nairobi, Kenya
www.eastafricaogs.com

APRIL

23 - 28

INTERMAT
Paris, France
paris-en.intermatconstruction.com

25 - 26

MOZAMBIQUE MINING, OIL & GAS (MMEC 2018)
Maputo, Mozambique
www.ametrade.org/mozmec

MAY

15 - 17

CONMIN WEST AFRICA
Abuja, Nigeria
www.conminwestafrica.com

16 - 17

AFRICAN CONSTRUCTION EXPO
Johannesburg, South Africa
www.totallyconcrete.co.za

29 - 31

POWER & ENERGY AFRICA 2018
Nairobi, Kenya
www.expogr.com

QUALITY URBANISATION CAN PROMOTE SUSTAINABLE GROWTH IN AFRICA

It is critical for African countries to strategically integrate urbanisation to their national development priorities if urbanisation is to contribute to structural transformation and economic development, according to Edlam Yemeru, chief of the economic commission for Africa's Urbanization Section.

Speaking at a two-day conference on the Harmonized Regional Framework for the Implementation of the New Urban Agenda in Africa in Cape Town, Yemeru said urbanisation needs to be seen as a core driver of productivity and economic growth, and is located at the core of national visioning and planning.

She told delegates, "Only when it is well planned and managed can urbanization contribute to greater economic dynamism, job creation, and poverty reduction."

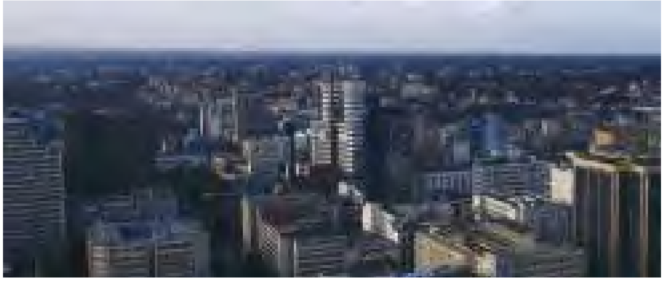


Image Credit: Adobe Stock

Urbanisation will be seen as major driver to economic growth in African countries.

AFRICA GREENTEC INSTALLS FIRST SOLAR CONTAINER IN NIGER

Africa GreenTec has commissioned its first solar container in the Tahoua region of Niger – allowing residents to work and learn after dark.


Image Credit: Africa GreenTec

Residents will benefit from a new solar photovoltaic system thanks to Africa GreenTec.

The container relies on a mobile 41-kWp photovoltaic installation and a 60-kWh battery storage system to provide electricity to the village of Amaloul Nomade, which is not connected to the national grid.

The construction, transport and installation of the 40-foot solar container was made possible by private investors and the International Climate Initiative (IKI).

"We can offer the local people a bit of comfort, access to education and knowledge, and new prospects – today, all of these things are especially dependent on a reliable supply of electricity," said Torsten Schreiber, Founder and CEO of Africa GreenTec.

Partnering with Africa to attain water sufficiency

Kirloskar Brothers Limited (KBL), the largest manufacturer and exporter of pumps in India, has taken various steps as part of a large number of government projects to make Africa sufficient with water and food.

Kirloskar is among the major trusted brand names across the continent. Over the last few decades, Kirloskar has been associated with government initiatives in different African countries involving small and large agriculture and lift irrigation projects by supplying pumps while managing end-to-end projects. Kirloskar has in–house capabilities to manufacture pumps as per project requirement of any scale.

Finchaa Sugar Factory, Ethiopia (2013)

A major strategy of Finchaa Sugar Project at Ethiopia is to boost sugar production, cut sugar imports and ensure the social and economic benefits of citizens. The objective was to make efficient and effective use of the country's natural, human and financial resources and boost sugar production four-fivefold by expanding capacities and developing a large-scale plantation.

Guneid Pumping station, Sudan (2014)

- Ensured a source of good quality feed on an annual basis by allocating part of the rotation land to production of fodder crops, hence leading to stability of animal production within the scheme.
- Grew leguminous fodder crops which fix nitrogen, with a positive impact on the soil and crops that follow in the rotation. Improved the socio-economic conditions and nutrition of farm households.
- Improved livestock types and veterinary services.
- Ensured the supply of milk and animal products to neighbouring towns.

Djibouti Project, Djibouti (2016)

This initiative put the communities in good health and economic conditions. Providing the poor with adequate drinking water in terms of quality and quantity will prevent people from resorting to polluted sources and becoming sick.

Hisco House (Lujeri Tea Estate), Malawi (2014)

- Pumps were supplied for tea gardens to help grow, process and export tea, macadamia nuts, cut flowers and vegetables. It had a significant influence on the lives of people in the community. In 2008, the small-holder farmers whose tea Lujeri processes, were certified as conforming to Fairtrade standards. The farmers' community will benefit from the Fairtrade price premium paid for such certified tea standards.


Image Credit: Kirloskar Brothers Limited

Sugar cane production in Ethiopia will promote social and economic development in the country.

These are among the major projects executed by KBL so far. The company already has manufacturing facilities in South Africa and Egypt where its technically qualified engineering team takes care of the servicing operation and maintenance of pumps installed at various sites.

KBL says it believes that water is life, and conserving and directing it in the right area to avoid its wastage is essential. KBL added that is committed to continuous innovation, providing world-class product quality and customer service anytime, anywhere. The company's philosophy of triple A (AAA), i.e. Adaptable, Affordable and Appropriate solutions, is the essential basis of its partnership that extends across various continents, organisations and customers. ■

Microfinance and the fight against poverty

Michael Mithika, president and CEO of VisionFund International talks to *African Review* about how microfinance is helping more people escape from poverty.

A few months ago, Michael Mithika took the helm at VisionFund International, the microfinance arm of Christian relief and development charity, World Vision. With more than 20 years experience in financial services, the Kenyan is ready to make an impact.

"I'm passionate about unlocking capital in emerging economies and witnessing the change it can create for struggling families," he said.

In fact, he knows a lot of about microfinance especially, and how it can bring about real change in people's lives.

Mithika is the founder of the School of African Microfinance, an international training course for middle and senior executives that now supports more than 1,400 executives from 40 countries.

Bringing this expertise to VisionFund, an organisation that delivers financial services including savings, loans and insurance to clients, could make all the difference.

"Our clients are our priority: we operate impact first and return second," he said. "We focus on the most vulnerable clients living in hard to reach rural areas who depend on agriculture for their livelihoods. We know, for example, that those working in agriculture are estimated to be a quarter of the world's financially excluded population. This is why we focus our work on the most difficult and costly areas to reach, and within them the most marginalised groups, especially women."

Image Credit: VisionFund International

A family in Kenya with their Kickstart irrigation pump purchased to irrigate the family's vegetable garden with a small loan from VisionFund International

Image Credit: VisionFund International

Michael Mithika, CEO of VisionFund International.

By 2020, a strategic target is for women – as the major caregivers of their families – to form 75 per cent of VisionFund International's total client base. There is also a clear focus on rural locations and supporting growth in the agricultural sector.

With these targets met, its work will positively impact the lives of seven million children each year, Mithika reckons.

One of the biggest challenges though is access to finance, especially in the current difficult economic climate.

This means working closely with individual and corporate donors, as well as seeking government grants and collaboration with agencies such as the UK's Department for International Development.

VisionFund International has now been working in Africa for a decade, since 2007, and operates in the Democratic Republic of Congo, Ghana, Kenya, Mali, Malawi, Rwanda, Senegal, Tanzania, Uganda and Zambia.

Most of its programmes are run in partnership with World Vision and other partners from aligned sectors.

The good news, Mithika says, is that access to formal finance is improving and with it a range of services for Africans' financial inclusion continue to grow.

> "Through our microfinance work we help our clients to improve their livelihoods"
>
> MICHAEL MITHIKA, PRESIDENT AND CEO OF VISIONFUND INTERNATIONAL

"The microfinance sector itself is becoming more competitive, with growing commercial and funding pressures, which opens the door to technology solutions. This in turn leads to increased convenience for clients, as mobile money and other dynamic transaction platforms extend reach. We are also seeing growing commitments to responsible finance – more transparency and additional protections for clients."

One major project it supports is GAFCo in Tanzania. In pilot, the programme helped 5,000 smallholder farmers to produce high quality sunflower seeds and beans to export to Europe. This combined a suite of crop insurance and technology to manage lending and repayment, which was designed to reduce risks and costs, helping the farmers to increase their acreage and deliver a significant boost to their income at lower risk. Following this success, it is being rolled out to smallholder farmers in Tanzania.

Another project is THRIVE, which operates in Malawi, Tanzania and Zambia. It combines an integrated set of elements that work together for farmers to increase their confidence and technical skills, reduce risk, access crop loan finance and better access more reliable markets for better pricing.

"Through our microfinance work we help our clients to improve their livelihoods," said Mithika. "This work includes training courses, our managed lending programme and our insurance products. We also provide an education programme.

The overall aim, of course, is to improve the livelihoods of families. Last year it helped over one million clients improve the lives of their families, including an estimated 4.3 million children. ■

Africa is a growing market for wealth management

Sub-Saharan Africa is among the most rewarding but challenging markets to penetrate and nurture from an asset industry perspective, specifically with regards to the super-rich, economist Moin Siddiqi investigates.

The majority of private money in Africa has originated from 'wealth creation' rather than purely 'wealth preservation'.

Sub-Saharan Africa is among the most rewarding but challenging markets to penetrate and nurture from an asset industry perspective, specifically with regards to the 'super-rich'. The region is not a single market, often mistaken by some financial services firms hoping to benefit from wealth creation and economic renaissance across much of the continent. "The origin of the accumulated private wealth, the distribution of this wealth and the economic and political climates, vary from country to country," stated the 2016 Africa Wealth Report.

Private "wealth" refers to the net assets of a person. It includes all their tangible assets (property, cash, equity, business interests) less any liabilities. The wealthy band group falls into five distinct categories: Billionaires with net assets of US$1bn or higher;
Centa-millionaires holding net

Table 1: Distribution of HNWIs in Sub-Saharan Africa

COUNTRY	Millionaires		Multi- Millionaires		UHNWIs*		Centa-Millionaires		Billionaires
	2016	2026	2016	2026	2016	2026	2016	2026	2016
Angola	6,100	8,500	320	450	70	100	16	22	1
Botswana	2,800	4,200	100	150	30	50	2	3	
Congo (DRC)	600	1,000	30	50	10	20	1	2	
Cote D'Ivoire	2,500	5,000	100	200	30	60	2	4	
Ethiopia	3,100	6,200	150	300	40	80	4	8	
Ghana	2,900	5,200	120	220	30	50	4	7	
Kenya	9,400	16,900	370	670	120	220	18	32	
Mauritius	3,800	8,700	170	390	50	120	5	12	
Mozambique	1,100	2,000	50	90	10	20	1	2	
Namibia	3,300	5,000	120	180	30	50	3	5	
Nigeria	12,300	12,300	620	620	170	170	14	14	4
Rwanda	600	1,200	30	60	10	20			
South Africa	40,400	52,500	2,130	2,770	650	850	96	125	7
Tanzania	2,400	4,800	90	180	40	80	13	26	2
Uganda	1,400	2,500	60	110	20	40	7	13	1
Zambia	1,000	1,800	40	70	10	20	3	5	
Africa Total									
(incl.North Africa)	145,100	198,000	7,010	9,420	2,270	3,030	336	445	31
South Africa %									
Africa Total	27.8	26.5	30.4	29.4	28.6	28.0	28.6	28.0	22.5

UHNWIs= ultra high net-worth individuals with US$30mn-plus in net assets.

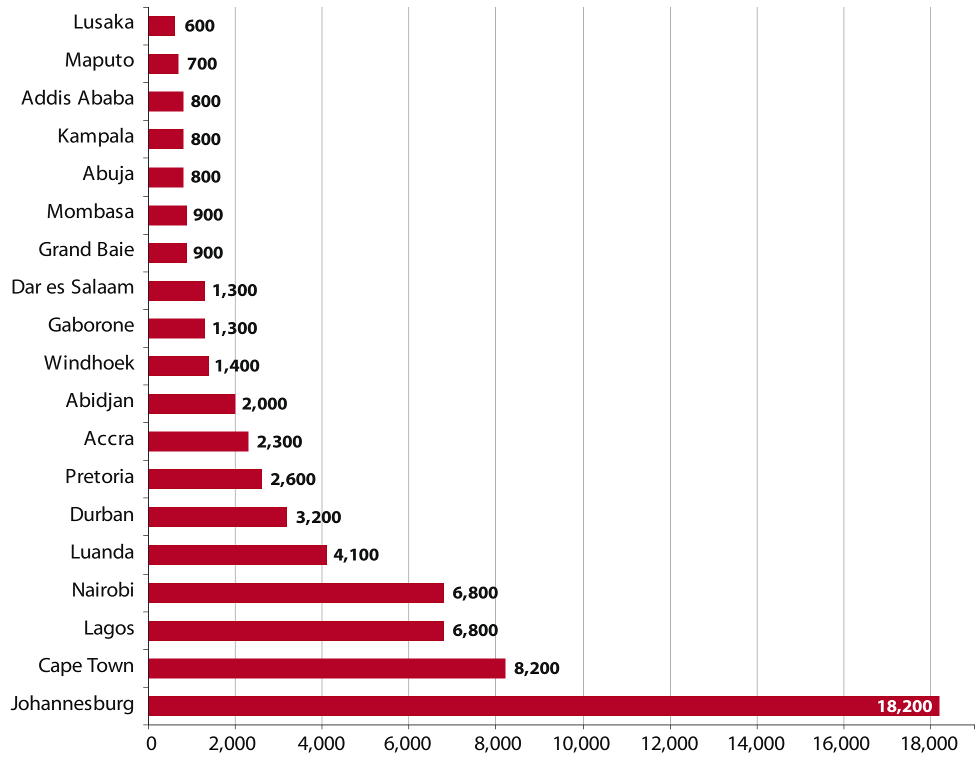
Source: New World Wealth.

wealth of between US$100mn and US$1bn; affluent-millionaires or ultra high net-worth individuals (UHNWIs) owning net assets of US$30-100mn; mid-tier millionaires holding between US$5mn and US$30mn in net investable assets; and lower-tier millionaires are those with net worth of US$1mn to US$5mn (see table one).

