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# African Review

AUGUST 2017

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Tor Langoy, managing director of BD Globe Capital

“One of the things African countries have in common is liquidity issues”

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**Chairman:** Derek Fordham

**Printed by:** Buxton Press

**Printed in:** July 2017

**ISSN:** 0954 6782

# Editor's Note

Welcome to our special Annual Construction & Mining Buyers' Guide. We hope you enjoy reading our construction issue, featuring updates on developments and projects. In our cover story (on page 36), there is exciting news about 'The Pinnacle' in Nairobi, Kenya, Africa's tallest skyscraper, being scheduled for completion in 2019. We then look at long-established construction firms and how they are supporting countless projects across Africa on pages 40 and 41.

Elsewhere in the issue, DNA-coded liquid technology could provide the answer for businesses to protect their assets after the shocking news that more than 50 per cent of all business theft happens internally.

Finally, it is over a month until IFAT Africa 2017 takes place at the Johannesburg Expo Centre from September 12 to 14. It is an important platform to discuss solutions to the current water crisis affecting Southern Africa. See preview on page 11.

**Samantha Payne, Editor**

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## EU Commission approves €100mn loan in assistance to Tunisia

The European Commission has approved the disbursement of a €100mn loan to Tunisia.

This represents the third and last tranche of the €300mn Macro-Financial Assistance (MFA-I) programme to Tunisia, adopted in May 2014.

The MFA-I programme is part of the EU's comprehensive efforts to help Tunisia respond to the severe economic difficulties it is facing and the persistent political instability in the region.

The operation has supported Tunisia's process of economic recovery by providing concessional funding, and by encouraging the implementation of a number of important policy measures agreed in a Memorandum of Understanding between the EU and Tunisia.

Pierre Moscovici, commissioner for economic and financial affairs, taxation and customs, said, "This disbursement, on the back of agreement on a new programme, reaffirms the EU's continued commitment to support Tunisia in its efforts to further its economic and political transition. Notwithstanding an unstable regional context, Tunisia has demonstrated its determination to consolidate a fully-fledged democratic system, and to achieve prosperity for all its citizens. The EU firmly stands with Tunisia and its people."

This first macro-financial assistance operation to Tunisia will be followed by a second MFA programme (MFA-II) in the amount of €500mn loans. The new operation was proposed following the terrorist attacks of 2015, which contributed to halting Tunisia's economic recovery. This had a significant impact on the country's balance of payments position and financing needs. The programme was agreed by the Council and the European Parliament on 6 July 2016.

The disbursement of MFA-II funds will be tied to the implementation of policy conditions mutually agreed upon. The Memorandum of Understanding was signed in Brussels in April 2017. The pending ratification of the memorandum by the Tunisian Parliament will pave the way for disbursement under the second operation. The EU's strategy of assistance to Tunisia includes budget support programmes under the European Neighbourhood Instrument (ENI), of which Tunisia is a major recipient.



Tunisia's economy was affected following the terrorist attacks of 2015. (Source: Shutterstock)

## IOM REHABILITATES WATER WELLS IN SOUTHERN LIBYA

The International Organization for Migration has completed the rehabilitation of 18 water wells in the Libyan city of Sabha.

The project, part of IOM's Community Stabilisation programme "Together We Rebuild," included the provision of new electrical pumps for wells to allow the restoration of a domestic water supply. The implementation of this project comes at a critical time when Sabha has been suffering from an on-going water crisis.

Bettina Muscheidt, the EU Ambassador for Libya, explained the EU supports Libyan efforts to end the current crisis through a political solution. "Libya's people cannot wait. Families across the country are in dire need of services. They want a return to normality. This is where this partnership between the Water and Waste Water Company in Sabha, the IOM and the EU can make a difference to improve lives and alleviate the suffering in an area where many different communities have been affected by the conflict." The need for the rehabilitated water wells came following community meetings conducted by the Community Management Committee (CMC), made up of IOM representatives and influential tribesmen.

Mohammad Aboul-Qassem Yaqqa, the head of works and maintenance department at the Water and Waste Water Company, said, "We appreciate the support of the EU and the efforts made by IOM in rehabilitating 18 water wells in Sabha city, which has been suffering from serious shortage in water supplies. It comes at a critical time when the Water and Waste Water Company is in need of such support to help us maintain this essential service to the people of the city."

Badad Ganaso Abdul Jaleel, Libya's minister of local government, said, "We are confident the people of Sabha and the South need these important projects."

## EGYPT ADOPTS RIVER BANK NATURAL FILTRATION TECHNOLOGY TO DELIVER DRINKING WATER AT LOW COST

Egypt continues making every effort to improve the living conditions of its citizens in line with the National Vision of Egyptian Development 2030.

Dr. Mostafa Medbouli, minister of housing, utilities and urban communities, and Dr. Hisham Al-Sherif - minister of local development inaugurated the national conference "River Bank Filtration (RBF) for Drinking Water Supply in Egypt".

The conference was organised by the United Nations Human Settlements Programme in cooperation with the Holding Company for Drinking Water and Sanitation, and was attended by the Eng. Mamdouh Raslan, chairman of the Holding Company for Water and Wastewater, and Mrs. Rania Hedeya, programme manager of the United Nations Office of Human Settlements Egypt office.

## ► BRIEFS

### Egypt investment bank gets brokerage licence



EFG-Hermes will focus on foreign investors. (Source: Shutterstock)

Egypt-based investment bank EFG-Hermes has been licensed to operate a stockbroker unit in Kenya with plans for an investment bank permit, targeting institutional and high net-worth investors from the Middle East. "We will focus on foreign institutional investors, domestic institutional and high net worth investors. We will look to work with strategic and corporate investors, especially from the Middle East who are looking to acquire assets in East Africa," said EFG Hermes in a statement to Daily Nation.

### Chinese company to build skyscraper in Rabat



One of Africa's tallest skyscrapers will be built in Rabat city. (Source: Shutterstock)

A Chinese firm has signed a deal with Moroccan companies to build one of the tallest skyscrapers in Africa in Rabat, the capital of Morocco, local media reported. The deal was signed by the China Railway Construction Corporation, Morocco's BMCE Bank of Africa and Travaux Generaux de Construction de Casablanca, Morocco's leading construction company, le360.ma news site said. The 250m high tower will form part of a large-scale project in Rabat.

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## Afreximbank announces 2016 results at 24th Annual General Meeting

At the 24th Annual General Meeting of the African Export-Import Bank (Afreximbank), President Paul Kagame of Rwanda announced that the economic challenges Africa faces should lead to nations in the continent to increase trade among themselves.

“These factors should not just remain objects of reference,” he told delegates who were in attendance. “Instead, they should drive us to urgently increase trade with each other, invest more within our countries and regions, and build joint infrastructure, in order to better facilitate the movement of people and goods within Africa.”

According to President Kagame African governments and the private sector need to explore a number of avenues offered by Afreximbank, explaining that, for the last two decades, the Bank had been raising money, financing strategic projects and has supported Africa’s pursuit of prosperity and independence.

President Dr Benedict Oramah had highlighted earlier, in his report to the AGM Bank, that the institution’s cumulative facility approvals had reached US\$50bn, due to record approvals of US\$10 bn in 2016, and that the Bank’s total assets reached US\$12bn in 2016, rising by 64 per cent from the previous year. “Loans growth quickened by about 65 per cent to reach US\$10bn and constituted 87 per cent of total assets. Net income rose strongly by 32 per cent from US\$125mn in 2015 to \$165mn in 2016 on sharply rising interest income, which increased by 30 per cent, from US\$372mn to US\$484mn. New equity injections and internal capital generation raised shareholders’ funds by 28 per cent to end 2016 at \$1.63bn,” stated the president.

Following the last AGM, Sao Tome and Principe, Djibouti, Burundi, South Sudan and Madagascar had joined forces with the Bank as participating states, with the total of participating states and shareholder countries reaching 45. Togo, Econet Global, Locafrique of Senegal, Atlantic Financial Group, and MBCA Bank Limited of Zimbabwe also became new shareholders in the equity of the Bank.



President of Rwanda, Paul Kagame. (Source: ITU/J.Ohler/Wikimedia)

## MASTERCARD TO HELP KENYA’S DIGITAL PAYMENTS SOLUTIONS

The Diamond Trust Bank (DTB) and Mastercard have entered into partnership to develop DTB Masterpass QR app for the country. Under the partnership programme, the users of the DTB mobile banking platform will be able to pay for in-store purchases by scanning a QR code displayed at checkout on their smartphones, or by entering a merchant identifier into their feature phones.

Mastercard said that the consumers did not need to carry cash or bank cards with them, adding that the mobile-based app will enable a convenient and fast digital payment from anywhere and anytime.

Chris Bwakira, vice president and area business head of Mastercard East Africa, said that the partnership aims to deliver an efficient, secure and cost-effective payment solution for the micro and small merchants in the country to help grow and develop business.

“According to Kenya’s Micro and Small Enterprises Authority, almost 80 per cent of the country’s critical jobs are created by these small enterprises, therefore it is critical that we introduce relevant solutions that address specific challenges,” he added.

“The mobile solution will not only eliminate the merchants’ reliance on costly point of sale devices, it also will remove the logistical issues of handling cash on daily sales,” said Nasim Devji, group CEO and managing director at DTB.

The partnership is a part of the Mastercard’s commitment to impact more than 1,50,000 micro, small and medium enterprises (MSMEs) in Kenya in 2017, as well as supports its global goal of connecting 40mn micro and small merchants, helping them to move beyond cash by the end of 2020.

Recently, Mastercard partnered with Kenya’s merchant service provider Kopo Kopo, to roll out Masterpass QR across 11 markets in the Sub-Saharan Africa.

## ETHIOPIA TO SET UP PHARMACEUTICAL INDUSTRIAL PARK

With the aim to transform the Ethiopian health sector, a pharmaceutical industrial park is under construction in Addis Ababa by the Chinese contractor Tiesiju Civil Engineering (CTCE) group.

The plan for the industrial park comes in line with Ethiopia’s pharmaceutical manufacturing development strategy. The park is expected to be completed in eight months.