In 2016, total wealth held on the African continent amounted to approximately US$2.2trn, according to UK-based consultancy New World Wealth (NWW). The top-five reported countries were South Africa (US$610bn); Nigeria (US$270bn); Kenya (US$95bn); Angola (US$75bn); and Ghana (US$55bn). Interestingly, worldwide private wealth estimate is staggering US$192 trn.

There are between 145,000 and 165,000 high net-worth individuals (HNWIs) living in Africa with combined wealth holdings of US$800-860bn. In addition, 2,270 African UHNWIs boasted assets of US$260bn in 2016 (NWW data).

Highest number of millionaires by SSA cities



Source: New World Wealth.

Location & Trends

During 2006-2016, sub-Saharan Africa was the fastest growing region for asset management business, with HNWI numbers (in percentage terms) swelling by 230; 219; 167; 97; and 93 percent, respectively, in Mauritius, Ethiopia, Rwanda, Uganda and Kenya. According to New World Wealth, 20 countries whose ultra-wealthy populations have grown most rapidly in the past decade, 11 are in Africa.

South Africa dominates Africa wealth list – four cities (Johannesburg, Cape Town, Durban and Pretoria) are home to 32,200 millionaires and almost 3,000 super-rich individuals – with total net wealth reported at US$468bn. Major sectors in leading centres are financial and professional services, real estate, healthcare, construction, telecom, manufacturing and basic materials.

In 2016, Nigeria ranked second by millionaires (12,400) and super-rich (800-plus). The country is home to Africa's richest magnate (Aliko Dangote), whose business

Image Credit: Flourish Africa

Folorunso Alakija inspires 300 women at the 2017 Flourish Africa Conference in November

portfolios are estimated by US magazine Forbes to be worth over US$12bn, making him the world's 108th richest individual – exceeding both South Africa's magnate Nicky Oppenheimer (US$7.1trn) and Africa's richest woman Isabel dos Santos (Angola) whose personal wealth is estimated at US$3.4trn. Folorunsho Alakija, also made the Forbes list and is worth US$1.61bn. She is a business tycoon in the oil and fashion industries.

Niche banking

'Wealth management' or 'private banking' is defined as the provision of financial services to HNWIs and their families. It generally involves the management of trusts, inheritance, the allocation of client's investable funds and specialised advisory services (fiduciary/custodian). An estimated US$125-132bn of African HNWI wealth is deposited with reputable asset managers (see table two). South Africa (mainly Johannesburg) is the hub for African private banking with US$72bn in Asset


Image Credit: Dangote

Aliko Dangote is Africa's richest man.

under Management (AuM).

Wealthy Africans demand the same sophisticated financial services with greater transparency in asset allocations as HNWIs do elsewhere. The 2017 Attitudes Survey conducted for New World Wealth found that African rich places high priorities on five factors when it comes to managing their wealth and their investment decisions: wealth preservation, capital growth, portfolio/asset diversification, investment protection from political interference, and passing wealth to the next generations (i.e. succession planning), followed by portfolio liquidity, privacy and steady income return. Popular asset classes for African HNWIs are stocks/shares, precious metals, cash (money market funds), real estates and personal business (see diagram).

In recent years, most of the 'new millionaires' have been young entrepreneurs and investors who have created promising businesses and invested in lucrative sectors from agriculture, services and technology sectors. Hence, the bulk of private money in Africa has originated from 'wealth creation' rather than purely 'wealth preservation' – as mostly in Western Europe and North America. HNWIs (especially ultra-rich) look for diverse product-lines to help grow their businesses in local/regional and international markets.

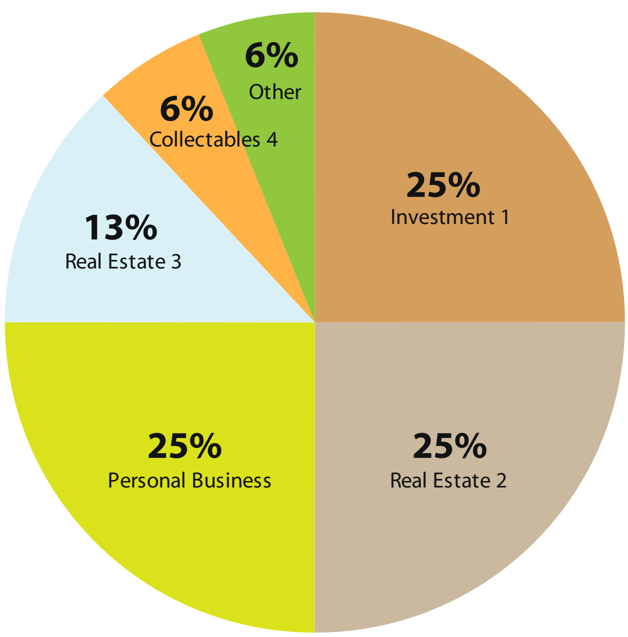
Among global banking giants pitching for regional niche business are UBS, Credit Suisse, Citi Private Bank, JPMorgan, Deutsche Asset & Wealth Management, Goldman Sachs, HSBC Private Bank, Morgan Stanley Investment Advisors Inc, Barclays Global Investors, SG Asset Management and Nomura Asset Management Co. Ltd. They operate mainly on 'suitcase banking model' (flying in-and-out) without the physical presence in African countries.

South African heavyweights led by Investec, Standard Bank, Nedbank, ABSA and Rand Merchant Bank also possess strong capabilities in private asset management. They boast an advantage over foreign counterparts of having physical networks and local knowledge for face-to-face interactions. However, global fund managers offer clients better scope for offshore diversification, reflecting their vast external contacts and presence in prime capital markets, stretching from New York, London, and Frankfurt to Tokyo.

Credit Suisse boasted, "We can connect an investment banking client in Turkey with a private banking client in sub-Saharan Africa and vice-versa. We can match supply and demand through our own network." The majority of African HNWIs outside South Africa tend to keep their funds in traditional European centres, with the UK, the Channel Islands and Switzerland being most popular. Dubai is a preferred destination, especially for North African HNWIs.

The continent's entrepreneurs and millionaires have grown exponentially over the past decade. This has created opportunities for intermediaries to set-up either as subsidiaries of commercial banks, insurance companies or boutique investment firms – located mostly in South Africa where prominent brokers include Alexander Forbes, Liberty Life, Sanlam Private Wealth and Prudential.

Portfolio management



1= Equities, Bond, Cash, Precious Metals.
2= Investing in Commercial Property Sector.
3= Primary Residence and Second Homes.
4= Fine Art, Classic cars, Wine.

Source: New World Wealth.

Sector selection

HNWIs display different preferences in their portfolio asset allocations. Lower and mid-tier millionaires have a high propensity to hold cash/deposits and residential real estate, while affluent millionaires largely invest in fixed-income products and equities. Centa-millionaires and billionaires exhibit high preferences for commodities, commercial real estate such as centrally located office and retail units on long leases, personal equity and offshore investments (keeping tangible assets outside their country) plus diverse business interest.

Residential property constitutes more than a quarter of the net assets of an average African HNWI. Popular properties for them are beachfront villas and homes in exclusive estates. About one-third of wealthy Africans also own second homes abroad – mostly in London, New York, Geneva, Paris and Dubai.

'Collectables' i.e. luxury item that holds its value over time, especially fine art, classic cars, jewellery, top-end watches, antiques, stamps, coins and investment grade wine are popular alternatives for super-rich to store up their wealth. Collectables accounted for US$8.8bn of the assets

Table 2: Wealth management companies by AuM

Top African Fund Managers	Base	African AuM US$MN 2016
Investec Private Banking	SA/UK	24,000
RMB Private Bank	SA	11,000
UBS Global Asset Management	Swiss	8,000
PSG Wealth	SA	7,000
Nedbank Private Wealth	SA	6,000
Sanlam Investments	SA	5,000
Credit Suisse	Swiss	4,000
Standard Wealth & Management	SA	3,000
ABSA Private Bank	SA	3,000
Old Mutual	SA	2,000
Momentum Group	SA	2,000
Citadel Capital	SA	2,000

AuM= Assets under Management refers to the market value of all the funds being managed by private banks & wealth managers on behalf of their clients.

Source: New World Wealth.

Table 3: The top seven SSA billionaires

Name	Nationality	Net Wealth US$MN	Source of Wealth
Aliko Dangote	Nigeria	12,200	Cement, Sugar, Flour
Nicky Oppenheimer	South Africa	7,100	Diamonds
Johann Rupert	South Africa	7,100	Luxury goods.
Mike Adenuga	Nigeria	5,100	Telecom, Oil
Christoffel Wiese	South Africa	4,400	Retail
Isabel dos Santos	Angola	3,400	Investments.
Koos Bekker	South Africa	2,300	Media, Investment

Source: Forbes The World's Billionaires 2017 List.

accounted for US$8.8bn of the assets of African HNWIs in 2016.

Of the asset-classes, global real estate has delivered a nine per cent yield during the past five years, exceeding returns from equities and bonds, according to Morgan Stanley Capital International (MSCI) index of 1,650 world stocks. Knight Frank, The World Report 2017 noted, "The income component, coupled with slower capital-driven cycles, makes returns on real estate much more predictable than returns on equities, with real cash flows providing a source of cash return regardless of the underlying change in asset values."

The NWW survey predicts the African private banking market will grow at seven per cent/year over the next decade. The most promising centres for private banking are Mauritius, Ethiopia, Rwanda and Tanzania – all projected to record a blistering 100 per cent growth between 2016 and 2026 – albeit from a modest base. While other emerging hubs are Kenya, Uganda, Ghana, Mozambique, Zambia and Côte d'Ivoire – with projected growth of 80 per cent during the same period. Nigeria is unlikely to record any growth in the number of HNWIs over the coming decade. A 40 per cent growth is predicted in Angola – above South Africa (30 per cent) and below 50 per cent for Botswana and Namibia, respectively.

In sum, the prize for fund managers to tap rising pools of African private wealth is tremendous given the emergence of the new rich and their demand for dynamic asset allocation and offshore investing outlets. Africa is the last emerging opportunity for private bankers looking for best returns. HNWI numbers are projected to rise by one third over the next 10 years, reaching 198,000 by 2026, while UHNWIs and centa-millionaires could total 3,030 and 445, respectively, based on NWW data – thereby creating opportunities for private client advisors to serve a profitable-niche market in emerging Africa. ■

eBay expands its African mission

eBay has opened up its platform to Africa via the latest phase of its partnership with MallforAfrica.com

July 2016 saw the launch of eBay's first Powered by MallforAfrica site, which enabled the reverse – US vendors selling to Africa. Reputable merchants with ratings of more than 300 had Nigeria, Kenya, Ghana, South Africa and Burundi firmly within their sights. eBay's Sylvie de Wever says the company plans to add more countries. MallforAfrica itself claims its main objective under the new partnership with eBay is to provide a platform for African entrepreneurs to grow their businesses so that they can make more money to send their children to school and help their families.

Similarly, other prominent e-commerce operators, such as Amazon, JD.com and Alibaba, are working to expand their African footprint, given that the Internet has opened up more business opportunities in emerging markets. According to consulting firm McKinsey, there is massive revenue potential for eBay, in particular, in its African push. McKinsey reckons digital sales revenue in Africa will likely surge past US$75bn around 2025; seizing a share of this market could transform eBay's fortunes. The company achieved revenue of US$9bn in 2016, up from US$8.6bn a year earlier.

eBay's original collaboration with MallforAfrica aimed to tackle a number of practical issues faced by consumer goods companies when entering African markets. With a closely tailored delivery system, its proprietary platform works as a digital broker and logistics manager. It accepts local currency and payments from fintech partners Paga in Nigeria and M-Pesa in Kenya, which goes back to eBay vendors in dollars. MallforAfrica took backing from private equity house Helios Investment Partners and has formed successful partnerships with Macy's and UK heritage brand Hawes and Curtis.


Facebook's Mark Zuckerberg

Image Credit: JD Lasica/Flickr source for Zuckerberg

> "This is where the future is going to be built"
>
> MARK ZUCKERBERG, FOUNDER OF FACEBOOK, WAS QUOTED AS SAYING WHILE ON A VISIT TO NIGERIA

Google CEO visits Lagos

July 2017 saw Google CEO and newly appointed board member Sundar Pichai jetting into the Nigerian capital Lagos for the company's Google for Nigeria event. During this surprise visit, he announced plans to train 10 million people for digital jobs over the next five years. He is the latest international tech firm chief to undertake a mission to Africa's most populous country, following trips last year by Facebook's Mark Zuckerberg and Microsoft's Satya Nadella. Pichai also announced a plan to invest US$3mn in equity seed funding for technology startups before the third quarter.

Additionally, Pichai revealed a series of products for the country, including YouTube Go, a platform where users with slow Internet can preview and save videos. This means YouTube users in Nigeria can now download any video in a range of different resolutions, then view it later without an Internet connection. According to Google, the number of hours of video content being uploaded continent-wide has doubled for the last two years, while viewing time on mobile phones has increased 120 per cent year over the year.

Google launched a partnership with Japan's Freetel to provide budget Android phones to Nigerians priced at around 13,000 Naira (roughly US$40), according to Caesar Sengupta, vice president of product management. Another feature unveiled for Nigeria was the Lagos Street View. Imagery of 10,000km of Lagos roads, including Eko Bridge and the National Museum, are now available on Street View. This followed the addition of more than 100,000 small businesses to Google Maps.

Nigeria has a population of 191 million and, according to the Nigerian Communications Commission, an estimated 91 million Internet users of December 2016. This equates to 47.6 per cent of the population.The conference followed a year-long programme to train one million Africans, completed in March. "Having a million digitally skilled young people in Africa is good for everyone. Because we think that if young people have the right skills, they'll build businesses, create jobs and boost economic growth across the continent," says South Africa country director Luke Mckend.

Mckend headed up the Digital Skills programme, which offered 89 courses through an online portal and face-to-face training in 20 countries with 14 training partners. Nadella chose to be in Kenya for Microsoft's biggest launch event in 10 years (for Windows 10 in July 2015), which was taken as a sign of Africa's growing importance. During his trip last September, Zuckerberg remarked about Africa, saying, "This is where the future is going to be built." Kenya's IT boom is well known, but Nigerians will be hoping they can play a leading role here, as job generation has been hard going for them.

The Google Nigeria Digital Citizenship summit was attended by Nigeria's Minister of Communication, Adebayo Shittu, who said the federal government would co-operate with Google Nigeria to harness the benefits of technology for Nigerians. ■

By Barry Mansfield

Cloud computing in Africa is about to take-off

Foundations in place for African cloud

The biggest obstacles facing mainstream African cloud uptake; high-speed access, affordable data and reliable connectivity, are quickly being cleared, paving the way for mass adoption of cloud-based computing across Africa.

Image Credit: Liquid Telecom

As many businesses across Africa review their IT strategies, there can only be one question on their mind – is now the time to migrate to the cloud? Lately, this question has become more pertinent to IT decision makers, who cannot help but notice that the region's cloud environment has taken some significant steps forwards. The rollout of critical infrastructure – such as subsea cables, fibre networks and data centres – has helped lay the foundations for the African cloud.

Africa's networks have slowly but surely become ready for cloud-based services, and the wider availability of bigger, better and faster internet connections will play a vital supporting role with future cloud adoption. Additional local data centre space will also provide a valuable platform for more data to reside in the region for the first time, as well offer new storage capabilities.

Crossing the chasm

Cloud computing in Africa is about to cross the chasm in the technology adoption curve, from early adopters to early majority, says David Behr, group chief product officer at Liquid Telecom.

"As a whole, Africa has lagged behind the world in terms of cloud adoption, mainly because of a lack of connectivity and later, due to the high cost of connectivity," said Behr. "Cloud is typically billed as a cost efficiency driver, but it is no good if any cloud cost-savings are gobbled up by the cost of connectivity."

However, dropping data costs and the arrival of advanced fibre networks and multinational data centres are changing the environment. "We've seen niche cloud adoption and a growing number of start-ups built as native-cloud companies, with early adopters finding cloud most effective where the computing power has been the biggest part of the workload. Now, the stage is set to move more workloads and we will soon see the early majority workloads in the cloud."

There is a compelling case for managed services for African organisations seeking to control costs, achieve scalability and harness new technologies such as the Internet of Things, big data analytics and machine learning through artificial intelligence. "There are instances where cloud computing has enabled companies to innovate and disrupt in ways that are just possible with on-premises infrastructure," he said.

> "Cloud is typically billed as a cost efficiency driver"
>
> **DAVID BEHR, GROUP CHIEF PRODUCT OFFICER AT LIQUID TELECOM**

Planning a cloud journey

In the African context, major drivers for cloud adoption go beyond opex vs capex. "Security is a very strong driver. It's not just about physical security, but about knowing your data is housed in a location with 24-hour power guaranteed, with a 24-hour operations centre manned by highly-skilled resources. When your systems and data are in the cloud, you can access them from anywhere in the world, no matter what local problems are being experienced at the office."

Cloud services are able to achieve greater efficiencies from a limited pool of highly skilled resources. "On the other hand, the IT teams who have been running systems on-premises no longer need to do so once systems and data are moved to the cloud. Organisations planning a cloud migration could face some kick-back from IT teams concerned about the change. The opportunity here is to upskill these teams, who will then be able to carry out more valuable work for the organisation, such as business intelligence and analysis."

Companies planning their cloud journey should research their options thoroughly, and call in expert consultants from service providers such as Liquid Telecom to assess needs and workloads appropriate for the cloud, and prepare a cloud roadmap.

"One challenge is that companies need to calculate the full cost of ownership of on-premises systems in order to compare on-premises and cloud costs," added Behr. "Companies might find on-premises appears more cost-effective if they fail to include hidden costs such as power, cooling, insurance, skills, scalability and the cost of potential outages. When a full total cost of ownership and flexibility assessment is carried out, cloud becomes an obvious choice."

To download Liquid Telecom's full African Cloud Report 2017, visit www.liquidtelecom.com ■

Increased urbanisation causing demand for sustainable bus transport

The new Lion's Coach, a complete bus by MAN, launched in October 2017 and also available for Africa.

Image Credit: MAN Bus

With almost half of Africa's population living in urban areas by 2050, bus companies are gearing up to delivering sustainable transport solutions.

European bus companies make up almost 50 per cent of the bus segment in Africa, according to the African Commercial Vehicles Market 2017 – Forecast to 2025, and they all provide eco-friendly engine ranges to help reduce carbon emissions and congestion in cities.

Nigeria, Kenya, and Morocco are expected to be the fastest-growing markets, the report stated, with Asian manufacturers expected to play their part in the CV market as the rate of urbanisation increases in the next few years.

MAN Bus and its local partners already have a strong bus presence in North, West and Southern Africa, offering green efficient transport solutions.

Burak Keskinkilic, head of bus sales in MAN Center Importer NWC Africa said, "Morocco is already running the Euro 6 engine range where the exhaust can be cleaner than the air in some Asian cities, and it's following alternative drive lines and digital technologies found in other European cities. My dream is that other African countries will follow the Euro norms (permissible emission levels, for both petrol and diesel vehicles) and governments make changes to make different fuels available to benefit society."

He stated the company is positioned well to take advantage of more business opportunities as African economies grow in the future.

He said, "When Africa's growth reaches double digits, we will be ready for production alongside our local partners and body building assemblies [who use our chassis]."

North African governments are pushing through incentives for vehicles to be produced locally in response to the growing emphasis for urban transport and MAN Bus has three CKD factories in Tunisia, Casablanca and Cairo through partners Alpha Tunisie, Sefamar and Kastour Egypt Group for Industry.

Keskinkilic, added, "In Morocco, we are the market leader and in Tunisia, we have the biggest share of the market with Volvo Buses, of more than 65 per cent. The political outlook in Egypt looks positive again after going through hard economic times, so we are prepared with our partner which has a CKD factory in Cairo, with more than 350 employees. Plus, we have been awarded a tender for 100 compressed natural gas buses in Cairo."

He said the company's body builder partners, such as Marco Polo and Irizar, are active in West Africa with deals already happening in Burkina Faso and Cameroon. "Numbers are now becoming more substantial. In West Africa we have noticed the market trying different brands, but in the long-term the European chassis proves more robust and clients keep coming back to us."

Keskinkilic continued, "We are looking to harvest the markets and increase the local capabilities in the market and share our local technical know-how to get the job done so we can share the journey with African countries."

The Lagos State Government announced plans in August to roll out the first set of 5,000 new buses by February 2018.

Governor Akinwunmi Ambode said, "We are introducing 5000 new buses of European standard to clean up the city because if you want to grow the economy of Lagos, transportation is key."

Other EU OEMs in Africa include Volvo Buses, Scania and Daimler Buses, which in July launched two new Mercedes-Benz buses for Kenya.

Volvo Buses are in South Africa, Morocco, Egypt and Tunisia under the Volvo brand, running Euro 3 engines due to fuel restrictions. Its hybrid and electric range are operating in Europe.
A spokesman said, "We're driven to create cities of the future, free from congestion, emissions and noise." ■

SCANIA LAUNCHES CAMPAIGN FOR MORE WOMEN BUS DRIVERS

Scania West Africa and the Greater Accra Passenger Transport Executive (GAPTE) and GIZ on behalf of the German Ministry of Economic Cooperation and Development (BMZ) has started a campaign to attract female bus drivers in Ghana to even out the gender imbalance in the transport sector.

The campaign under the motto of 'Women Moving The City!' has recruited 73 successful applicants who are now undergoing a training programme sponsored by Scania and GIZ. They will be trained by the vocational school Government Technical Training Centre in Accra to get a bus driver's license free of charge. After graduation, they will be offered a position as bus driver for the Aayalolo buses, which are owned and managed by GAPTE.

Fredrik Morsing, managing director of Scania West Africa, explains why Scania has decided to invest in this campaign, said, "Recruiting women to drive the GAPTE fleet of 239 Scania buses, is a safety measure since they will most likely handle the asset with care."

73 applicants are training to become bus drivers in Accra.

Image Credit: Scania West Africa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THE CONSTRUCTION OF MEDUPI POWER PLANT REACHES HALFWAY POINT

The Medupi Power Station in South Africa – set to be the fourth largest coal fired power plant in the world – has moved a step closer to completion.

Medupi Power Plant will produce 4,800MW when it is completed in 2020

Image Credit: GE Power

Unit 4 of the Medupi Power Station, which will add an additional 800MW to the national grid, has been successfully tested and has received a final acceptance certificate from Eskom.

It will be GE Power's third unit to be transferred for commercial operation, marking the halfway point of the project. It will produce 4,800MW when it is completed in 2020 – the equivalent of providing electricity for 3.5 million households in the country.

Douglas Beigley project director, Medupi Power station, said, "Our team has been working with Eskom on the Medupi Power Plant since 2007 and our collaboration has achieved significant progress with more than just power supply in South Africa. We have invested more than one billion Rand to empower businesses and trained more than 300 students on technical and engineering skills."

GE's scope includes 6 full EPC turbine islands and air cooled condensers.

ENGIE to develop South Africa's energy services

ENGIE has acquired Thermaire Investments and Ampair as part of its strategy to grow its presence across Africa.

Thermaire Investments and Ampair are acquired by ENGIE.

Image Credit: Kimco Realty/Flickr

The company is already an expert operator in renewables and energy storage, as well as lighting, heating and cooling systems.

ENGIE added that the acquisition of Thermaire Investments and Ampair – already major players in HVAC installation in South Africa, Botswana and Mozambique – will provide a regional platform to offer energy services to the public, industrial and commercial building sectors.

Mohamed Hoosen, CEO of ENGIE Southern Africa, said, "We are proud of this first step in the business to business market and excited about jointly exploring further opportunities in the region."

ENGIE said that the acquistion of the companies was conditional on approvals of the relevant regulatory bodies.

JP Hargovan, CEO of Thermaire Investments said, "We are thrilled at the prospect of developing and growing our business in line with the greater ENGIE strategy."

Bob Forbes, CEO of Ampair added, "Ampair is ecstatic at the opportunity to work with ENGIE and believes that the value add from the ENGIE company will summersault Ampair into another league."

THOUSAND OF CITIZENS TO GAIN ACCESS TO ELECTRICITY IN TOGO

The government of Togo's "CIZO" initiative has taken a significant stride forward after BBOXX launched its solar systems in Togo, supplying thousands of people with electricity.

H.E. President Faure Gnassingbé, of the Republic of Togo, visited one of BBOXX's first customers in the rural town of Awagomè, to mark the start of the company's roll-out of 300,000 off-grid solar energy solutions.

BBOXX has already imported its products and will begin selling its smart solar systems in people's homes immediately, with an initial target of installing 10,000 in the next 12 months.

The Hon Marc Dèdèriwè Abli-Bidamon, Minister of Energy and Mines, said, "The CIZO Initiative aims to significantly increase the electrification rate in rural areas of Togo by 2022 through the use of solar home systems. The commercialization of solar systems through the participation of private actors will accelerate the impact on the Togolese economy. Against this backdrop, the government is creating the right environment to foster and enable private actors to operate efficiently."

BBOXX aims to roll out 300,000 off-grid solar systems in Togo

Image Credit: BBOXX

Khobab and Loeriesfontein wind farms power 240,000 homes in South Africa

South Africa focuses on boosting its renewable energy sector to meet domestic demand of energy.

Image Credit: jbdodane/Flickr

South Africa's Loeriesfontein and Khobab wind farms have announced the commencement of their 20-year commercial operations, with a generation capacity of 140MW each – the largest single expanse of wind turbines in the country.

Collectively, the wind farms will power 240,000 South African households – impacting the country's economy and its people.

Situated in the Northern Cape, which has one of the highest volumes of renewable energy utility power plants in the country, these sister wind farms comprise a total of 122 wind turbine generators, spanning 6,653 ha.

Sylvia Lucas, Premier of the Northern Cape, said, "The Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) is a priority programme for the province and proves to be a game-changer. This is a sector that can assist government to radically transform the economy. To date, more than 60 per cent of South Africa's Independent Power Producers have been allocated to the Northern Cape. Through this we are able to attract local and foreign investment to, not only the Province, but the country at large. The attraction of these investments places us at the forefront of the Renewable Energy Industry," she added.

The two sister farms are owned by a consortium led by Lekela Power, which provides clean and renewable energy across South Africa.