In a statement to the The Ethiopian Herald, Getahun Agegnehu, project contractor representative, said that the park will be built with all modern infrastructural facilities including the waste treatment plant.

“The park will be a well-serviced pharmaceutical investment hub,” he reinforced.

Adinna Berie, pharmaceutical fund and supply agency public relations head, said the park, after completion, would cut the growing national expenditure for medicine import from the neighbouring countries.

## ► BRIEFS

### Kenya needs to prepare for Brexit fallout



Kenya needs to prepare for Brexit trade deals. (Source: Shutterstock)

The impact of Brexit could hit the Kenyan economy as Britain begins renegotiating more than 100 trade deals.

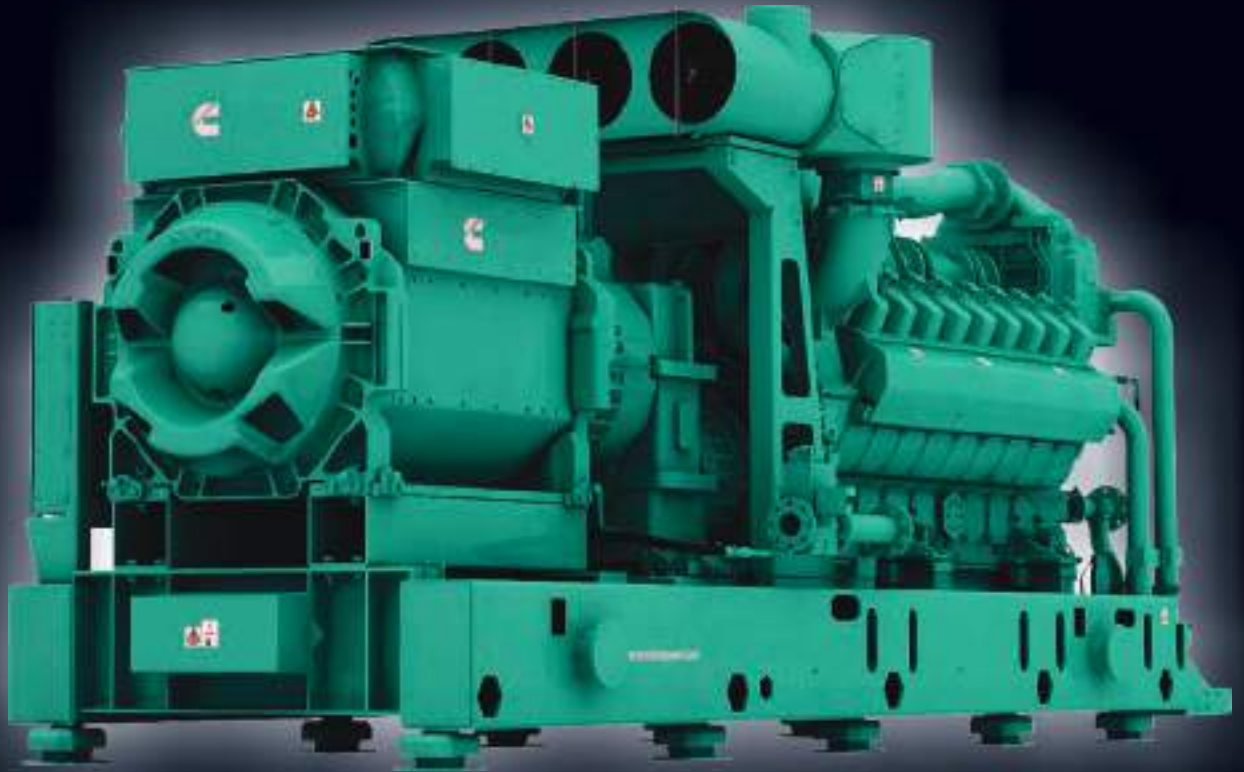
According to the Kenya Institute for Public Policy Research and Analysis, Brexit will hit exports and donor funds for projects. “As Britain realigns its engagement with trading partners, Kenya and EAC need to prepare effectively to engage Britain for mutually beneficial trade relations,” Kippra stated in the Kenya Economic Report 2017.

### Somalia sees Internet and data services restored



Somalia’s Internet services have been fully restored. (Source: HomoCosmos/shutterstock)

Somalia’s Internet and data services have been successfully restored after three weeks of considerable economic damage to many sectors of the Somali economy including commerce, education, healthcare and the delivery of government services. The ministry has promised to work with all public and private stakeholders to ensure this issue does not arise again, putting a number of measures in places. The ministry has thanked the Somali people during this time.



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## Sparrows Group and SPIE Oil & Gas win crane maintenance contract

Total E&P Congo has awarded Sparrows Group and SPIE Oil & Gas Services the crane maintenance contract on the Moho Nord development.

It is the first joint delivery project for the two companies, who agreed a partnership last year with an initial view to developing a collective service offering throughout Africa before expanding the scope globally.

The scope of the agreement covers maintenance, inspection and testing services on five pedestal cranes on the development's Likouf Floating Production Unit (FPU) and Tension Leg Platform (TLP) over three years.

Commencing in Q3 2017, the project will be managed locally by SPIE, with expert specialist technical personnel delivered by Sparrows.

Stewart Mitchell, chief executive officer at Sparrows, said, "We have operated successfully in West Africa for several years, however this is the first significant contract we have secured in the Congo.

Being able to grow our footprint into new areas was key to us choosing to partner with SPIE to deliver a service that provides clients with the highest standards in crane operations and maintenance."

The contract involves the review of existing plans before the firms take on full maintenance responsibility. This includes inspection and testing of all cranes, with corrective maintenance and spare parts supplied where required.

The cranes supplied for the Moho Nord development TLP were manufactured by Sparrows at their US manufacturing facility.

Richard Masson, general manager at SPIE Oil & Gas Services said, "Our partnership with Sparrows enables us to provide the highest standards in safety and operational reliability on all crane operations and maintenance work. Being able to partner with a world-class specialist service company provides demonstrable benefits to operators in maximising the operations and working life of their assets."



Sparrows Group has operated in West Africa for several years. Source: Sparrows Group

### GE PARTNERSHIP FOR SKILLS DEVELOPMENT

GE has announced a skill development partnership programme involving its GE Lagos Garage, the Lagos State Ministry of Wealth Creation and Employment and the Lagos State Technical and Vocational Education Board (LASTVEB) aimed at developing the skills of students in advanced manufacturing. The programme involved 20 final year students and five instructors from the five Government Technical Colleges in the State taking part in an intensive one-week training, during which they were exposed to cutting-edge technology, with an emphasis on additive manufacturing, 3-D printing, CAD designing, rapid prototype development, basic subtractive manufacturing using CNC mills to demonstrate mould making; and basic business knowledge. Patricia Obozuwa, director, Communications & Public Affairs, GE Africa, said, "We believe that partnerships such as this are necessary if we are to overcome Africa's economic challenges."

### FMO AND EAIF REFINANCE UGANDA POWER PLANT

The Emerging Africa Infrastructure Fund (EAIF) and FMO, the Dutch development bank, are jointly lending US\$29.3mn of senior debt with a 12-year term to refinance the 13MW Bugoye hydro-electric power plant in Western Uganda. The plant, which has 98 per cent availability, feeds power into Uganda's national grid. Financial close is expected around mid-August.

EAIF and FMO have supported a number of Ugandan renewable energy projects in hydro- and solar power over the past 10 years, which will account for up to 39 per cent of Uganda's installed generating capacity.

Proceeds from the refinancing will be used to repay EAIF the balance of its original loan to the project, fund repair works, and repay construction loans made by the project, the Africa Renewable Energy Fund (AREF), managed by Berkeley Energy. AREF is to use the refinancing proceeds to invest in other greenfield hydro-electric plants in Uganda.

EAIF, a member of the Private Infrastructure Development Group (PIDG) to which seven governments and the World Bank currently contribute funds, is the mandated lead arranger of the Bugoye refinancing, with the EAIF and FMO each contributing 50 per cent of the US\$29.3mn facility.

"In refinancing Bugoye, EAIF and FMO are freeing up capital that AREF will use to develop greenfield renewable power stations," said Nazmeera Moola, head of EAIF at IAM. "That will add to Uganda's economic potential by increasing the country's generation capacity, and creating new jobs in construction and plant operation."

Nicholas Tatrallyay, investment manager at Berkeley Energy said, "The Bugoye refinancing is one of the first refinancings for small hydro projects on the continent and is an important milestone for Uganda's renewable energy sector."

### ► BRIEFS

#### Proparco signs deal with Ecobank

Proparco, the private sector financing subsidiary of Agence Française de Développement (AFD), has signed a US\$50mn trade finance guarantee agreement with pan-African banking group Ecobank.

The guarantee package will support the trade operations of four of Ecobank's subsidiaries in West Africa - Burkina Faso, Côte d'Ivoire, Guinea and Mali - with EBI SA, the group's France-based subsidiary, thus helping to boost trade between African and European companies.

Charles Daboiko, CEO of Ecobank Côte d'Ivoire, said that the financing will enable the group to expand its range of activities, adding that the deal forms part of a long-standing partnership between the two parties.

#### HVAC & R Engineering wins Africa projects

Aberdeen-based HVAC & R Engineering, part of the Nucore Group, has recently won a number of significant projects in Africa, including a US\$3.9mn project in West Africa which encompasses the design, build, supply and installation of heating, ventilation, air conditioning units for several offshore installations. The project has involved extensive site surveys to plan and prepare for the removal and installation of 26 HVAC units on the installations. Engineering and manufacturing of the first unit has been completed and is due for installation in July, with completion and installation of the remaining units due throughout the remainder of this year and into 2018.

Other projects won include the design, manufacture and supply of ATEX compliant (Zone 2) air conditioning and condensing units on-board FPSO's for OPS Angola.



SERIES 2017



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Up next... Bobcat 'Tough Jobs'

## Zimbabwean gold mine records rise in production

Production at Blanket Gold Mine has recorded an increase of more than eight per cent during the first half of this year despite some teething infrastructure challenges, the management has revealed.

The mine, owned by Canadian Caledonia Mining Corporation, produced 12,522 ounces of gold during the second quarter ended June 30, bringing this half year total production figure to 25,316.

Caledonia chief executive Steve Curtis expressed confidence the mine would meet its revised 2017 full year production estimates ranging between 52,000 ounces and 57,000 ounces and long-term annual target of 80,000 ounces by 2021.

"Notwithstanding the 8.5 per cent increase in production in the first six months of 2017 compared to the first six months of 2016, the second quarter of 2017 presented some operating challenges at Blanket," said Curtis.

In the first quarter of this year, the mine had reported an 18 per cent increase in production attributed to increased tonnes milled and higher grade and improved recoveries.

In the second quarter, Caledonia had cut its production target to between 52,000 ounces and 57,000 ounces from 60,000 ounces in a bid to safeguard the long-term production target of 80,000 ounces in 2021 by prioritising capital development tonnage over ore production tonnage.



Blanket Gold Mine has seen a rise of 8.5 per cent in production. (Photo: Mark Agnor/Shutterstock)

## SACAU YOUNG AGRIPRENEURS FORUM GETS HANDS-ON TRAINING AT AGCO FUTURE FARM

AGCO, a worldwide manufacturer and distributor of agricultural equipment and solutions, welcomed delegates from 11 countries attending the Southern African Confederation of Agricultural Unions' (SACAU) Young Agripreneurs Forum to its Future Farm in Zambia for an in-depth three-day programme covering farm mechanisation and the business of agriculture.

SACAU is committed to a transformative agenda for agricultural development which is growth-oriented and enterprise-development focused. A key emphasis is working with young farmers and, since 2014, SACAU has run an annual regional young farmers' forum. The aim of the forums is to create a positive image for agriculture among the next generation and develop role models from within the sector.

At the AGCO future farm the young agripreneurs spent time in the classroom, workshop and on the farm. Among the topics covered were the role of mechanisation in primary production, how technology is changing the face of farming and business and entrepreneurship skills.

Delegates were able to get familiar with AGCO's leading brands of agricultural machinery including Challenger, Fendt, Massey and Valtra, together with the Company's products and services aimed specifically at supporting African agriculture. A highlight was practical, hands-on experience with the range of Massey Ferguson equipment which includes tractors, harvesting machinery, hay and forage tools, implements and materials handlers.

"We were delighted to host the Youth Forum at our AGCO Future Farm," said Nuradin Osman, vice president and general manager Africa at AGCO.

## NAMIBIAN GOVERNMENT TO SUBSIDISE ELECTRICITY

The Namibian government has launched the National Electricity Support Tariff (Nest) in an initiative to make electricity more affordable to low-income households. The pilot project was launched at Oshakati, with Oshakati Premier Electric (OPE) as the local implementing agent.

The full implementation of the project is expected to start at Oshakati on 1 August. The Ministry of Mines and Energy and the Electricity Control Board (ECB) will validate the benefits before the project is rolled out nationally next year.

Nest is meant for domestic electricity consumption only and will provide financial relief to low-income consumers who consume 15 amps and less. Under Nest, customers can pay a subsidised rate of US\$0.09 per unit for the first 50 units, instead of the normal rate of US\$2.06 per unit, and US\$0.12 per unit when buying 51 to 200 units.

The pilot project is expected to benefit at least 2,500 people in Oshakati.

Electricity tariffs in Namibia have more than tripled over the past 10 years, placing a heavy burden on low-income earners and less affluent households. The major cause for the increasing cost of electricity in Namibia is attributed to the steadily rising cost of generation, transmission and distribution.

## BRIEFS

### Zimbabwe to build regional power line



The new power line will establish Zimbabwe as a regional power hub. (Photo: zhengzaishuru/Shutterstock)

The Zimbabwe Electricity Transmission and Distribution Company (ZETDC) has announced plans to construct a 1,000km regional power line next year in partnership with Mozambique and South Africa.

ZETDC systems development manager engineer Ikhupuleng Dube said the establishment of the power line would result in the construction of a mega power station in Triangle, that would distribute power to the region.

### Hulisani invests US\$6.4mn in South African wind industry



The acquisition is Hulisani's third this year, following the Kouga Wind Farm and the Rustmo solar photovoltaic farm. (Photo: XXLPhoto/Shutterstock)

Sustainable energy investment firm Hulisani, has signed a US\$6.4mn deal with wind tower producer GRI Wind Steel South Africa. The company stated that they have provided preference share funding to Pele Green Energy (PGE) wholly owned subsidiary Pele SPV 198 to enable PGE to indirectly acquire 12.5 per cent of GRI, Engineering News reported. This deal is seen as part of Hulisani's strategy to acquire and invest in a diverse range of energy-producing assets with the potential for growth.

## Upcoming Events Calendar 2017

### AUGUST

21 - 22

#### INFRASTRUCTURE AFRICA

Johannesburg, South Africa  
www.infrastructure-africa.com

22 - 24

#### CALL CENTRE CONFERENCE AFRICA

Nairobi, Kenya  
www.callcentreafrika.iqpc.ae

24 - 25

#### AFRICA PROPERTY SUMMIT 2017

Johannesburg, South Africa  
www.apisummit.co.za

30 - 1 Sept

#### MINESAFE

Johannesburg, South Africa  
www.minesafe.co.za

### SEPTEMBER

2 - 6

#### INTERNATIONAL HEAVY HAUL EXPO

Cape Town, South Africa  
www.ihha2017.co.za

5 - 6

#### AFRICAN PORTS EVOLUTION

Accra, Ghana  
www.west.portsevolution.com

5 - 7

#### POWER NIGERIA 2017

Lagos, Nigeria  
www.power-nigeria.com

13 - 14

#### FUTURE ENERGY UGANDA

Kampala, Uganda  
www.future-energy-uganda.com

15 - 17

#### KENYA TRADE SHOW

Nairobi, Kenya  
www.growexh.com

26 - 28

#### KENYA MANUFACTURING & EQUIPMENT

Nairobi, Kenya  
www.kenyamachineryexpo.com

### OCTOBER

3 - 7

#### ARCHIBAT 2017

Abidjan, Côte d'Ivoire  
www.africa-conference.com

4 - 5

#### AFRICAN RAIL EVOLUTION

Durban, South Africa  
www.rail-evolution.com

10 - 12

#### AFRICA HOTEL INVESTMENT FORUM

Kigali, Rwanda  
www.africa-conference.com

## Positive signs for IFAT Africa 2017

Just more than a month to go before IFAT Africa 2017 – one of the leading environmental technology trade fairs in Africa.

Some 140 exhibitors are expected to take part in the fair at the Johannesburg Expo Centre from September 12 to 14, focusing on water, sewage, refuse and recycling.

One of the major themes of the fair will be looking at the knock-on effects of drought that has affected Southern Africa.

“The current water crisis is one of the most serious environmental problems facing Southern Africa,” said Stefan Rummel, managing director of Messe München. “With IFAT Africa, we offer a platform for discussing solutions to these problems and presenting the relevant technologies.”

The South African Department of Water and Sanitation has identified 2.7 trillion Rand (more than 178bn) worth of projects to be carried out between now and 2035. The majority of the projects will focus on greater use of surface water, which is already under considerable pressure. This will require new dams, pumping stations, pipelines and treatment facilities.

Companies to attend IFAT Africa 2017 include local and international key players, such as Averda, Bovu Fluid Holdings, C.R.I. Pumps S.A., Endress+Hauser, Grundfos, KSB Pumps & Valves, Memcon, NETZSCH Southern Africa, Ritz Pumps



IFAT Africa 2017 provides a platform to solve the water crisis. (Source: Shutterstock)

South Africa, Skip Truck Traders, Tecroever, Wamechsi Group and Wilo Pumps S.A.

Graham Hartlett, commercial director at WEC Projects, is looking forward to this year's trade fair attendance. He said, “IFAT Africa allows us the opportunity to showcase our unique solutions and exclusive technologies for our clients in the water and sewage treatment sector. It is a fantastic platform for meaningful interactions with our clients.”

Philipp Past, sales manager at GLS Tanks

International, will be present at IFAT Africa for the first time: “We regularly exhibit at the parent trade fair in Munich and now want to explore the African market. IFAT Africa is the ideal platform to achieve this. The IFAT brand stands for innovation, professionalism and promising business contacts.”

Messe München organises IFAT Africa and runs more than 50 of its own trade shows for capital goods, consumer goods and new technologies.

## 27 MILLION TANZANIANS NOW HAVE ACCESS TO IMPROVED WATER SERVICES

One in two people in Tanzania has access to basic water services, according to a new report released by the World Health Organisation (WHO) and UNICEF.

According to the WHO report, 27mn Tanzanians have access to basic water services. But progress on sanitation and hygiene has declined, as 63 per cent of Tanzanians still have no access to improved sanitation.

The Joint Monitoring Programme report, *Progress on Drinking Water, Sanitation and Hygiene: 2017 Update and Sustainable Development Goal (SDG) Baselines*, presents the first global assessment of “safely managed” drinking water and sanitation services. Globally, the report shows that billions of people have gained access to basic drinking water and sanitation services since 2000, but these services do not necessarily provide safe water and sanitation. Many homes, healthcare facilities and schools still lack soap and water for handwashing. This puts the health of all people, especially young children, at risk of disease.



According to the WHO report, 27mn Tanzanians have access to basic water services. (Source: Shutterstock)

## ALIBABA LAUNCHES AFRICAN YOUNG ENTREPRENEURS FUND

Alibaba founder and executive chairman Jack Ma announced the creation of a US\$10mn African Young Entrepreneurs Fund, during the Youth Connct Africa Summit co-hosted by UNCTAD and the government of Rwanda.

“I want that fund supporting African online businesses,” said Ma, who is special adviser to UNCTAD for Youth Entrepreneurship and Small Business, adding that he was poised to hire staff for the fund, to begin operations this year.

Ma said that he would also work with UNCTAD to help bring 200 budding African businessmen to

China to learn from Alibaba.

“I want them to go to China, meeting our people, seeing all the things we have been doing, all the great ideas China has,” he said. Alibaba is one of China’s biggest internet companies.