Chris Antonopoulos, chief executive officer of Lekela, said, "This is an important milestone for Lekela and its partners. We are pleased to have added more than a million megawatt hours of clean, renewable energy each year to the country's national grid, avoiding an estimated 22 million tons of carbon emissions over the lifespan of the projects, when compared to traditional fossil fuel power plants." Furthermore, these two wind farms achieved more than two million man hours of construction activity without a single lost-time-incident.

Kevin Foster, country construction manager for Mainstream Renewable Power, said, "Considering the sheer scale of these power projects, the multiple level of activities and the complexities involved in building these very large wind farms, it is an impressive achievement for our construction team."

Electricity demand will boost Uganda's industrialisation drive

The construction of the Karuma and Isimba hydropower plants will more than triple the country's power capacity, paving the way to transform the economy of the country, Geoffrey Muleme reports.

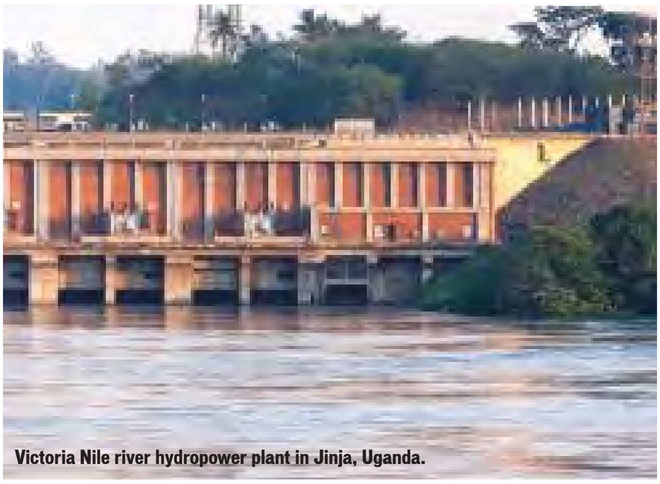
The managing director of Uganda's biggest energy distributor Umeme said the country needs to boost its industrialisation drive by 70 per cent to meet the demand for power which is set to be generated by major power plant projects next year.

Speaking to journalists on 16 November, Selestino Babungi said that it was vital that the country attracted more investment to support economic growth adding that "it was industrialization that will drive up the demand and ensure the electricity coming on stream is absorbed in the economy to support economic development."

Babungi said, "We recognise that the upcoming period requires further significant investment in grid expansion. The government's ambition of increasing electricity penetration from the current 22 per cent (of which 16 per cent is on the grid) to 40 per cent of households by 2030, coupled with the projected increase in effective generation capacity from the current 650 megawatts to over 1,600MW by 2020, underlines the urgency for investments in the distribution network."

Umeme intended to boost the power generation in the country by investing heavily in building new substations in industrial parks, installing new transformers and extending power lines across the country in a bid to increase the availability and reliability of power production.

The Karuma hydropower project, which is being constructed by the Sinohydro Corporation of China, consists of a 20 m-high, 311.53



Victoria Nile river hydropower plant in Jinja, Uganda.

Image Credit: Adobe Stock

m-large concrete gravity dam, coffer dams, power intake works and a surface power house (6x 100 MW). It will have 400KV and 132KV transmission lines. Around 600MW of electricity is expected to be generated by the plant located on the Kyoga Nile. Fifty one per cent of physical works have been completed so far and it is financed by the China Exim Bank. The plant will come into operation in December 2018 and will be the largest dam in East Africa.

According to a report by the New Vision, two turbines of the US$1.8bn plant will be switched on in December 208 then subsequently, a turbine every month until the project is handed over to the government.

While the Isimba hydropower plant in western Uganda is intended to increase energy capacity by 188MW and it will be completed in August 2018.

In the government's 2017/2018 Background to the Budget, it stated discussions were ongoing with a private developer for a 600MW hydropower plant in Ayago in the Nwoya district.

Uganda's energy minister Irene Muloni said electricity generation capacity has improved, using figures from the Electricity Regulatory Authority (ERA). She says power production has grown to 947MW from 300MW in 2002.

The minister told participants at the recent 7th annual joint energy and mineral sector review that power generation capacity is expected to hit 1,994.5MW by 2020 when construction of more energy plants is completed.

> "Uganda's electricity consumption has registered growth in the past two years as demand for energy expands"
>
> **IRENE MULONI, UGANDA'S ENERGY MINISTER**

"The government is focused on its priority of increasing access to clean, reliable and affordable energy to its population. We expect Uganda to be able to consume the power. Uganda's electricity consumption, which is an important indicator of economic activities, has also registered growth in the past two years as demand for energy expands," she said.

The Electricity Regulatory Authority, which regulates the power sector in the country, hosted a group of German investors regarding investment opportunities in the power and electricity sub-sector. The director in charge of Economic Regulation in ERA, Dr Geoffrey Oboi told investors that Uganda has ready export markets in Democratic Republic of Congo, northern parts of Tanzania and South Sudan. However he said Uganda was not exporting much power due to inadequate transmission infrastructure. He added that for exports to start, the transmission network had to exponentially grow beyond the current 220kV. Apparently there are plans to construct 2,002km of transmission lines across the country.

The government is also developing a new electricity policy that will enable million of Ugandans to be connected to the power grid without incurring any charges, realising that many households and businesses are not connected to power lines due to the high costs involved. ■

EMSA GENERATOR

EMSA Generator, who spreads to the whole world especially Europe, Middle East, Africa and C.I.S. countries, is among the most important players of uninterrupted energy production market in the world with its over 40 years of experience.

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Powering the construction and industrial sectors

Back-up power generation has never been so important in supporting businesses as well as industrial and construction sectors. Here are a sample of gensets from some major manufacturers operating in Africa.

Himoinsa emergency energy for new Casablanca Finance Centre

Himoinsa's HDW-750 T5 generator sets will guarantee the supply of electricity to the CFC Tower, the first building in the new financial district, aspiring to be Morocco's Wall Street. Both generator sets will start working in parallel and will be able to supply, depending on the demand, up to 1.3MW of stand-by power.
The 26 floors of the tower contains offices and banks and financial institutions for whom any power cut would entail substantial losses.

Image Credit: Himoinsa

Himoinsa's HDW-750 T5 generator sets to supply back-up to the CFC Tower in Morocco.

Doosan launches four new generators

Doosan Portable Power has launched a new range of four generators – the G20, G30, G45 and G60 – from 20-60 kVA, in 50Hz and 60Hz versions. As well as construction and rental, the new generators extend the Doosan portfolio to a wider audience to cover applications such as home standby, telecommunications and back-up power for small businesses.

Image Credit: Doosan

Doosan has launched new range of 20-60 kVA generators.

Zest WEG Group supports construction and mining sector

Zest WEG Group Generator Set Division manufactured a custom standby 220 kVA genset solution, which is ideal for construction and mining applications.

This auto mains genset process controller incorporates engine control and an alarm system. The genset itself is installed inside an acoustically lined enclosure designed to reduce the noise breakout to 75 dBa at seven metres. An integral eight-hour belly fuel tank has been built into the base frame, and it has a glass and electronic fuel gauge.

Image Credit: Zest WEG Group

Zest WEST Group's 220 kVA genset is uniquely designed for construction and industrial applications.

KOHLER- SDMO lights up Cameroon stadium

KOHLER-SDMO supplied three gensets of up to 800kVA for the Ahmadou Ahidjo Stadium in Yaoundé, Cameroon, to ensure the 2016 Women's Africa Cup of Nations went off without a hitch.

The generating sets provided all the stadium's electricity demands during the matches, mainly for the lighting towers during the competition to offset any loss of power from the grid.

Image Credit: kohler-sdmo

KOHLER-SDMO was on stand-by to provide power for 2016 Women's Africa Cup of Nations.

VISA SpA involved in major contract

The Onis Visa units, owned by Johnson & Johnson, are installed as emergency power sources in a large residential and office complex in Prague, Czech Republic. The gensets are installed as an emergency power source for the building consumption and a data centre (Johnson & Johnson server room). The 2 x 400.0 kVA PRP and 1 x 645.0 kVA gensets have Iveco and Doosan diesel engines, plus a 2,500-litre fuel tank.

Image Credit: VISA SpA

Onis Visa gensets are installed as an emergency power source large complex in Prague.

Inmesol powers football matches

An INMESOL 1110 kVA LTP genset model IP-1135 has been installed at the Alphonse Massemba-Débat sports complex in Brazaville, the capital of the Republic of Congo.

This standby genset will be in charge of supplying electrical power in the event of an outage. The generator set features a Perkins engine soundproofed by a double soundproofing panel and installed in a 40ft container.

The stadium hosts matches from the Republic of Congo Football team, as well as from several local clubs in the National Football League. It was the venue chosen to host the 1965 All-Africa Games and the 2004 African Championships in Athletics. It has a capacity to receive 3,000 people.

Image Credit: Inmesol

An Inmesol genset was installed at the Alphonse Massemba-Débat sports complex in Congo.

Zest's pan-African power solutions

Zest WEG Group, the generator set manufacturer/electric motor supplier, remains a significant player in connecting thousands of people to power across Africa.

With more than 37 years of experience in Africa under its belt, Zest WEG Group, a subsidiary of leading Brazilian motor and controls manufacturer WEG, continues to dominate sub-Saharan Africa's power landscape.

Since it was formed in the 1960s, it has become the largest electric motor and variable speed drive supplier in Africa, servicing 45 countries. From providing low and high voltage electric motors, power and distribution transformers, containerised substations, switchgear to developing customised diesel generator sets, the Zest WEG Group is well-equipped to meet the energy needs of its clients.

Zest WEG Group diesel generator sets, in particular, are a common feature across sub-Saharan African businesses and industrial sites, providing power for a range of applications from construction, mining to health and retail as well domestic households.

The company's largest project to date was the completion of the Syrah Balama power plant in Mozambique in December, 2016. Zest WEG Group designed and installed seven 3000kVA MTU/WEG gensets, supplying 11kV of continuous power to a graphite mine.

Louis Kotze, chief operating officer, Zest WEG Group Generator Set Division, told African Review, "This was an exciting project for us. We normally provide solutions for the platinum and gold industries because South Africa is a mining economy, but this was new in terms of graphite and being a conductive material, we had to come up with special solution to counteract the conductivity on the electrical equipment."

Image Credit: Zest WEG Group

The lift of the Zest generator was done on a wind free day in Cape Town.

Last year, Zest WEG Group installed a 1,600kVA and a 2,000kVA acoustically treated, containerised generator sets at the new Netcare Christiaan Barnard Memorial Hospital in Cape Town, where the world's first heart transplant was performed in the 1960s. During the installation, the team faced logistical challenges while offloading the generator sets. Roads were closed as the generator sets were positioned on top of the hospital's roof using specialised cranes. The generator sets were put into containerised units, specially designed for noise reduction.

The company was behind another major project, installing eleven 630kVA Volvo units at the V&A Waterfront, a popular tourist retail and commercial complex in Cape Town. The generator sets had to be installed in the only space available in the parking area, where the team had to contend with low ceilings and corridors to move generator sets into their operating position. Extensive work had to be carried out on the exhaust extensions, which were manufactured up to three stories high through the ventilation shafts.

> "We are unique as we are an integrated energy solution provider"
>
> **LOUIS KOTZE, CHIEF OPERATING OFFICER, ZEST WEG GROUP GENERATOR SET DIVISION**

But while Zest WEG Group excels in making and installing special customised solutions, Kotze hopes the company will continue to build on its standard and premier ranges of generator sets (10kVA-3350kVA, 50/60Hz).

He said, "Besides us being able to do a project that is very complex, we are looking at developing our standard range of equipment because there are still so many countries without electricity that are looking for a solution today. We hope we can push this by getting ourselves into the different markets and having more distributors."

Zest WEG Group, which has eight operations in South Africa, as well as branches in Mozambique, Tanzania, Zambia and Ghana, has distributors in Angola, Botswana, Cameroon, the Democratic Republic of Congo, Côte d'Ivoire, Kenya, Mali, Mauritania, Mozambique, Namibia, Senegal, Tanzania, Zimbabwe and Zambia.

Kotze believes that in time the generator set industry will turn towards hybrid applications and he said the company was recently contacted by the authorities in Cape Town to assess the design development of the desalinisation plant to deal with the water shortage problem. "They were thinking about using a dual fuel solution, and we were able to come up with a hybrid scenario with gas and diesel," he said.

The 2000 kVA Zest generator during the initial stages of the generator lift.

Image Credit: Zest WEG Group

He added, "It will be interesting over the next 50 years in regards to renewable energy with costs expected to come down in Africa. But it's not that easy to pull off a renewables project in Africa because the logistics is challenging and despite the increasing trend towards renewables, you always need your generator set as a power supply base to meet demand."

In regard to Zest WEG Group's future, he sees it aligning towards microgrid solutions especially for smaller communities, moving into power pools and establishing more plants such as Syrah Balama in Mozambique.

He said, "The challenge is, however, that every country in Africa has its own localisation programme, which makes it difficult as there are not always the skills available in that country. Most of the time, we are required to train local people who are going to work at a power plant and by doing so, we add value to a particular country.

"We are unique as we are an integrated energy solution provider, supplying and installing an array of products from our many divisions across the Zest WEST Group. This positions us well for decades to come in the future." ■

AC electric mill motor repaired after massive failure at gold mine in Zimbabwe

The largest AC electric motor operating at a gold mine in Zimbabwe was refurbished by rotating machinery repairer, Marthinusen & Coutts following a huge failure.

Estimated to be around 30 years old, the 2150 kW synchronous mill motor broke down at Freda Rebecca Gold Mine, causing the main hub of the electrical rotor component to come off.

Marthinusen & Coutts was contacted by the mine to carry out a full assessment and came up with an alternative solution to redesign the motor instead of replacing the hub, which reduced costs.