Jack Ma, founder of Alibaba, one of China’s biggest internet companies, supports young African entrepreneurs. (Source: Trond Vikem, NFD/Flickr)

## PLANET EARTH INSTITUTE LAUNCHES THE PEI EXCHANGE

Planet Earth Institute has launched the PEI exChange – the first online platform for African development.

The new website aims to connect all people working in and passionate about Africa. Based on user-identified criteria, including countries and regions of focus, industries, skills and experience, the PEI exChange provides personalised matches to help users make their ‘Big Ideas for Africa’ happen. These could include charitable projects, a new technology, a business plan, an academic collaboration or more.

The Rt Hon Lord Paul Boateng, PEI Chairman and Trustee, said, “The latest digital technologies are a powerful way of fostering collaboration among the many talented individuals working to further sustainable and inclusive development in Africa. As such, I believe that the PEI exChange will be an invaluable resource and community for people who are passionate about the continent. This online matching platform and project portal has the potential to revolutionise the way people do business and good in Africa.”

## AFRICAN CONSUMER PRODUCTS INDUSTRY RIDES OUT UNCERTAINTY

Africa’s consumer products industry is demonstrating a resilient and positive growth path when viewed in local reporting currencies,

according to Deloitte’s latest report.

The *African Powers of Consumer Products* report shows that the top 50 African listed Consumer Product (CP) companies are concentrated in 15 countries, with South Africa, Egypt, Nigeria and Morocco accounting for 64 per cent of the companies, with just above 80 per cent of their total revenues. This concentration reflects the size of their respective economies, their level of development and economic diversification, but also the low degree of capital market development in other African countries. On average, the year-on-year revenues of the top 50 declined by 7.5 per cent in US dollars and grew by 4.7 per cent in local reporting currencies.

“Although African economies have seen their currencies depreciate sharply against the US dollar, making imported goods more expensive, companies which produce goods locally and are able to ramp up facilities have an opportunity to grow their market share,” said Andre Dennis, Deloitte Africa consumer products leader.

## NEW INSECTICIDE-TREATED MOSQUITO NET TO FIGHT AGAINST MALARIA

BASF has introduced a new class of insecticide-treated mosquito nets to prevent malaria.

The World Health Organisation approved the Interceptor® G2, the first insecticide it has recommended in more than 30 years. Scientists from the Innovative Vector Control Consortium (IVCC) and the London School of Hygiene and Tropical Medicine collaborated to create the chlorfenapyr-coated bed net, which has already been trialled successfully in Benin, Burkina Faso, Tanzania and Côte d’Ivoire. Dave Malone, IVCC technical manager, said, “The collaboration with BASF gave us access to an insecticide with a rare combination of attributes: new to public health, effective against resistant mosquitoes, and able to coat polyester netting with a long-lasting formulation.”



New insecticide mosquito net introduced to fight malaria. (Source: Shutterstock)

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“There is need for us as Africa to boost the capacity of national data ecosystems fairly early in the implementation cycle of the sustainable development goals, that is why the ECA and its partners have produced this Africa Data Revolution Report and will continue to do so.”

**OLIVER CHINGANYA**

Director of the Africa Centre for Statistics at ECA

“Africa has lost one of its best sons. Mr Ndiaye was a consummate professional who worked assiduously to position the African Development Bank’s work in Africa. He was an outstanding president who contributed immensely to the growth of Africa and created the deep footprint for the Bank in Africa. He was such a great and wonderful father figure to me and many of the Bank staff. He loved the Bank so much and was always present at the Annual Meetings, without fail, always encouraging me to push the High 5s, for which he was so proud.”



**DR AKINWUME AYODEJI ADESINA**

Current AfDB President, Akinwumi Adesina paying tribute to Babacar Ndiaye, the fifth elected president of the bank who passed away in Dakar, Senegal on 13 July, aged 85

“I was delighted to meet President Akufo-Addo, some of his key ministers and Ghanaians from all walks of life to discuss how we can strengthen the Commonwealth’s focus on promoting democratic values, development, security and prosperity.”



**LORD TARIQ AHMAD OF WIMBLEDON**

The foreign office minister for the commonwealth and the United Nations during a visit to Ghana

“Distributed generation, smarter and cleaner steam power, renewables, smart grids, storage, prosumers, innovative financing, evolving energy policies and new political imperatives mean that energy stakeholders need to embrace new capabilities and innovative business models for better outcomes and to bring more power to the population, faster and more sustainably than before.”

**GEORGE NJENGA**

GM, Steam Power Systems for Sub-Saharan Africa at the PowerGen and DistribuTech 2017 conference

“There’s a need to produce a new era of industrialisation driven by young economic champions.”



**MOSEBENZI ZWANE**

South Africa’s mineral resources minister

“Platforms of this nature afford us the opportunity to not only consolidate political ties, but also to create the much-needed value-chains, skills and technology transfer and employment generation required to give effect to our economic ambitions, both in South Africa and Zambia.”

**DR ROB DAVIES**

South Africa’s minister of trade and industry speaking ahead of the two-day Outward Trade and Investment Mission to Lusaka, Zambia

“This facility will play a key role in facilitating transport within the Horn of Africa region due to its strategic location. This region has huge untapped potential that require projects such as this one to be unlocked.”

**JOHNNY ANDERSEN**

Kenya Airport Authority (KAA) managing director on the opening of Isiolo International Airport

# AFRICAN REVIEW / ON THE WEB

A selection of product innovations and recent service developments for African business  
Full information can be found on [www.africanreview.com](http://www.africanreview.com)

## ZIMBABWE TO BECOME REGIONAL POWER DISTRIBUTION HUB

With an aim to become a regional power distribution hub, Zimbabwe has announced that it will construct a 1,000km regional power line in 2018 in partnership with stakeholders from Mozambique and South Africa. The Development Bank of Southern Africa (DBSA) will be funding the project worth US\$244mn, with the new power line expecting to have a maximum capacity of 1,740MW.

In a statement to *The Herald*, the Zimbabwe Electricity Transmission and Distribution Company (ZETDC) said that the new power line will include the construction of a mega power station in Triangle, to distribute power to the southern African region.

Speaking to the source, Ikhupuleng Dube, systems development manager at ZETDC, stated that the power line will start in Mozambique and pass through southern Zimbabwe to end in the northern Limpopo Province in South Africa.

"We are seated at the hub of the region, meaning power has to come through Zimbabwe, and we are now establishing a super grid so that power from the north, east, west and south comes to Zimbabwe and then we distribute it to where it would be required," Dube said to the source. Dube further added that the largest part of the construction will be made in Zimbabwe, with project expecting to be completed by 2021.

According to the source, the new power line will be constructed in several phases, with the first phase

consisting of the construction from Mozambique to Triangle, and the second phase from Triangle to Njelele in South Africa.

"We are finalising preparatory work. From Orange Grove to Triangle, we are talking about US\$134mn and a massive substation will be constructed in Triangle," Dube added.

## GE SIGNS US\$575MN AGREEMENT TO HELP IMPROVE RAIL INFRASTRUCTURE IN EGYPT

GE has signed a letter of intent worth US\$575mn with the Egypt's Ministry of Transportation (MoT) and Egyptian National Railways (ENR) to supply 100 GE ES30ACi Light Evolution Series Locomotives that can be used for both passengers or freight rail, as well as a 15-year agreement for parts and technical support for GE locomotives in ENR's new and current fleet.


The agreement, which is the largest ever between the parties, also includes technical training aimed at improving local capabilities and technical skills for more than 275 ENR engineers and employees in Egypt.


The signing was attended by Egypt's Prime Minister Sherif Ismail; H.E. Dr Sahar Nasr minister of investment and international cooperation in Egypt; H.E Dr Hesham Arafat, minister of transportation in Egypt; Robert Beecroft, US Ambassador to Egypt; Medhat Shousha, chairman of ENR; and John Rice, vice-chairman of GE and president and chief

executive officer of GE's Global Growth Organization. "A common thread amongst national strategies across the globe is the provision of sustainable and advanced infrastructure, with transportation a particularly crucial component," said Rice. "What is exciting about this partnership is its truly holistic nature. We are working with the MoT and ENR on the entire process – from ensuring a competitive financing solution with partners to the manufacture and technical support for the locomotives, and the training and development of engineers. This is what it takes to be a true partner, engaging at all levels to offer comprehensive end-to-end solutions."

Nasr added, "The partnership between the Ministry of Transportation, Egyptian National Railways and GE is testament to the remarkable potential evident in the transportation sector and the unwavering commitment of the public and private sectors to realise it, and we are certain it will help drive future investments across multiple sectors."


Arafat noted that the agreement would leverage the role of ENR in transporting goods using rail which is aligned to the Ministry's vision to improve rail infrastructure, decrease loads on the road, and help achieve the country's target to transport 25mn tonnes of goods annually using rail by 2022. The agreement also includes servicing and improving the efficiency of GE locomotives that were supplied in 2008, in addition to providing parts needed for the maintenance of GE fleet and providing training to Egyptian skilled labour.








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# Mobilising capital for Africa

Tor Langoy, founder and managing director of BD Globe Capital talks to *African Review* about offering financial solutions to continue making Africa an attractive investment destination. Stephen Williams reports.

**T**or Langoy's focus was originally the oil and gas sector but his professional gaze is now broader – everything from infrastructure projects to agricultural developments.

His specialty has been in business development, strategic and corporate finance, and investments in oil companies, maritime assets, commodity trading, real estate, and gas to power projects. Deal sizes ranged from US\$20mn to US\$2.6bn.

He has since collaborated with Ed Kostenski, the founder and chief executive of the multimillion-dollar turnover Nationwide Equipment company. It deals in heavy plant and equipment for the construction and extractive industries, particularly in West Africa, and in the agriculture and marine sector. Langoy has established a subsidiary within Nationwide Equipment to deliver financial services to the company's clients. This facilitates the purchase, lease and rental of the equipment and the resources to keep the equipment serviced.

Langoy explains, "The company is called Nationwide Finance and we finance projects in mainly developing markets. For the last 10 years, our focus has been Africa, particularly Nigeria.

"Clearly African countries are very diverse and they have their unique culture, languages and leadership, but also their problems. One of the few things that they have in common is liquidity issues within their economies, and that is where Nationwide Finance comes in," added Langoy.