Marthinusen & Coutts refurbished the largest AC electric motor operating in Zimbabwe.

Image Credit: Marthinusen & Coutts

Richard Botton, divisional CEO of Marthinusen & Coutts, said, "Our team's extensive experience and understanding of large rotating machinery enabled us to offer an alternative to the mine that would ensure optimum reliability going forward. One of the solutions was to use the existing rotor superstructure with a bolt-on hub on the motor." In addition, 18 main pole coils were replaced.

A complete rewind of the stator was necessary due to the extensive damage caused during the failure at the mine. Fortunately, the mine store had a spare set of coils, manufactured 20 years ago, and were rewound at Marthinusen & Coutts in South Africa. A compete upgrade and modification to the sleeve bearings also brought these back to OEM specifications.

"The ability to implement enhancements during the repair of critical electrical rotating machinery such as this motor is a major advantage to the mine as it allows for the latest technology and enhancements to be included in the final product solution," Botton added.

SKID-MOUNTED SUBSTATIONS COMPLETED

South Africa's Parnis Manufacturing has completed a fast track project to supply skids and enclosures for three skid-mounted substations for Schneider Electrics. Parnis Manufacturing project manager Manuel Di Giovanni said the three medium voltage (MV) transformers could be delivered ahead of schedule to Panama in South America.

The units will be powering mining shovels at First Quantum Mineral's new Cobre Panama copper project, as well as the mine's primary crushing circuit. The large open pit copper mine will operate in four zones over an area of 13,600 ha.

"The mining skids allow the units to be moved from one position to another in the open pit, following the movement of the mining machines," said Di Giovanni.

The company fabricated the enclosures for each of the mining skids which house the three transformers, reducing power from the primary 33.5 KV network to 7.2 KV.

He added, "This provided a faster solution."

Powering businesses using solar solutions

Harinder Singh, president of Eastman Auto and Power Ltd, talks to *African Review* about how solar products are becoming innovative power solutions in Africa.

Image Credit: EAPL

Harinder Singh, president of Eastman Auto and Power Ltd.

What type of products are Eastman Auto and Power Ltd (EAPL) promoting in Africa and in which countries?

EAPL offers a wide range of batteries, inverters, solar panels and top of the line solar products that are widely known for their innovative technology in-built with the latest applied scientific automation.

Our state-of-the-art advanced technology products includes home UPS, solar hybrid UPS systems (built-in MPPT and PWM type solar charge controllers), grid tie inverters, solar charge controllers (MPPT and PWM Type), solar panels (mono and poly), solar street lights (with/without inbuilt Lithium-ion batteries) tubular batteries (flooded type and VRLA type with advanced gel technology) and many more. We are exporting to Nigeria, Uganda, Senegal, Kenya, Tanzania, Malawi, DR Congo, Burundi, Burkina Faso, Mali, Afghanistan, Pakistan, Middle East countries (Dubai, Yemen, Syria) and so on.

What applications are the products mostly used for and in what industries?

Our versatile range of products suits to each and every power backup application – domestic, commercial (for office or shops) or industrial, fulfilling smallest residential home systems up to multi-KW solar power plants. It can be used in medical field, banks, IT companies, BPO, textile, manufacturing industries.

How is EAPL different to your competitors?

EAPL is part of the Eastman group which began in 1970 focused on innovation, quality and excellence and holds four globally recognized companies as its extended arms. There has been no looking back since then and EAPL from its humble origins has become one of the mostly highly coveted business conglomerates in India. As a group, it has set new benchmarks in the manufacturing and export industry.

The Eastman eco-friendly in-house manufacturing facility at Himachal Pradesh (ISO 9001, ISO 14001, and OHASAS) is based in India, with capacity to produce more than 90,000 batteries per month along with other power backup products. Also, we have warehousing facilities in Dubai and Singapore.

The range of products offered by Eastman is known for its quality, durability and performance. Our products are different in terms of unique designs, user friendly features, such as a LCD display (in all models ranging from lowest end to higher end), advanced DSP technology, highest efficiency, and complete safety from all kinds of disturbances. These are all features incorporated as per market needs, which give value for money to the end user.

Why are solar batteries better than the traditional products?

Solar batteries are much better than traditional batteries due to their rigid construction to run continuous load for hours at a high rate of discharge. In general batteries are designed at C20 rating to handle the load or you can say give backup power. Solar batteries are designed at C10 rating which means they can deliver more power at any given instant of time as compared to C20 rated batteries without affecting their overall performance. In short, they are having 10 to 15 per cent extra Amp Hr compared to traditional batteries.

EAPL's products suit domestic and industrial power backup applications.

Image Credit: Adobe Stock

What is EAPL's future strategy in Africa?

We as a company believe in the strategy of one country, one partner and we walk together exploring the best of the business opportunities in the assigned areas to achieve the common goals in our business endeavours.

We believe in the alignment of vision, practices and resources with our partners so that we can create a link of trust that could harmonize mutual benefits in the long run to ensure the best of the power solution products that are available for the customers across African markets.

As technology in the renewable energy industry is dynamic, we are constantly evaluating new products to offer the best package to the environmentally and energy conscious client. ■

Powering the Dakar Rally 2018

Himoinsa has reached an agreement with Amaury Sport Organisation (ASO) to supply power for the Dakar Rally 2018.

The rally, which will be held between 6 and 20 January, will cover 9,000km across Peru, Bolivia and Argentina.

Himoinsa has designed a mobile power supply for the more than 10 camps that ASO plans to set up for the race. There will be eight HPCW-500 D5-6 Power Cube generator sets, with FPT C13TE7 engines and Cramaco alternators. Being dual-frequency it will allow them to operate when the races passes through Peru, a 60Hz market, as well as in Argentina and Bolivia, where the generators will run at 50Hz.

To implement the plan, three independent technical units have been appointed, which will install, commission and transport two generator sets to each camp. One generator will supply 503 kVA (50Hz) or 524 kVA (60Hz) of PRP power, and the other will remain on stand-by to guarantee a 100 per cent reliable supply. Similarly, the generators are ready to work in parallel, if need be.

Gabriel Gallino, general manager of Himoinsa Argentina & Cono Sur, said, "We took account of every detail to provide a very reliable power solution. We'll keep up with the frenetic pace of the race. Our technical team will always work 'two camps' ahead. They are highly skilled, expert engineers who will do the work required to guarantee a reliable power supply."

Himoinsa is a veteran of the Dakar Rally and it has its own racing team. This year, the company said it had a great opportunity to show the world its experience in the power generation sector, in which it has been working for over 35 years and show once again that the company has extensive know-how and an expert engineering team enabling it to design solutions for such challenging projects as the Dakar Rally, the toughest rally race in the world. ■

Image Credit: Himoinsa

Eight HPCW-500 D5-6 Power Cube generator sets, with FPT C13TE7 engines and Cramaco alternators will power the Dakar Rally 2018.

LOUIS BERGER BUILDS NEW BRIDGE BETWEEN CAMEROON AND NIGERIA

Image Credit: Louis Berger

The new two lane bridge over the Cross River will ease congestion between Cameroon and Nigeria.

Louis Berger was awarded a €1.5mn (US$1.7mn) to build a two lane bridge over the Cross River by the Cameroonian and Nigerian governments.

The two-lane box girder balanced cantilever bridge will be approximately 403m (1,322ft) long with a 150m span over the Cross River, at Ekok/Mfum, the border between the two countries. It will replace the heavily congested single lane suspension bridge.

The new bridge will contribute to more effective and time-saving transportation while providing safer and more comfortable journeys to road users on each side of the border.

"We are proud to support both governments to improve their transport infrastructure and the connectivity between the two countries," said Jacques Blanc, Louis Berger's senior vice president. "The new bridge will contribute to more effective and time-saving transportation while providing safer and more comfortable journeys to road users on each side of the border." The project has a duration of 18 months with a 12-month defects liability period.

Dangote partners with Jumia to sell cement online

Image Credit: Dangote Group

Chux Mogolu, key account director of Dangote Cement with Juliet Anammah, CEO of Jumia Nigeria after the deal was signed.

Dangote Cement has signed a pact with Jumia Nigeria, one of the leading e-commerce platforms in the country, to sell cement to customers online.

Under the deal, Nigerians and corporate bodies can order on Jumia to purchase a minimum of 300 bags of 50kg of Dangote Cement and above at a reasonable price of US$6.92 per bag.

The move aims to reduce price and improve logistics when purchasing products. Chux Mogbolu, key account director of Dangote Cement, said that the new initiative, also, is expected to help prevent online scams.

"For now, the pilot scheme is live in Lagos, Abuja and Port Harcourt, but we can extend to other cities depending on demand," he said.

"With the deal, Nigerians in need of seamless supply of cement from Dangote can now place order and pay online and wait for the delivery in record time from any of Dangote's nearest cement plant to Lagos, Port Harcourt or Abuja. We are starting with minimum order quantity (MOQ) of 300, 600 and 900 bags."

Speaking on the deal, Juliet Anammah, CEO of Jumia Nigeria, said that the deal with Dangote Cement is part of efforts to deepen service delivery on Jumia Nigeria online platform.

INFRASTRUCTURE INVESTMENT WILL SUPPORT OIL AND GAS DEVELOPMENT

Infrastructure investment of US$150bn over the next eight years is required for Africa to meet energy demands, according to Steve Lowden, chairman, NewAge.

His comments at Africa Oil Week on 5 to 9 November in Cape Town echoed those of multiple speakers who also emphasised the need for multi-billion dollar infrastructure investment in roads, airports, ports and rail, as well as oil and gas industry-specific infrastructure projects.

He said that the "infrastructure deficit" in Africa will become even more apparent with energy consumption in Africa set to double by 2035.

From 1975 until 2009, energy consumption has flatlined across Africa "Yet there's plenty of gas," said Lowden. "If just 17 per cent more was used for power generation, African energy consumption would be the same as India."

Lowden outlined NewAge's projects across Africa. These include 2D and 3D seismic in Morocco with a view to drill next year, multiple projects in Ethiopia, a sandstone project in South Africa, and promising 2D and 3D seismic and a gas-to-power project with Eni in Congo-Brazzaville. According to Lowden, narrowing the infrastructure deficit should run hand-in-hand with developing gas-to-power projects across Africa, another ongoing theme of Africa Oil Week. As well as the Congo-Brazzaville project, he cited the importance of developing a gas field and FPSO for the Nigerian domestic market.

The growing impact of Chinese investment on infrastructure development was raised by Lowden, including such companies as COIDIC, CSSC, Exim, Hope and SinoSure, all of whom are seeking to expand their presence in Africa.

The rehabilitation works on the runway of the Nnamdi Azikiwe International Airport were completed by Julius Berger Nigeria Plc.

Image Credit: Julius Berger

Contractors square up to infrastructure challenge

Nigeria's homegrown construction industry is flourishing with the roll out of new infrastructure, but remains alert to new possibilities and opportunities elsewhere.

Nigeria's homegrown construction firms are playing a starring role in the development of the country's new infrastructure.

With a soaring population, the government is keen to upgrade everything from transport and telecommunications infrastructure, to energy and water services, as well as real estate development.

Among them, Julius Berger, has played a pivotal role in notable projects such as the Lagos Eko bridge in the commercial capital of Lagos and, more recently, Nigeria's high profile Abuja airport runway upgrade.

The upgrade of Nnamdi Azikiwe International Airport – involving the complete rehabilitation of the runway and main taxiways – was completed earlier this year, ahead of schedule.

The Abuja-based contractor is now recognised as one of Nigeria's top brands, working across the civil, marine and industrial construction fields.

Its latest venture sees it working on the construction of the Bodo to Bonny road, which kicked off after a ground-breaking ceremony in Bonny, Rivers State.

This is the area that hosts the mighty Nigeria Liquefied Natural Gas (NLNG) export project, in which Julius Berger was engaged on 20-plus years earlier.

In fact, the new road project is being jointly funded by NLNG itself, together with the federal government.

Technically, it is a massive undertaking, with the construction of a 39km long modern road through low lying marshlands, muddy areas and swamps.

The project also includes the construction of a number of major bridges, including Afa Creek Bridge (530m), Nanabie Creek Bridge (640m), plus a major river crossing over the Opobo Channel of about 750m in length.

> "Within Nigeria, we aim to diversify our business beyond into power and oil and gas"
>
> **WOLFGANG GOETSCH, JULIUS BERGER EXECUTIVE**

Strong expertise

Other major local players active rolling out the new roads network include Setraco Nigeria Limited, a leading engineering construction company with over 35 years experience in delivering civil and infrastructure projects.

What is clear is that all of these flagship Nigerian contractors come with plenty of experience.

Another is Reynolds Construction Company, which has a history dating back more than 50 years, and has delivered roads and other projects both in Nigeria and increasingly across West Africa, highlighting its skills and expertise.

Monier Construction Company (Nigeria) Limited is another well known civil engineering and construction group with a solid reputation acquired over a period of five decades.

Despite this impressive history, it is an important time right now for all players, as local contractors seek to muscle in on larger and ever more sophisticated contracts.

As well as roads and transport, the government is fostering investment in other core areas such as energy to fuel Nigeria's scaled up economy.

It means some of the largest projects are still being steered to international contractors.

China Civil Engineering Construction Corporation, for example, is to lead the construction of a proposed new hydropower plant in the eastern Mambilla region, worth a reported US$5.8bn and known as Nigeria's biggest dam project.

The project, which could one day generate 3,050MW of electricity, requires the construction of four dams – one of them 150m high – plus 700km of transmission lines.

Although the high costs mean many suspect the project will be delayed – Mambilla was first mooted in the early 1980s – it is a scheme that local firms would dearly love to participate in.