Over the years Nationwide Finance has put together deals. These include Phase 1 of the Rivers State Monorail in Nigeria, a 14km portion of a project that is designed to transport 10 million commuters

within Port Harcourt; and supplying three jack-up barges for offshore shallow water oil exploration and production operations.

## Nationwide Finance

BD Globe Capital's extensive experience in raising capital, leveraged by Nationwide Finance, raised the US\$98mn needed for the initial phase of the elevated monorail project and the US\$44mn jack-up barges' deal.

Langoy met *African Review* after returning from a trip to Chad, Cameroon, Nigeria and Ghana with Kostenski where they were looking at deals and met with 13 ministers and other decision-makers. He said there is a vast requirement for capital and that the sorts of plant and machinery in highest demand was primarily of the sort to underpin agricultural schemes – not only tractors but graders to level farmland. And that demand was from the public sector, the government ministries responsible for agricultural development and food security.

While in 2005, agricultural equipment was accounting for 30 per cent of Nationwide Equipment's sales to Africa, he believes that share will rise to 70 per cent this year as governments make policy commitments to focus on food security.

But wherever the demand was originating, or what type of plant and machinery was required, the challenge was capital. There is not the liquidity within African financial systems to facilitate the purchase of the required equipment.

Langoy's answer to this challenge is to access funding from developed countries through special purpose vehicles, which can make use of the cash that is awash (relatively) in



**Tor Langoy, founder of BD Globe Capital. (Source: BD Globe Capital)**

mature markets – yet would never be considered for investing in the risk markets that Africa represents.

"That's the sort of strategy that many of the multinationals have taken for decades. Take Shell, they may have a Nigerian subsidiary, but a significant majority of their assets are held in The Hague or London," he points out.

## Adhering to best practices

"The main thing for an investor is to de-risk and one way of mitigating risk is to adhere to best practice in corporate governance, accounting and transparency. You get a lower cost of capital if you adhere to best Western practices. You get a single digit cost of capital.

"Now in Nigeria or Angola, for example, the banks have so little capital you cannot access it, and the corporates are slowly dying as the banks are not lending to them – or if they are, they do so at very high interest rates. They are paying double digits rather than single digits for financing.

"You need to think out of the box, to get into the honey pot. The world has never been so awash with capital. More than half of the

world's sovereign bonds are giving negative yields. You have this interest rate apartheid," he added.

But what happens after you have raised affordable capital in your special purpose vehicle in New York, London, Frankfurt, Dubai or Singapore jurisdiction? Langoy reckons that then you can employ the capital to buy Nationwide Equipment, invest in and acquire local companies. "Aliko Dangote is a brilliant example," Langoy says of this strategy. "He has structures that are teamed up with international banks and private equity funds. He is now the 'go-to guy', and he definitely gets single digit finance. None of his peers did what he did, turning to international banks rather than local banks, to make themselves attractive enough for international capital.

"And that's what we do for companies, banks and governments. Along with corporate banking, we provide corporate finance services and we establish structures for them to customise smart capital solutions to get affordable capital. We then make a decision on whether to invest. If clients are willing to walk with us, they can benefit from smart and cheap capital solutions. But they have to be transparent and stick to the rules.

"Presently, we are raising US\$500mn for a Nigerian bank, by creating innovative corporate and capital structures, which in turn get them into global capital markets with single digit capital cost.

"We know what works and what doesn't work. This is a competitive and globalised world and you have to make yourself attractive. It takes the development of an investment conducive environment to attract the scale of foreign direct investment that Africa needs." ■



# Boeing raises forecast for new airplane demand in Africa

**B**oeing has raised its forecast for new airplane demand in Africa over the next 20 years.

The company's annual Current Market Outlook (CMO) released at the Paris Air Show last month, predicted 1,200 new commercial aircrafts will be delivered across the continent by 2036, of which 72 per cent is aimed at passenger traffic growth.

The market value of the aircraft will be US\$180bn with 50 per cent and 30 per cent being single-aisle and small wide-body respectively. Air Algerie, Ethiopian Airlines, Royal Air Maroc and TAAG were among the African airlines to buy Next Generation Boeing 737s or 787s in 2016, whereas RwandAir and Air Austral signed a lease agreement with the Aircraft Lease Corporation to acquire new aircraft.

"This is a strong indication that African airlines are no longer the dumping ground of old and used airplanes," said Miguel Santos, managing director of Sub-Saharan Africa, Boeing International and director of international sales for Africa, Boeing Commercial Airplanes. "Twenty five brand new airplanes from Boeing production lines were delivered/leased to African carriers in 2016."

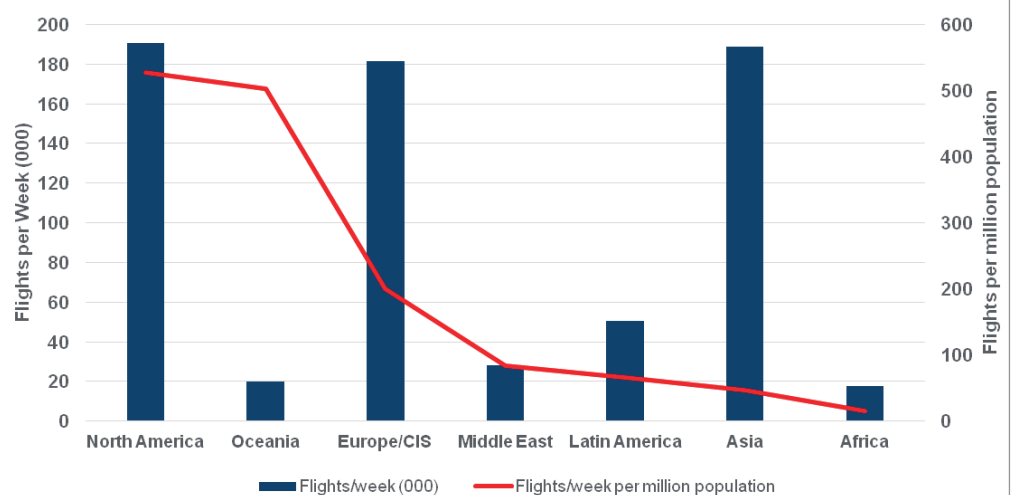
Still, Africa only provides 17 flights a week compared to North America and Europe, offering 190 and 181 flights a week, respectively. According to the CMO report, the Asian market, including China, leads the way, with 16,050 airplanes expected to be delivered over the next 20 years, followed by North America with 8,640, Europe with 7,530 and the Middle East with 3,350.

Globally, there will be a need for 41,030 new airplanes in two decades valued at US\$6.1tn. Fifty seven per cent of the new deliveries will be for airline growth, while 43 per cent

**2016 Deliveries to Africa both Direct and Via Lease**

Direct or Via Lease	Customer	Lessee	737 NG	777	787	Total
Direct	Air Algerie		8			8
	Air Austral				2	2
	Comair Limited		2			2
	Egyptair		1			1
	Ethiopian Airlines				3	3
	Mauritania Airlines		1			1
	Royal Air Maroc				3	3
	TAAG (Angola Airlines)				2	2
Via Lease	Air Lease Corporation	Air Austral		2		2
		RwandAir	1			1
		<b>Total</b>	<b>13</b>	<b>4</b>	<b>8</b>	<b>25</b>

**Africa is underserved compared with other regions**



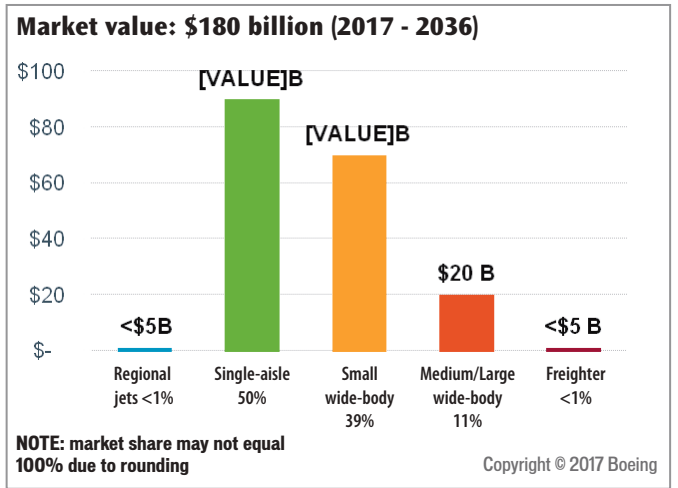
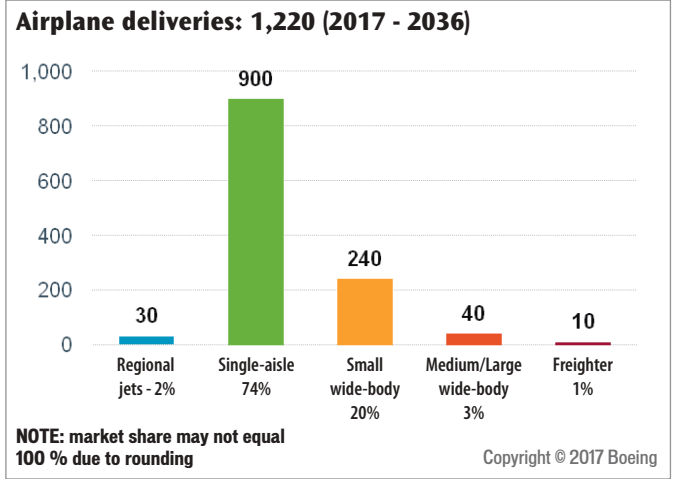
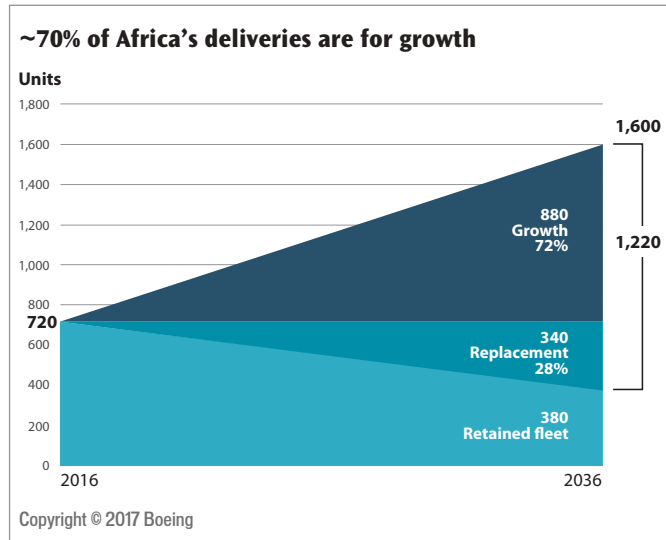
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Region	Flights/week (000)	Population (millions)	Flights/week per million population
North America	190.5	361	527.8
Oceania	20.1	40	503.1
Europe/CIS	181.7	907	200.3
Middle East	28.3	338	83.7
Latin America	50.7	769	65.9
Asia	188.7	4022	46.9
Africa	17.6	1118	15.8

will be for the replacement of older airplanes with newer fuel-efficient aircraft.