Expanding role

And, at a time when the national economy has faltered in the wake of lower oil prices in recent years, this is an issue that the major names are getting to grips with.

Again, Julius Berger has declared that it wants to acquire oil assets and expand into the power sector, in a bid to diversify its business to boost profitability and competitiveness.

The company, which has been operating since 1965, was named as one of the top 50 brands in Nigeria at an awards ceremony in Lagos.

That also means searching for new opportunities in regional markets such as Ghana, Benin and the Côte d'Ivoire, according to one of its executives Wolfgang Goetsch.

"Within Nigeria, we aim to diversify our business beyond our core competence of civil engineering, looking into power and oil and gas, or to diversify outside the country," he was quoted as saying in an interview with Bloomberg this year.

The group derives about two-thirds of its earnings from government contracts.

It is in the process of conducting market studies to flag up potential new opportunities and partnerships.

"We believe with strategic partners that we are more attractive to clients who want to have a whole industrial or power plant," Goetsch added.

In a region set to grow rapidly in the coming years – Nigeria's population alone is expected to reach 300 million by 2050 – the local construction sector has a long road ahead of it. ■

agrofood & plastprintpack Nigeria returns in 2018

agrofood & plastprintpack Nigeria belong to the leading trade shows in Nigeria.

After the great success in 2017, the German trade show specialist Fairtrade Messe announced the date for the upcoming event in 2018. The 4th agrofood & plastprintpack Nigeria is scheduled for 27 to 29 March, which will be held at the Landmark Centre in Lagos.

And with 110 exhibitors from 20 countries (2017) and 1,958 professional visitors from 21 countries (2017), agrofood & plastprintpack Nigeria is a must-attend event for all professionals in this important industry.

"Nigeria is the second largest importer of agricultural and food processing and packaging technology and the second largest importer of plastics, printing and packaging technology in sub-Saharan Africa," said Martin März, Fairtrade Messe's managing director. "So it comes as no surprise that official pavilions from Austria, China, Flanders/Belgium, France, Germany, Italy, Netherlands, South Africa, Spain and Turkey have already booked for 2018."

For more information visit www.agrofood-nigeria.com and www.ppp-nigeria.com

Image Credit: Fairtrade Messe

Agrofood & plastprintpack Nigeria brings together Nigeria's major professionals with suppliers across the world .

Solar powered airports lead renewables revolution

Solar energy projects to power airports are popping up across Africa, from Algeria to South Africa. Expect more to follow.

We may not be flying on solar powered aircraft just yet – although experimental planes are now taking to the skies – but Africa does have its own airports that are completely reliant on clean, renewable energy. And more are on their way.

Algerian renewable energy project developer Soliwind is working on its latest solar energy venture, a 1.39 megawatt plant at Oran's new airport.

As part of an EPC contract, the company is providing design and construction expertise for the installation of 5,362 photovoltaic rooftop panels at the terminal.

Port Elizabeth airport is among those airports earmarked to have solar panels installed by ACSA.

Image Credit: Bair175/Wikimedia Commons

The plant will produce two million kWh (kilowatt hours) per year and is expected to generate both cost savings and greenhouse gas reductions.

Oran is Algeria's second city, and the new Ahmed Ben Bella International Airport will be capable of handling up to four million passengers per year.

George Airport

But this project mirrors similarly pioneering work elsewhere.

South Africa's George Airport achieved recognition when it became the continent's first air gateway to use electricity drawn only from solar panels last year.

The town of George lies halfway between Cape Town and Port Elizabeth and the airport handles more than 600,000 passengers each year. It also serves as a national distribution hub for cargo, such as flowers, fish, oysters, herbs and ferns.

It became only the second airport in the world to harvest all its energy needs from solar power, after Cochin in India.

Transport Minister Dipuo Peters launched the first phase of the 200sq m solar farm last year, a R16mn project spearheaded by the Airports Company South Africa (ACSA).

Peters said at the time that the project would help to reduce emissions and pressure on the nation's energy grid "and highlights Africa's prominence in the global renewable energy revolution".

Airports Company of South Africa (ACSA) is installing solar energy panels at all of its other regional airports – Port Elizabeth, East London, Bram Fischer International Airport, Kimberley Airport and Upington – to make them more self-sufficient.

Not long after the news broke about George Airport, ACSA launched its second solar power plant at Kimberley in the Northern Cape.

The R13.5mn solar farm is located on 0.7 ha of land within the airport's grounds and uses an 11kV substation as its main source of supply, also located on the airport's land.

The plant is forecast to produce some 927,000 kWh per year, using 1,620 PV panels and 18 inverters.

ACSA chairman Skhumbuzo Macozoma says his company plans will introduce an energy mix to all its airports, which include major international gateways, such as Johannesburg and Cape Town, and will achieve carbon neutrality by 2025-2030.

Proven concept

Elsewhere, other countries are learning from the experiences of others.

> "The solar plant will enjoy cheaper solar electricity without substantial upfront capital investment"
>
> **RACHAEL NDEGWA, SWISSPORT KENYA LIMITED CHIEF, ON JOMO KENYATTA INTERNATIONAL AIRPORT'S CARGO FACILITY**

In Kenya, Jomo Kenyatta International Airport now houses East Africa's first solar-powered cargo facility, owned by Swissport Kenya Limited.

Swissport Kenya Limited commissioned the project in 2017, which it hopes will meet a third of the facility's energy demand, in partnership with Mettle Solar Ofgen and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

Swissport Kenya Limited chief Rachael Ndegwa said the project could cut its power bills by 30 per cent.

"The solar plant will contribute to a healthier environment and clients will enjoy cheaper solar electricity without substantial upfront capital investment," she said at the commissioning in July.

Kenya Airports Authority has announced similar plans to incorporate solar power at its main in Nairobi.

Meanwhile, work continues at full pace in Algeria, a country where is no shortage of sunshine to feed the vast array of solar panels, in what is expected to become the second largest rooftop solar installation in Africa.

Soliwind's general manager Abdelatif Belgout called the new Oran airport development an "emblematic project" that would help shape and define "the positive energy buildings of tomorrow".

The work at the airport is soon scheduled for completion and marks a step up in scale from similar developments in South Africa.

He said, "This project will develop local know-how and benefit from experience feedback to other nations, especially those of the African continent, who are now suffering the consequences of climate change." ■

Still the leader of the pack

John Chattaway, product manager for compact loaders (skid-steer loaders, compact track loaders, and mini-track loader) for the EMEA region talks to *African Review* about Bobcat's products being so effective in Africa.

Bobcat S450 skid-steer loader, which is popular in Africa, with an auger attachment.

Image Credit: Bobcat

What does your role as product manager involve?
We take the insights of the marketplace, take the voice of the customer, and we develop our products based on matching their needs and applications.
We work very closely with the attachments group.

John Chattaway, Doosan's product manager for compact loaders for EMEA region.

Image Credit: Bobcat

How long have you been in this role for?
I have been in this product management role for the last eight years. Before this, I led the new product development strategy for the various product lines in our European area, such as the Telescopic Handlers and Mini Excavators, based at Bobcat's previous regional headquarters in Waterloo, Belgium before coming to Dobříš, Czech Republic, to work full-time on the compact loader business.

Why are the loaders such a unique product?
The Bobcat loader started out in the agricultural world and since then it has developed into a very versatile, compact, highly manoeuvrable piece of equipment for many industries including construction, landscaping and mining. It can also be a power source for many different attachments. In fact, the Bobcat loader started the trend to have quickly interchangeable attachments on the front of the machine. Our attachment interface is known as the Bob-tach, the quick attachment device that we patented many years ago, and now everyone copies. It revolutionised the industry in that you can change quickly from a bucket to a set of pallet forks in several minutes.

One of the keys to the Bobcat Loader's success is that it is a very durable machine, which is why it is suitable across the Middle Eastern and African regions where often the product is stuck out in the middle of nowhere and its simple design can be easily maintained.

What are the latest models due to be launched?
We are in the development of the next generation of the machine ready to comply with the new

> "Around half our loaders in Africa will go into markets like South Africa, Angola and Mozambique"

A Bobcat S450 with a bucket attachment.

Image Credit: Bobcat

European Stage 5 regulations. This line is not specifically for Africa or the Middle East but the changes will allow us to introduce these higher performance machines when our customers need them. Our product range has not been static, we release updates and options on a regular basis, but we do not develop completely new models too often, as we like a reasonable product life-cycle for our customers. The most recent introduction in the Middle East and Africa was the Bobcat S450 skid-steer loader in 2014, where this model size remains hugely popular. Before this, we launched our 500 series of mid-range skid-steer loaders and track loaders, these are the bread and butter of all our products in Europe, where we sell more 500 series products than any other. In terms of recent innovations, we have a compact but powerful track loader called the T450 which has added to our presence and leadership in the compact track loader market. It has been extremely successful in Europe.

Do you think the S450 skid-steer loader will continue in Africa?

Yes, absolutely, at least for the next 10 years. If you look at our product range and what our competitors are trying to do to match us, our products are what customers want in the Middle East and Africa. They use it as a motorised helping hand and you'll find it on most work sites. It is not about developing the product in a very technological way, it's more about continuing its simple performance, durability, and ability to be easily maintained.

Which African markets have your products?

Around half our loaders in Africa will go into markets like South Africa and other regions where you've got industries set up around commodities and oil, such as in Angola and Mozambique. We also see some agricultural use of the loader range in these markets as well as in Kenya and Nigeria. In North Africa, we see the products mainly used for construction work as in the Middle East.

> "The most recent introduction in Africa was the Bobcat S450 skid-steer loader in 2014"

Beside our focus on the more straightforward and uncomplicated products, we have available quite technologically niche products, such as remote control machines for the mining industry. We make sure our products are fully optionable with HVAC systems, joystick controls and high-flow hydraulics from the factory and then we support our distributors to work out the specifications with the customers for field installed accessories. For example, local distributors can add the remote control and if needed also install anti-fire equipment if a machine is used in mining.

The loader market over the past two years had weakened but we don't expect our volumes to change dramatically – we still maintain a very good market share and our focus is on our customers' applications and how they use the machines to enable them to react quickly to the normal market changes. ■

The backbone of the construction industry

Construction equipment makers roll out latest models and boost customer service to capture market potential.

Right at the heart of Africa's construction industry is the trucks, cranes, machinery and other handling equipment that haul the heavy loads on each and every project, every day of the week.

Robust, resilient, and built to last, these machines are behind every successful road project, every producing copper or gold mine, and every city office block, from Morocco right down to Mozambique.

But the demanding and varied conditions across the continent – from the swamps of Nigeria's delta lands to the scorched deserts of Algeria – present an extra challenge for manufacturers.

Customers, construction firms and engineers demand dependability and performance even in the face of extreme adversity.

Major players working across Africa providing the hardware to making things happen include heavyweights such as Caterpillar, Komatsu, Hitachi, Liebherr, Terex and Volvo, among many others.

What they all have in common is a solid reputation and a long history of performance.

Yet markets rarely stand still and all face stiff competition for business, while technology continues to offer new opportunities to refine and improve products and machines.

This continues to lead a flurry of new products and innovations to the market – great news for Africa's construction firms and project managers.

TL30.70 offers an outstanding maximum reach of four metres with a load of more than one ton.

Image Credit: Bobcat

Bobcat telehandler

For over 50 years, Bobcat has built compact equipment offering performance, toughness, comfort and versatility to help its customers complete their work more efficiently and effectively.

It has launched its new model – the TL30.70 compact telehandler, providing a maximum lift capacity of three tons and a maximum lift height of nearly seven metres.

The new machine is designed for a wide range of applications in the African construction and rental industries.

"The TL30.70 provides an excellent compact and cost-effective alternative to larger seven metre models, especially where working spaces are tight and increased manoeuvrability is required," the company said in a statement.

The compactness and stability of the TL30.70 makes this machine a perfect tool for easy pick and go or for lifting materials to height on housing and commercial property developments, it added.

"In addition, performance is not compromised as the TL30.70 offers an outstanding maximum reach of four metres with a load of more than one ton. At the maximum lift height, users can lift up to two tons of weight, which is sufficient to place a pallet of heavy bricks in most conditions."

There is plenty of power behind it too: for lesser regulated markets such as Africa, Bobcat telehandlers are powered by the Perkins 1104D-44TA Stage IIIA/Tier 3 diesel engine, delivering 100 HP by use of mechanical injection.

> "The TL30.70 provides an excellent compact and cost-effective alternative to a larger seven metre model"
>
> **BOBCAT**

User friendly

While technology has delivered huge advances, and engine power has no doubt beefed up even the smallest of machines, it is still the little things that count on the ground.

Again, companies, such as Bobcat prioritise the customer experience for all its machines, which makes them user-friendly for operators, as well as robust and dependable.

The TL30.70 offers several features providing unique ease of use, such as an all-in-one ergonomic joystick that ensures all boom functions and travel direction are permanently in the hands of the operator.

The latest telehandler – part of a range of 12 user-friendly models aimed at applications in construction and rental – includes a high comfort air suspension seat for the most comfortable drive position.

And safety, of course, is also integral in all models, with major features, such as an automatic parking brake.

The boom cushion retract feature also automatically slows down the boom speed when it is nearly fully retracted or at minimum/maximum angles, thereby increasing safety and operator confidence.

Like all its rivals, Bobcat also extends other service benefits to its customers, including a three year/3,000 hour warranty as standard for all models (which can be extended to five years/5,000 hours). ■

Image Credit: AdobeStock

Affordable housing conundrum

African cities become the new home to over 40,000 people every day. The UN projects that by 2050 there will be about 1.5 billion people within the region. This poses a challenge as metropolitan areas lack housing infrastructure.