“Passenger traffic has been very strong so far this year, and we expect to see it grow 4.7 per cent

each year over the next two decades,” said Randy Tinseth, vice president of marketing for Boeing Commercial Airplanes. “The market is especially hungry for single-aisle airplanes as more people start travelling.” ■



# Shanghai LIYU connects China's top steel manufacturers with the rest of the world

Information about the newly built Maya International Airport terminal is featured on Shanghai LIYU's website.

**M**aya International Airport terminal in Congo has served millions of passengers each year since it came into operation. This 437,810 sq m project was jointly constructed by Zhejiang Southeast Space Frame Co., Ltd (Southeast Space Frame) and a Congo steel manufacturer.

Related information about this project can be searched on liyucsf.com, the bilingual website, which focuses on integrating China's top steel manufacturers with partners across the world.

Relying on liyucsf.com, Shanghai LIYU offers three interconnected groups (LIYU Steel Engineering Trade, LIYU Steel Verification Inspection and LIYU Steel Technology Consulting) to serve clients. With professional skills, scientific business management,



industrial experience and dedicated team members, Shanghai LIYU has been providing excellent, efficient services for customers.

Shanghai LIYU employs several strategies to partner the targeted companies with the most suitable

manufacturers, including international certifications and project types. International certifications include AISC, EN1090, ISO3834, CWB, ASME while other projects include high-rise buildings, bridges, hotels, power

plants, steel components and manufacturing facilities. These strategies offer unique solutions to fulfill our customer's requirements.

Shanghai LIYU has many very experienced IWEs, CWIs, ASNT inspectors (for RT/UT/MT/PT) and NACE inspectors. In addition, we are familiar with AISC, CWB, CSA, BS, ISO, ASME, EN and GB standards and national testing laboratories for mechanical, chemical and bend checks.

More than 100 clients in China have given Shanghai LIYU the opportunity to provide them with professional consulting services. It strives to perfect a platform to connect China's steel manufacturers with the world, and the further development of the global steel-making industry. ■

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# New dawn for NAVECO as New China Daily vehicle enters the Asian and export markets

The new generation 7-tonne unit was presented at the inauguration of NAVECO's new automated plant in Nanjing.



The New Daily China was unveiled at NAVECO's new plant in Qiaolin, Nanjing. (Source: Iveco)

**N**AVECO, the joint venture between IVECO and SAIC, has celebrated the first New China Daily light commercial vehicle coming off the assembly line.

The new China daily was unveiled at NAVECO's new automated plant in Qiaolin, Nanjing, last month – marking a new era for IVECO as it enters its fourth decade in China. IVECO was the first European OEM to establish a partnership with a local commercial vehicle manufacturer.

The new generation 7-tonne unit, dubbed the light commercial vehicle of the future, will be on sale in China in the fourth quarter of 2017 and will be ready for export markets in 2018. It complements the NAVECO Daily range with the European Daily and its vehicles of higher tonnage.

Featuring a new axle, F1 engine (2.3l or 3.0l) and new Quad-leaf

front suspension, which increases load carrying capacity and handling ability, makes it a benchmark product in the Chinese and export markets. It is a multi-purpose vehicle adapted for the transportation of goods, passengers and other special applications.

Speaking at the inauguration ceremony on 7 July, Pierre Lahutte,

IVECO Brand President said, "Today is an important milestone for us at IVECO and for our NAVECO partnership in China. We enter strongly into the fourth decade of our presence and partnership with NAVECO's investment of 1.8bn RMB in this brand new state-of-the-art manufacturing setup. Along with the New China Daily, the new plant is a

commitment to deliver a top quality product to the Chinese market."

The 843,000 sq m plant will increase NAVECO's production capacity from 40,000 to 100,000 vehicles a year. It is a world-class green operation using solar photovoltaic and recycling solutions. NAVECO aims to increase per capita output value by 25 per cent.

The production of the major components are concentrated in one place to maximise efficiency, and engine production is 90 per cent automated. High precision welding is carried out by more than 130 robots.

Lahutte added, "Through World Class Manufacturing, this facility puts quality and sustainability at the heart of its operation and will play a central role in our strategy support China's transition to sustainable transport and manufacturing." ■



Pierre Lahutte, IVECO Brand President and other NAVECO representatives at the inauguration ceremony of the new plant in Nanjing. (Source: Iveco)



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APM Terminals in Tangier, Morocco.  
(Source: APM Terminal)

# Connecting the dots

Intermodal logistics services to benefit from improved infrastructure across Africa. Martin Clark reports.

**A**frica's patchy infrastructure has long bedevilled trade and investment activity across the continent – a major headache for intermodal transport and logistics services providers.

However, new improvements to infrastructure – from roads and railways to ports and airports – and upgrades to logistics services through ever greater competition, are starting to unblock some of the jams.

The pace of development remains uneven, however.

While South Africa tops the list for having the most developed transport and logistics sector in sub-Saharan Africa – placing it on a par with some of the world's industrialised countries – logistics companies are looking to the rest of Africa for investment opportunities.

Energy, agriculture and other traditional major industries still provide a strong and steady flow of work for multimodal logistics firms, but the growth of new areas, such as the retail sector, is encouraging providers not only in South Africa, but increasingly in other major markets, such as Nigeria and Kenya.

Africa's largest market by population, Nigeria, is a truly exciting proposition for the industry, with huge investment to upgrade essential infrastructure now finding its way into big developments, such as the Lekki deep sea port, scheduled for completion in 2019, and the Badagry mega port, scheduled for completion in about five years time, with a soft opening next year.

With foreign investment into Ghana also gathering pace, it is opening doors right across West Africa, a point not lost on international carriers and freight forwarders, such as CMA CGM,

DHL, MSC, DSV, UAL, Sifax and St. John.

Lekki port, for instance, at the heart of the Lagos Free Trade Zone, will hold container, dry bulk, and liquid berths, with a projected capacity of 2.7 million TEUs per annum. It is being spearheaded by Tolaram Group along with the Nigerian Port Authority and Lagos State officials.

APM Terminals in the Netherlands is involved in the development of the new Badagry port, bringing a major international player with plenty of expertise.

It is the largest port and terminal operating company in Africa, with 12 operating facilities in 10 countries, including major transshipment facilities in Tangier, Morocco and East Port Said Port, Egypt.

## Ghana upgrade

As well as Badagry, new terminal projects are underway at the Port of Abidjan in the Côte d'Ivoire, plus a US\$1bn expansion of Ghana's Tema port, an area now emerging as a hub for the nation's dynamic offshore energy sector.

The expansion, which brings together Meridian Port Services (MPS), a joint venture between APM Terminals, Bolloré Africa Logistics (Meridian Port Holdings) and the Ghana Ports and Harbours Authority (GPHA), is immense in scale, underlining the long-term potential of the regional intermodal market.

Container throughput at MPS, which handles approximately 80 per cent of Tema's container volume, was just 670,000 TEUs in 2013; the new expansion will boost the port's annual container throughput capacity to a mighty 3.5 million TEUs.

The expansion plans include the development

of four deep water berths and an access channel able to accommodate larger vessels now entering the West African trade lanes. A six-lane modern highway is also being constructed between the port at Tema and Accra, to enhance the movement of cargoes into and out of interior points.

During a visit to the port earlier this year, APM Terminals chief executive officer Morten Engelstoft said the project would make Ghana "an economic giant and enhance its position as the maritime hub in the sub-region".

It also highlights a general sophistication across Africa's ports sector, and growing integration with other transport infrastructure.

In Morocco, new remote controlled ship-to-shore cranes (STS) are being installed with Automated Rail-Mounted Gantry Cranes (ARMGs) to increase productivity at the new 5 million TEU MedPort Tangier facility now under construction at the Tanger-Med II port complex.

The deep water terminal is scheduled to open in 2019.

The STS cranes will be delivered at the end of 2017 by Shanghai-based ZPMC, while the ARMGs will come from Austrian-based Künz.

Infrastructure upgrades are feeding demand from international business.

Morocco is an increasingly attractive location for global manufacturers and supply chains across the automotive, aeronautics and textile industries.

Germany's Siemens is building a windmill blade factory, Renault operates a manufacturing facility producing 250,000 passenger cars annually, and French-based auto parts maker Valeo is investing US\$50m in new production facilities. ■

## THE BOLLORÉ WAY – MAKING THINGS HAPPEN: BY RAIL, BY ROAD, BY SEA AND BY AIR

One of Africa's leading multimodal experts, Bolloré Transport & Logistics is active right across the continent.

It is one of the world's leading transport and logistics groups, while the group's other activities and subsidiaries also span ports, railways and the energy sector.

It is also targeting emerging business areas, including facilitating the emergence of Nigeria's retail sector, supplying warehouse management for global consumer brand Unilever, among other projects.

Its warehouse, located at Unilever's manufacturing site in Agbara Industrial Estate in Ogun State, stores products including food, beverages, cleaning agents and personal care products.

Bolloré Logistics Nigeria also handles warehousing activities for other big players in the fast moving consumer goods industry such as FrieslandCampina and A&P Foods.