The construction sector is seen as a barometer of the health of an economy; quick to grow in a period of confidence; but one of the first to be hit in a downturn. In 2000, the residue of the previous decades was still present and despite population growth, very little new housing stock reached the market. Informal housing dominated over new build and only individuals with sufficient funds were building their own homes in the formal sector.

Eighteen years ago, with the exception of South Africa, the residential developer was something new. People built their own homes, sometimes over several years, building what they could afford to bit by bit. Mortgages were unheard of (and remain largely unavailable) and tract developments simply did not exist. Over the next five years, this changed dramatically.

Developers came into the market at the high end, buying up land in wealthy districts; building and selling homes for more than US$250,000. In Ethiopia the government designated large areas of land on the outskirts of Addis Ababa for real estate development and issued real estate development licences to a number of companies. Developers such as Country Club Developments, and others have all developed gated communities with house values in excess of US$300,000.

In Kenya former farm lands surrounding Nairobi have been turned into high value developments. In 2001, a ¼ acre plot in Karen which sold for US$50,000 is now valued more than US$500,000. Nigeria, Ghana, Zambia, Angola, Mozambique and others all experienced similar price rises. Developers were very successful, but demand at the high end of the market became saturated.

Attention turned to cater for the next tier, the upper middle income group. Smaller town house properties targeting price ranges US$60-US$100,000 became the next growth segment. As the middle class across sub-Saharan Africa (SSA) continued to expand, the market for middle income developments continued to grow, in turn pushing up prices. Fears of a property value bubble failed to materialise simply because the demand for homes and middle class incomes, continued to rise beyond the level of supply.

Who's left behind?

Politicians and economists love it when a market regulates itself. Supply and demand work hand in hand. However, not to deny the massive growth in real estate construction, the majority of the population has still been left behind. Land prices and the cost of construction remain well out of reach for most people. Even for those whose income would enable them to re-pay a long term low interest loan, such loans, through a formal mortgage market, simply do not exist.

HassConsult, last year reported that while the upper and middle housing markets are facing a glut, the lower middle class is finding it difficult to find suitable housing, either for purchase or to rent. Already there is a shortage of housing, but with Africa's population set to grow to 1.5 billion by 2050, demand is set to rise. Coupled with this, the percentage of population reaching middle income status (according to the World Bank) is set to grow from 35 to 40 per cent.

By 2030, a further 200 million Africans will enter the housing market as first time buyers.

What mortgage market?

Accessible finance would enable large numbers in Africa to build and invest in their own properties, but interest rates in local currencies are so high, with annual rates ranging anywhere from 14-26 per cent, that long term loans are simply not an option. Private home builders will progress their projects slowly with short term loans, but long term mortgage finance is still a dream in most countries. One exception is Côte d'Ivoire where the government has intervened in the banking sector and mortgages are now available from six per cent. This has encouraged large numbers to take up pre-qualification for mortgages but the supply side has yet to catch up and prices remain excruciatingly high for new properties.

The next 12 months may see this rectified as many developers are now breaking ground, or seeking investment finance to build large numbers of tract housing. In other markets, it is being left to the private sector. There remains huge ambition from overseas investors to fund real estate development in SSA, but security of their investment remains the greatest challenge.

If the demand exists for affordable mass housing appears to and sufficient numbers in the local population can afford sensible repayments then government has a role, if not an obligation to provide security for investors and developers willing to fund the construction. For the past few years governments have been seeking investors to build and finance development, but have not been willing to participate in off-take guarantees. As a result, their success has been extremely limited.

> "Accessible finance would enable large numbers in Africa to build their own properties"
>
> **JOE COLLINS, MANAGING DIRECTOR AT AFRICA BUILD LTD**

The near future

Relatively recently, there is a palatable sense that things are starting to change. Ed Harkins from GKB Ventures, working with NMSI Developers, both UK companies have experience in brokering finance deals that allow such projects to progress. Harkins working closely with NMSI has been able to raise cost effective and long term funding support from the UK government for large scale housing projects in Africa at very low and attractive interest rates. These structures would require a sovereign guarantee from the host African government to make the project bankable and fundable.

In Kenya, the government has launched a programme to deliver one million new homes by 2022, with the first pilot project for 8000 units to be awarded in the near future. Lagos state announced they would be funding the construction of 20,000 new homes in 2018. Funding for 10,000 houses in Zambia is soon expected to be approved. There are similar initiatives across the continent. To date there are cases where international developers and finance have been able to put programmes together, for specific cases, which have enabled development to take place; but even these have progressed with great patience and 'creativity' needed to overcome the obstacles presented.

Whether these successful models can be systemised and replicated, or whether other models emerge (these may include financing from international finance at fixed hard currency rates) there is certainly a need and an appetite to succeed.

There is an immediate need for large scale investment into housing development. Complex and outdated systems of property law and land ownership are in need of reform by governments and restrictive business and regulatory environments, especially for foreign investors, need to be addressed.

Property ownership can have a huge impact on economic growth. If individuals can raise money against property collateral, they can invest in businesses, which increases spending and the multiplier effect goes to work, stimulating increased economic growth. ■

By Joe Collins, managing director at Africa Build Ltd

REDUCED TAIL SWING EXCAVATOR TO BE DISPLAYED DURING 2018 WORLD OF CONCRETE

Doosan Construction Equipment will display a DX140LCR-5 15-ton reduced tail swing crawler excavator in its booth C5887 at the annual World of Concrete Exhibition in Las Vegas from 23 to 26 January 2018.

The machine will be configured with a quick coupler and hydraulic breaker, as well as optional rubber track pads, which minimise damage to concrete surfaces.

The DX140LCR-5 excavator is designed for long life with an extra-sturdy frame and reinforced superstructure. As standard, the machine comes with permanently sealed and lubricated track links, and the workgroup bushings and hard-wear discs are designed for reliability as well as extended service intervals to increase uptime. Its shorter tail swing allows operators greater flexibility.

Image Credit: Doosan

The DX140LCR-5 has a shorter tail swing allowing operators greater flexibility where space is limited.

A standard 7-inch LCD screen allows operators to continue monitoring excavator parameters while viewing the rear view or optional side view camera image. Critical machine data appears next to the camera view. When the optional side camera is installed, a split screen allows rear and side camera displays to be viewed at the same time.

To help save diesel fuel, auto shutdown is standard to help owners save fuel during non-working conditions. Operators can configure the idle time from three to 60 minutes. When enabled, the feature will shut down the excavator's engine when the preset idle time is met. This will assist in areas where local regulations require idling for only limited periods for off-highway machines.

Factory-installed options for the DX140LCR-5 crawler excavator include straight travel pedal, two-way auxiliary hydraulic pedal (in addition to joystick control), cab guarding for special applications and additional work lamps.

NEW CONTRACTS FOR CONCOR INFRASTRUCTURE

Concor Infrastructure has secured two contracts in the mining sector, and managing director, Eric Wisse, says the company, formerly known as Murray & Roberts Infrastructure, is well positioned to take advantage of the increased optimism in the mining space.

Concor Infrastructure was awarded the Belfast Implementation Project for Exxaro's new coal operation in Mpumalanga, a province in eastern South Africa. This 22-month contract comprises major bulk earthworks and civil infrastructure that will enable works for the mining operation. It also includes the upgrading of a gravel road to surface standard that will facilitate access to the mine.

Wisse says that the company's experience in mining infrastructure projects will allow its teams to leverage this expertise on the project.

"We also secured the contract for the earthworks and civils for the box cut at Ivanhoe Mines' Platreef mine in Limpopo," Wisse said.

Concor Infrastructure has also received a contract for road rehabilitation on the Bakwena highway, on the section from Pumulani Plaza to Hammanskraal. Over the last five years, the company has worked on the Bakwena highway on sections stretching from Pretoria northwards. The work involves asphalt milling, and asphalt inlay and overlay work.

Wisse says that work continues apace on the company's other major roads projects in the Eastern Cape, North West, Gauteng and KwaZulu Natal.

Acquired by a consortium led by Southern Palace Group, Concor Infrastructure as part of Concor Construction is a level 1 B-BBEE contributor.

Carmix 3500 TC chosen for important mine

Launched in preview last year, the innovative 3500 TC has been selected for an important project in Mexico: the Concheño Mine.

This silver-gold open pit and underground mine in the state of Chihuahua was opened in 2013 and can produce 15,000 tons every day. Minera Real de Angeles opted for four Carmix 3500 TC machines for the construction of access roads to the mine.

The great productivity of the 3500 TC – according to Luis Antonio Herrera Amante, Carmix Specialist for Carmix Tracsa dealer – CAT Rental Store – is a major factor for working in worksites, such as the Concheño Mine.

The company said the new machine performs excellently in terms of versatility and flexibility and can work in difficult environments.

The reliability of Carmix machines was already well known to the Minera Real De Angeles staff, having worked with a 3.5TT model in the mine for almost two years. At the beginning of 2017, the quality and versatility of the product, joint to the prompt availability of spares and a timely customer service induced the building materials supplier to order four 3500 TC machines.

They wanted efficient machines, which were able to work in harsh conditions and travel on bumpy dirt roads with 20 to 30 degree slopes, in a particularly humid microclimate. The new 3500 TC machines have proved an efficient solution to reach even the most inaccessible areas of the mine safely and comfortably for the operators. They also have helped to increase productivity.

Image Credit: Carmix

The Carmix 3500TC has been chosen to build access roads to a mine in Mexico.

Image Credit: Peri Formwork

Scaling new heights

Scaffolding and formwork companies adapt to shifting market conditions with typical gusto.

PERI Formwork is finishing work on the Waters Edge high-rise residential development.

While no one doubts Africa's long-term potential, there are still question marks hanging over some of the continent's larger economies and how this might affect infrastructure spending in the months and years to come.

Nigeria has been hit hard by a fall in crude oil prices in recent years, for example, while South Africa has suffered the ignominy of a series of credit downgrades in 2017; in November Standard & Poors cut its local debt rating to 'junk'.

Builders and construction suppliers from across the continent are watching closely how this affects projects – what happens in the continent's largest economies can have a knock-on effect elsewhere.

Still, South Africa's formwork and scaffolding companies are facing up to the challenge with typical gusto. A highly competitive niche, well known companies such as Pre-Form, Viva Formwork & Scaffolding and Uni-Span Formwork and Scaffolding have established themselves firmly in what is perhaps Africa's most sophisticated construction industry marketplace.

Although nobody is blasé about the serious economic challenges that the country faces, South Africa's leading formwork players remain upbeat about the future.

Cape Formwork Contractors (CFC Scaffolding) said that it "remains positive" about the future of South Africa "and continues to lead in the scaffolding and formwork industry", following news of credit downgrades during the year.

And, away from the analytical offices of the big ratings firms, there is plenty of work going on, on the ground, involving both public and private financing.

Projects

Major projects underway include the construction of the giant Medupi power station, which will help to underpin base load electricity supply in South Africa for years to come. Uni-Span Formwork and Scaffolding is among the vast array of suppliers to have work on the power plant.

Once completed in 2020, the facility will be the fourth-largest coal-fired power station in the world and the largest in Africa, a mark of growing confidence in a region with arguably more long-term growth potential than any other worldwide.

And across South Africa's big cities there remain plenty of new tower blocks and other developments going up, calling on the services of local formwork suppliers.

On a smaller scale to Medupi, but important no less, PERI Formwork is finishing work on the prestigious Waters Edge high-rise residential development, overlooking the Intaka Island wetlands reserve and surrounding waterways, in Cape Town.

The eight-storey building of 144 apartments is being built by Group Five, with the PERI team delivering solutions to support the special architectural features designed by Munnik Visser Architects. Completion is scheduled for late 2017.

Other projects are keeping contractors busy in Johannesburg, Durban and elsewhere.

If there is to be a squeeze on the economy, however, local players must adapt accordingly, competing effectively for new business when it comes up.

One little developed aspect that could help to differentiate players in such a crowded market is environmental performance.

Recently CFC Scaffolding began upcycling all used site shade-cloth. "Whilst originally, we felt it would be of little use, we're lucky enough to have found charity organisations that desperately needed the material," the company announced.

A total of four truckloads of shade-cloth – used for safety and privacy purposes – were delivered to various charities to be used to create shade for animals, especially important during the Cape's hot summers.

It's a small touch, but underscores how companies can make a difference in the eyes of the community – and potentially buyers and project developers.

CFC Scaffolding also recently received an MBA award for 'scaffolding excellence' from the Master Builders and Allied Trades' Association for the Western Cape in recognition of its work in promoting safety in the local building industry.

Whatever the challenges or forecasts thrown up by the economy or the ratings agencies, South Africa's scaffolding industry is ready to do what it has always done so well – help continue to build the nation's future. ■

Blasting and explosives in mining

Efficient, and effective blasting – with the right explosives and equipment for the job – is essential to ensure a mine's profitability, Tim Guest reports.

Back in September, one of the leading blasting and explosives players in the African mining industry, BME, broke the world record for the most electronic detonators fired in a single blast. This was conducted for its client, Kansanshi Mining PLC at the Kansanshi operation in north western Zambia, (10km north of the town of Solwezi), which is 80 per cent owned by First Quantum Minerals and is the largest copper mine in Africa by copper production. BME's world-beating blast highlighted the critical place of explosives and blasting in mining; two of the most important elements in ensuring the productivity and viability of mines and mining overall.