As well as moving consumer goods, the Bolloré group is involved on a far deeper level in West Africa, holding transport concessions, including cross-border railways, such as the operation of the network linking Abidjan in the Côte d'Ivoire to Kaya via Ouagadougou, in Burkina Faso.

It has just signed a revised agreement for the SitaRail concession, which will invest US\$250mn over four years in the renewal and modernisation of rolling stock.

This includes the renovation of 200 km of railway track and multiple numerous railway stations, a move that will streamline the movement of goods and people, boost trade, and reduce transit times between the two countries.

Sitarail manages 1,260 km of railways and already transports 300,000 passengers and 900,000 tonnes of freight each year.

Bolloré calls the network "an essential regional integration tool" for the benefit of the whole region.

In the ports sector, it is engaged in management and expansion projects across the region, including Conakry in Guinea and Freetown in Sierra Leone, making it a leading player in the multimodal sector.

This level of expertise makes it an ideal partner on some of Africa's traditional industries, such as mining and energy.

### Mining logistics

The company recently supported the Canadian Endeavour Mining group with logistics and freight forwarding services for the Houndé gold mine in Burkina Faso, one of the largest mining projects in the region.

It was appointed to coordinate and manage the international transport, customs transit formalities and delivery of all of the mining construction equipment, using the group's local branch in Bobo-Dioulasso, just 100 km from the gold site, as the project office.

By July 2017, that meant the consignment and delivery of 147 tonnes of airfreight, 1,375 TEUs and 9,750 freight tonnes of project cargo for Houndé. This included running dedicated block trains via the Sitarail railway concession to transport containers direct from Abidjan port to Bobo-Dioulasso.

"Bolloré Logistics and its subsidiaries were able to understand critical paths, extremely tight construction schedules and pre-empt seasonal influences affecting the availability of trucks during the country export season," the company said.

First gold pour is anticipated by the fourth quarter of 2017, according to Endeavour Mining.



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# The challenges of building an industrial economy in Africa

The manufacturing sector could boost huge economic growth for the continent but its share of GDP has not moved from around 11 per cent over the last 10 years. Economist Moin Siddiqi investigates.

In today's sophisticated global economy, Africa remains a weak link. The region could become an emerging manufacturing hub through optimal development of natural and human resources and increased technological transfers. Li Yong, director-general of the United Nations Industrial Development Organisation, said: "Africa is by no means destined to lag behind the rest of the world economy. But to fulfil its economic potential, Africa must industrialise."

Manufacturing is a major untapped growth opportunity in Africa, but the sector's share in gross domestic product (GDP) across the continent has stagnated at 11 per cent over the past decade, compared to 23 per cent in East Asia & Pacific, according to the most recent World Bank data. In 2015, Africa's manufacturing output was worth US\$500bn, of which five countries (Egypt, Morocco, Nigeria, South Africa, and Tunisia) comprised

**Table: Manufacturing data on Sub-Saharan Africa region, 2015**

	Manufacturing % of GDP	Manufacturing value-added US\$Bn	Manufacturing avg. annual % growth 2000-2015	Manufactures % of total merchandise exports
Sub-Saharan Africa	11.0	143.92	4.6	23.9
Rest of Sub-Saharan Africa				
South Africa	13.0	37.19	2.1	49.4
Nigeria	10.0	45.90	10.6	6.4
Kenya	11.0	6.56	3.6	36.9
Congo, Dem. Rep.	19.0	6.38	6.7	N/A
Côte d'Ivoire	14.0	3.98	N/A	8.1
Cameroon	14.0	3.66	2.1	8.9

Source: World Development Indicators 2017, The World Bank

the bulk of total capacity. Seventy per cent of production was consumed in the country of manufacture; tenth and one-fifth, respectively, were traded within Africa and exported outside Africa, according to Mckinsey Global Institute (MGI).

Five sub-sectors of manufactured categories are: Capital-intensive; e.g chemicals, transportation equipment. Labour-intensive; e.g textiles/apparel. Resource-intensive; e.g wood products, paper and pulp.

Local processing: e.g rubber, plastics, fabricated metals, food. High-tech; Computers and office machinery.

### Lagging global competitors

Africa's share of global manufacturing exports has also stagnated at a paltry one per cent since 2000. In comparison, the World Bank reported China expanded its share of global exports from 4.7 per cent in 2000 to 18.8 per cent in 2015. Other Asian countries; Bangladesh and Vietnam, too, achieved rapid growth in manufacturing exports by matching low labour costs with active steps to attract investment, develop skills, and greater access to global markets through trade agreements.

African import products can be manufactured more cheaply within the region. One third of food, beverages, and other processed goods consumed in Africa are imported; while Southeast Asian and Latin American countries import approximately 20 and 10 per cent, respectively, of such goods. Similarly, about two-thirds of Africa's supply of capital-intensive items (mainly automobiles and machinery) are imported, which is twice the level for Latin America.

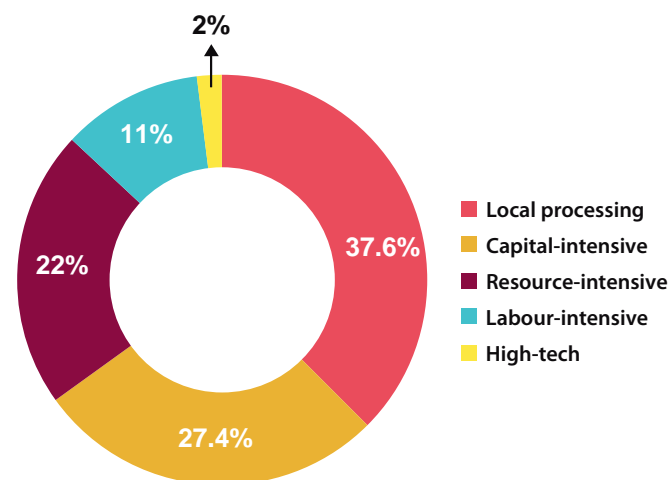
Despite abundant local raw materials, Africa still imports a large share of manufactured products, including cement and refined petroleum. In 2015, 49 refineries were operating across the region, but little new capacity is expected on stream over the medium-term, reflecting the challenge of building competitive refineries in Africa. Regional refining capacity remains low at 2.1mn-bpd, while BP reported Africa's total 2016 oil production at 7.89mn-bpd.

### Promising fundamentals

The continent is well-placed to industrialise, driven by the following factors:

- Massive natural resource endowments, which can be used as raw materials for heavy and light industries. Africa boasts the largest unexplored resource basins on Earth with 80-90, 50, and 40 per cent, respectively, of chromium, manganese, vanadium and platinum; diamonds; and gold, as well as 60 per cent of world's uncultivated, arable cropland (approximately 600mn hectares). It also holds 7.5 per cent of global oil reserves and huge stranded natural gas resources.
- Fairly inexpensive labour and

**Pie-chart: Breakdown of Africa's manufactured goods by % of total value of 2015 output, US\$500Bn.**



Sources: Mckinsey Global Institute and UNCTAD.



favourable demographics (about three-quarters of Africa’s population is aged under 35). Hence, it will soon have the world’s biggest workforce of 1.1bn by 2034, according to MGI analysis. These demographic trends offer an opportunity for vocational training and skill development – a prerequisite for building industrial value chains. Unit labour costs and wages are low compared to other regions.

- Africa also benefits from an educated diaspora.
- Africa’s stock of housing, commercial buildings and infrastructure is expanding – in tandem with rapid urbanisation – thereby creating demand for construction materials such as cement, metals, and wood.

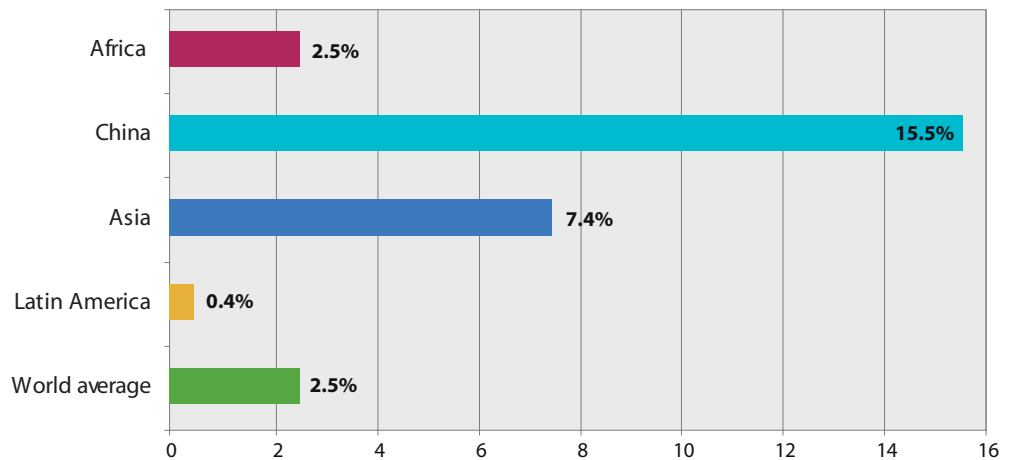
**High-potential sectors**

Africa’s manufacturing output could double within a decade reaching the US\$1trn mark by 2025, reckons MGI. Three-quarters of output expansion could derive from meeting growing domestic consumer and business demand, reducing the volume of goods that is imported. The rest could derive from boosting exports. Kenya, Ethiopia, Tanzania, Rwanda, Ghana, Senegal and Mauritius are expected to undergo some degree of industrialisation, along with Nigeria.

The largest opportunity for increasing manufacturing value added lies in the capital-intensive category, like machinery/transport equipment, followed by agri-food value chain. Resource-intensive manufacturing (cement and petroleum products) and labour-intensive goods (such as textiles/clothing) are smaller but still significant outlets for manufacturers to service both local and regional markets.

As Africa’s business sector expands, demands for inputs such as machinery/ equipment and fuels/chemicals are increasing fast. That makes the manufacturing of capital-intensive innovations a profitable sub-sector, however, that opportunity is mostly confined to those with established

**Manufacturing value added, global comparisons**



Source: Mckinsey Global Institute.

manufacturing hubs (Egypt, South Africa and Morocco). Nigeria has capacities in petrochemicals and fuels, Kenya in machinery and auto spare-parts, Botswana in diamond cutting, Zambia in metal processing, Ghana in gold refineries and aluminium smelting and Cameroon and Sierra Leone in steel-making underpinned by iron ore reserves.