Blasting is one of mining's most hazardous day-to-day operational activities, but it is essential to break and fracture rock in pretty much every type of mining scenario; only drilling is an appropriate alternative in some. However, when it comes to fracturing rock by blasting, a thorough understanding of the mechanics involved in breaking rock through the use of explosives is essential, and careful and accurate calculations are needed to determine the right type and amount of explosive to be used to break the particular volume of material desired. Incorrect calculations, the wrong set-up, insufficient or too much explosive, and the outcome can range from an incomplete result to too much rock being freed and damage being caused, to the geologic structure of a mine, with subsequent expensive support work required to make good such unwanted consequences as weakened rock structures.

For the BME blast conducted at the end of September in the main pit of Kansanshi Mine, (the mine has two open pits), 6,690 electronic delay detonators (EDDs) were successfully initiated, using BME's AXXIS digital initiation system. The detonation overall consumed a total of 400 tons of emulsion explosives that yielded an overall average powder factor of 0.9kg per cu m (NB: powder factor is the tons/tonnes or cubic yards/metres of rock per pound/kilogram of explosive used). BME's resulting blast moved approximately 455,000 bank cu m (BCMs) of rock. The holes drilled to take the explosive and detonators were single-primed, with a set-up that included nine different shots, 18 slave blasting boxes and one master box. According to a company spokesperson, the blasts were offset to keep the mass charge per delay to a minimum. The highest timing recorded on this blast was 6,520 milliseconds. BME's previous in-house record used 4,141 EDDs in a single blast two years ago at Kansanshi. In the latest event, a seven member crew logged and tested the blocks over a period of two days, pre-charging the shots on 20 September 2017 and completing on 28 September 2017. According to the company, 'electronic initiation is becoming increasingly popular due to the reliability, accuracy and timing-flexibility of these devices, making blasting practice more predictable and allowing for larger and more cost-effective blasts'.

AXXIS record blast for most electronic detonators fired in a single blast in conjunction with its client Kansanshi Mining PLC.

Image Credit: BME

Explosives choice

Traditional blasting, whether in open pit or underground scenarios, relied on black powder and dynamite to do the job. Today, a wider range of explosives are available and suited to different jobs. In open pit scenarios perhaps commonly used types are now the hybrid ammonium nitrate/fuel oil, known as ANFO, products, as well as emulsions – as in the BME blast mentioned above – slurries, or dry mixes. Yet, before any explosive is settled on for an application, knowledge of the geology and rock type to be broken is crucial. These include such things as the 'fracture condition' of rock, which can change as a result of previous blasting, as well as water conditions/hydrostatic pressure within a given geologic structure, temperature and product specifics of the explosives themselves, all of which can impact how effective a particular quantity and type of explosive will be.

A leading player

There are several companies involved in the development, manufacture, supply and service support for the use of explosives in mining in Africa and worldwide. AEL Mining Services, for example, operates out of South Africa with presence in East, West, Central and Southern Africa. The company is a member of the JSE-listed AECI Group in South Africa and claims to be the largest supplier of explosives technology and initiating systems in Africa, with its products and services used across the mining, quarrying and construction markets. Its surface bulk explosives are claimed to be among the best developed in the market and its eco-range has been developed to optimise surface mining through the use of recycled oils in its formulation while retaining high shock energy and stability.

The eco product variations are non-detonable and safe to handle including with bulk delivery. As eco emulsions, they incorporate used oil in the fuel phase and the non-detonable emulsion only becomes an explosive once sensitised. It is charged using a pump or a drill, depending on the ANA/emulsion ratio, and can be mixed with ANA (ANPP-Ammonium Nitrate Porous Prill), or ANFO (Ammonium Nitrate Fuel Oil) in various ratios depending on energy requirement.

The company's underground bulk explosives and its respective pumping and delivery systems being continuously developed within its R&D department where new and improved emulsion formulations, delivery systems and services are continually evolving. An example is AEL's range of products. ■

CAVEX HYDROCYCLONES BOOST RECOVERIES AT THARISA

Tharisa Minerals' platinum mining operation on the south-western limb of South Africa's Bushveld Igneous Complex has boosted its mill circuit production performance by 36 per cent by replacing its original cyclones with Cavex hydrocyclones from Weir Minerals Africa. Changing to the Cavex hydrocyclones allowed the mine to recover an additional 98 ounces of platinum group metals (PGMs) each month, giving an additional annual revenue of US$800,000 – almost R11mn.

The Tharisa mine, in production since 2009, produces metallurgical grade PGM concentrate and chemical grade chrome concentrate from a shallow open pit operation. It had been using conventional 510 mm flat-bottom cyclones fitted onto their secondary mill circuit cluster. However, according to the mine, these cyclones were cutting too coarsely, were inefficient and were experiencing a low mass split to underflow. The mine's objective was to allow the secondary mill circuit to improve mass pull to the underflow and produce a much finer cyclone overflow material reporting to downstream flotation and spiral circuit. By providing a finer feed material to

Image Credit: Weir Minerals Africa

Five Cavex 500CVX hydrocyclones prior to being retrofitted at the customer site.

flotation and the spiral circuits, PGM and chrome recovery increases significantly.

In an initial trial, Tharisa mine installed a single Cavex 500CVX hydrocyclone on site, retrofitting the unit onto the existing competitor cyclone cluster. It then conducted a sample analysis, comparing the performance of the Cavex hydrocyclone to that of the competitor cyclone. The data from this trial confirmed that the Cavex unit outperformed the incumbent competitor's cyclone.

Once the results of the first trial were made available, the competitor was offered another trial opportunity to make adjustments that would improve its equipment's performance. To do this, it modified one of its on-site cyclones by installing an angled conventional cone section onto the flat-bottom cyclone, intending to sharpen the cut point and improve efficiency.

In a second sampling campaign undertaken by the mine, the performance of the Cavex 500CVX hydrocyclone was compared with the competitor's original cyclones and its newly modified cyclones. The Cavex unit again outperformed both competitor cyclone models, showing a significantly reduced level of +75 micron material reporting to the overflow. This result highlighted the benefits of the 360-degree laminar spiral inlet.

As a result of the tests, Tharisa Minerals removed the installed competitor cyclones on its secondary mill 13 way cluster and replaced these with Cavex hydrocyclones. This has contributed to the mine's vision of being a low cost producer with resources on the Bushveld complex.

WIRTGEN'S NEW W 210 XP LARGE MILLING MACHINE IS VERSATILE PERFORMER

Image Credit: Wirtgen

The W 210 XP can handle a range of applications from pavement removal to fine milling jobs.

Wirtgen has extended its comprehensive product range with the launch of the W 210 XP, a new high-performance machine. The W 210 XP's powerful 6-cylinder engine delivers an output of 571 kW, allowing the milling pro to handle a wide range of applications, from surface course rehabilitation to pavement removal and fine milling jobs. It comes equipped with a 2m milling drum unit as a standard feature.

Units with milling widths of 1.5m and 2.2m are also available.

The 2m and the 2.2m milling drum units are FCS Light-compatible and are fitted with Wirtgen's HT22 quick-change toolholder system. The robust upper part of the system can be easily changed directly on site. This minimises machine downtimes and increases the lifespan of the milling drum. HT22 is a versatile solution for maximum milling performance and cost-efficient operation.

Thanks to its compact dimensions and optimum machine transport weight, the W 210 XP can be easily transported from one job site to the next. As a result, the milling machine can be up and running in no time. Without the water tank content of approximately 29 tons, the transport weight is low, so that the machine can be transported on a light low-bed truck with a low gross train weight. Customers are more flexible as a result, and can get their large milling machine to its next job at a fraction of the cost.

The ergonomically designed walk-through W 210 XP operator's platform is a further advantage. The control elements are ideally arranged to provide a clear overview and make operation child's play for the machine operator. Most functions can be controlled by the multi-functional joystick mounted in the armrest. In this way, the operating concept of the new W 210 XP, devised by the Wirtgen designers allows high daily production rates.

Advertiser's Index

DE BEERS INVESTS IN EDUCATIONAL INFRASTRUCTURE DEVELOPMENT

De Beers Consolidated Mines (DBCM) has partnered with the Free State Department of Education, and Kagiso Shanduka Trust (KST) to unveil two educational infrastructural projects: a media centre and a revamped primary school in the farming town of Viljoenskroon.

The company funded the construction of the media centre at Ntsoanatsatsi Primary and the provision of books and resources such as computers and furniture, including a library and a librarian and curriculum-related training and refurbished classrooms and paved the school grounds at Mahlabateng Primary.

DBCM fully supports the Department of Education's national agenda to provide basic education to South African and continues to invest in a number of educational programmes and educational infrastructure projects across the country. In 2016, DBCM spent R5.1 million and R1.9 million year-to-date in supporting educational projects in the Free State. The company spent a total of R27.6 million on 30 educational projects across all its operations last year.

Speaking at the handover, CEO of De Beers Consolidated Mines (DBCM), Phillip Barton, said, "At De Beers we are passionate about our communities, and we pride ourselves in forging strategic partnerships that significantly contribute to the socio-economic development of our country. "In partnership with KST, we have made significant and lasting contributions in the Free State through implementing infrastructure projects in schools. The opening of this media centre is the beginning of an exciting new era for the young learners of Ntsoanatsatsi Primary. As a company, we are privileged to play a role in shaping these young lives and ultimately contributing to the future leaders, professional and citizens of Free State."

MEC of Education, Tate Makgoe thanked De Beers and KST for supporting the development of the Free State education system. He said, "This media centre is not only a building, it represents educational empowerment for this generation of learners. It is initiatives like this one that will contribute and mould future leaders on the Free State. "DBCM has partnered with KST and other organisations in the District Whole School Development Programme.

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Boosting Africa's economic growth through infrastructure investment

Jurie Swart, chief executive officer at African Infrastructure Investment Managers (AIIM), looks at how the private sector can, and should, contribute to African development through further infrastructure investment.

Anyone who has lived and travelled around sub-Saharan Africa is familiar with the inevitable traffic jams and pot-holed roads, the water rationing, the power outages and power surges that blow your white goods. Infrastructure is Africa's most urgent developmental necessity because nothing holds back economic growth more than a shortage of power or inadequate transport links and facilities. Around US$100bn needs to be invested annually over the next 10 years to meet the continent's infrastructure requirements, and yet less than half of this is being spent. By addressing the infrastructure finance shortfall, the African Development Bank estimates that up to four per cent per annum could be added to Africa's GDP growth rates. Infrastructure remains a significant opportunity for investment across the continent, particularly in power, energy and transport, and the private sector has a central role in providing essential financing. So far, of the US$16.5bn raised by private equity funds for investment in Africa between 2011 and 2016, US$10.6bn is already being channelled towards infrastructure, according to research by the African Private Equity and Venture Capital Association.

Over the past 20 years, private sector funding of power projects in sub-Saharan Africa has almost doubled every five years. Aside from Chinese investment, independent power producers (IPPs) represent the fastest growing source of financing within the power sector in Africa. Côte d'Ivoire's Ciprel power plant was sub-Saharan Africa's first IPP in 1994, and more than 120 have followed. AIIM has been a part of this growth through investments in 17 renewable energy projects under the South African REIPPP programme, the Azura-Edo natural gas power project in Nigeria – the country's first fully privately financed IPP, Gigawatt in Mozambique, Ghana's Cenpower, and Albatros Energy Mali – the first IPP to feed into the country's national grid. There is undoubtedly been considerable progress in the energy sector over the last 20 years, and opportunities still abound, particularly in jurisdictions such as Benin and Burkina Faso which may have hitherto been overlooked.

Transport, in particular roads and ports, is another major opportunity for investment. Having the capacity to improve regional trade and facilitate entrepreneurship, reducing the cost and increasing the supply of products and services is critical to Africa's development. The road access rate in Africa is well below global norms and high transportation costs can add up to 75 per cent to the price of goods.

We are at last seeing a strong deal pipeline for projects in roads and ports though the sector outside of South Africa has been somewhat overlooked by the private sector so far. That said,

> "African markets continue to show strong signs of developing maturity"


Image Credit: AIIM

Jurie Swart, chief executive officer at AIIM.

a number of transport projects are now coming to fruition, with Kenya, Uganda and some of the Francophone countries concluding toll road programmes for example, in what looks to be very well considered and advised processes. Meanwhile, there is a considerable opportunity to aggregate smaller bulk handling and container terminals in what is still a fragmented sector, and our recent acquisition of the DSM Corridor Group in Tanzania was AIIM's entry point to develop a pan-African port platform.

Where investments are well structured and managed, they can offer attractive risk-adjusted returns while making a transformative, and sustainable difference to millions of people's lives. Currency risk, political risk and rule of law, and the exit environment are some of the risk factors most commonly cited by international limited partners, but these are often overstated by investors unfamiliar with the environment and many of the risks can be mitigated by partnering with a local investment manager with a solid track record on the continent.

African markets continue to show strong signs of developing maturity and increasing sophistication. The continent's aggregate growth has also been showing signs of rebounding, with projections of 3.2 per cent growth in 2018 and 3.5 per cent in 2019 for sub-Saharan Africa and remains the second fastest growing region globally.

The good news is that infrastructure investments are starting to be an essential component of many institutional investor portfolios, and there has been a significant increase in fundraising for infrastructure funds since 2012. According to the Southern Africa Venture Capital and Private Equity Association, more than US$1bn has been raised for African Infrastructure projects so far this year. While international investors are looking to new markets, trustees and investment funds need to recognise not only the risks but also the opportunities and rewards that alternative investments such as long term infrastructure can provide. More institutional investors need to understand how Africa's infrastructure opportunities can fit into their investment strategies, as they offer predictable and reliable returns so long as deals are structured and managed well.

As policy frameworks and procurement procedures improve across Africa, and the track record for private infrastructure projects develops, previous barriers to investment are steadily being removed. This will all serve to unlock the additional capital required to make a meaningful contribution to the continent's infrastructure requirements and in so doing, boost economic development. ■