Labour-intensive manufacturing can integrate more African countries into global supply chains. But regional share of global labour-intensive exports (US\$1.6trn in 2014) was one per cent, well below 35 per cent share of global total for China in this category.

**Industrial development strategies**

The shortcomings in infrastructure, especially power supply and transport logistics, low labour productivity, still high trade barriers and lack of economies of scale constitute major barriers to industrialisation. Assembly-line operations are attracted by the presence of cluster industrial parks and special economic zones where investors receive fiscal incentives. Ethiopia plans to invest US\$10bn over 10 years in export hubs to house textile, leather and agro-processing firms.

Further trade liberalisation and a supportive environment for manufacturers (including access to credit) can make Africa more

competitive in global and regional value-chains. Lower tariff and non-traffic barriers will help firms reliant on imported intermediate inputs/machinery to export manufactured goods. To address the scale issue, three Regional Economic Communities in Africa representing 26 countries have launched the Tripartite Free Trade Area (TFTA) to provide an integrated, larger market for manufacturers.

Most African manufacturers need business administration courses to upgrade their productions and acquire better knowledge of the global marketplace. An educated workforce is crucial for export-oriented activities. “Investment in technical and vocational training programmes should complement investment in basic education to

enhance specific skill-sets related to individual industries and value chains,” advises African Development Bank.

The African continent given its competitive edge in natural resources is not industrialising to its full potential. Foreign manufacturers boast high market shares in categories that could be produced more cheaply in Africa for both local and regional markets. Presently, manufacturing sector serves a fraction of fast-growing domestic demand. However, industrialisation is crucial for job creation, export diversification, and diverting resources from less productive activities to newer ones, raising overall productivity, thereby leading to ‘structural transformation’ of the region. ■

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Using DNA technology is helping improve asset security. (Source: Shutterstock)

# Track and trace using DNA technology

More than 50 per cent of all business theft happens internally. Barry Mansfield explores how businesses across Africa are turning to high-tech solutions, including DNA forensic marking fluid, to protect their assets. Barry Mansfield reports.

Every year businesses lose billions worldwide to losses through employees, contractors and organised crime – but an improving technique in asset security looks set to change this bleak picture. It involves a unique 'DNA' profile or code, kept in a secure database. The code is neither known to the users, nor can it be replicated by any third party. The forensic link between owner and asset establishes incontrovertible and court acceptable proof of ownership. In fact, in the past 17 years, 100 per cent of 'proof of ownership' cases were successful when tested in a South African court of law.

While this is not an entirely new technique, it has become more affordable, foolproof and sophisticated with the arrival of new product iterations released over the years. The fluid is highly resistant to UV radiation, heat, cold, vibration, abrasion and other extreme environmental conditions.

Solutions range from a police drive to tackle building site burglary, to the development of a

gun that fires paintball-like DNA pellets (weighing less than a gram) to mark suspects during volatile police situations, such as riots. In the latter example, culprits are tracked via UV readers or sniffer dogs.

Shopkeepers are now fitting sprays above their front door, which are activated manually to soak raiders as they escape – or automatically activated when a panic button or burglar alarm is triggered. The spray cannot be washed off (it is close to invisible once dry) and each aerosol has its own unique DNA strand composed of 60 variable chromosomes, linking the criminal directly to the shop raided. It remains on the suspect's skin for two weeks and on clothes for six months. *The Daily Telegraph* reported that McDonalds was trialling the technology in several branches worldwide from 2015.

## DNA technology

Theft is a massive problem for fast-food outlets, which typically boast a high cash turnover, multiple entry

and exit points, a high staff turnover, and many employees working through the night at truck-stops and other remote locations. Some marketers of the DNA technology have claimed an 85 per cent crime reduction rate, but they usually emphasise that the system is about prevention rather than arrests. Police have widely distributed the spray kits so private residents can mark their property, and it has been widely used by schools and universities.

Another case study involved tradespeople receiving a discount to mark all their tools. But 2017 has also seen police officers working closely with farmers to establish a forensic marking scheme that will see a traceable solution – provided by specialist SelectaDNA – applied to livestock. It is the first time this technique has been utilised to combat theft of sheep. It is intended as a preventative tool, as well as allowing for a straightforward means of tracking back to the farm in the event of animals being stolen. In this 12-month pilot scheme, each

kit will enable around 100 animals to be tagged.

A police officer explained that she would "deploy the warning signs and notices around the farm will hopefully deter thieves, but where livestock are stolen, the markings will allow us to trace animals." Officers are also able to carry out spot checks at places like auctions. This use of synthetic DNA has long been applauded by Africa's top security experts, including Carolyn Hancock, director of the DNA Project for the last 10 years and a former lecturer at Durban's University of KwaZulu-Natal. But it was limited at first to niche projects like the marking of the Super 15 rugby trophy.

James Brown, managing director of SelectaDNA, says that the use of SelectaDNA during the last 12 years "has resulted in dramatic reductions in all types of acquisitive crime." Animal theft is extremely upsetting for owners, he adds, but also "costs insurers and farmers millions of pounds each year." SelectaDNA already assists rural communities by preventing theft of tractors, quad

bikes and other valuable equipment with its DNA marking technique. Now, the company aims to ramp up its efforts in co-operation with farmers, police and insurers to put an end to livestock theft.

**South Africa**

In South Africa it is not unusual for there to be 30,000 cases of animal theft annually (and a monetary loss of R750mn). The University of Johannesburg’s Patrick Nkwari warns that RFID tracking is too short in terms of communication range, and GSM is too expensive, which explains the appeal of the DNA technique. Elsewhere, automobile maker Nissan utilised a similar method for all vehicles put on sale in South Africa, Swaziland, Lesotho, Namibia and Botswana. In this case, the material is virtually impossible to remove as it is bonded to the cars with a powerful

“ The use of SelectaDNA during the last 12 years has resulted in dramatic reductions in all types of crime.”

**JAMES BROWN, MANAGING DIRECTOR OF SELECTADNA,**

adhesive spray.

Dealers were given product training and the South African Police Service and immigration authorities were equipped with the necessary kit, including UV light and spotting scope, to view the identifying material.

Today, all BMWs manufactured in South Africa are marked, along with all imported Renault and Suzuki cars. Business Against Crime South Africa (Bacsa) has found that the recovery rate of marked vehicles has increased to between 60 per cent

and 80 per cent, compared with an overall 43 per cent recovery rate for all vehicles stolen (or hijacked) before the technique was in widespread use.


The technology has been expanded to a wide range of assets, including boats, school computers (as part of the Gauteng Online project), DVD players, jewellery and mining machinery. Healthcare giant GlaxoSmithKline uses a similar technique to verify the authenticity of poppy seeds along its supply chain. South Africa’s seed industry is

looking into the method, while R&D continues in fields, such as textile authentication, plastic manufacturing and concrete certification, with firms like DataDot leading the way. DNA-marker bike kits have also been used by cycling retailer CycleLab.

South African based firm Recoveri has used a printed ‘microthread’ in copper cables to deter thieves. Since removing the thread is impossible, any length of cable can be identified and the owner traced. As the technology is so adaptable, the DNA Project’s Hancock emphasises that DNA is “in reality a simple molecule made up of four nucleotide bases. Scientists can synthesise short stretches of DNA, making each slightly different by varying the sequence of these four bases.” This approach can involve a “synthetically manufactured” material, or a simple barcode. ■

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INSPIRING INNOVATIONS

Ethiopia is positioning itself as a hub for manufacturing. (Source: Shutterstock)

# Ethiopia committed to fostering a new generation of workers

The country has set its sights on becoming Africa's industrial park leader by 2025. BonelliErede's Africa Team writes.

**A**fter overtaking Kenya in 2015, Ethiopia has been confirmed for the second consecutive year as the leading economy in Eastern Africa. According to the IMF's latest data, Ethiopia's GDP exceeded US\$72.5bn in 2016 – nearly three billion dollars more than the IMF's projections.

The figures are testament to Ethiopia's commitment to creating a business environment that, besides offering new opportunities to Western and Chinese investors, will foster a new generation of workers. Workers who will contribute to boosting internal demand for goods and services and, thus, drive development.

In 2016, the Ethiopian government set down the gauntlet to other emerging markets, including Tunisia, Morocco and Egypt: Ethiopia has set its sights on becoming Africa's industrial park leader by 2025. To do so, the Industrial Parks Development Corporation (IPDC), chaired by the former minister of industry, Sisay Gemechu, has been set up.

In 2015, the primary sector accounted for almost 40 per cent of Ethiopia's GDP, 90 per cent of the import of foreign currency and 85 per cent of jobs. The industrial sector (mainly SMEs) accounted for

only 15 per cent of the GDP. As specified under the Growth and Transformation Plan II, the manufacturing sector needs to reach an annual growth of 24 per cent and increase its contribution to export-driven revenues from 10 per cent to 25 per cent. To this end, a dozen industrial parks are under construction and others are in operation, such as in Bole Lemi.

## Industrial parks

Investment in industrial parks is open to domestic, local and foreign investors (the legal and tax framework provides several incentives). They will be built in the outskirts of the main cities, and many will be dedicated to a single industrial sector. Opportunities abound for various types of investors: their construction is a significant opportunity in itself for developers. Plus, the construction of manufacturing plants is an opportunity for light manufacturers, and the business generated under the different supply chains of each park is a major opportunity for distributors and local manufacturers.

Developing the industrial parks appears to be a less common opportunity, and who is actually taking advantage of it? Of the seven in

operation, six were developed by Chinese companies and one by a South Korean company. It seems that three Chinese companies will build another seven in Addis Ababa and Jimma. The total cost for the necessary infrastructures is reportedly estimated to reach €430mn.

According to the information available, the IPDC has awarded the construction works for the Bole Lemi II industrial park (which is the second phase of the existing industrial park in Bole Lemi) to the Chinese construction group CGC Overseas Construction, with the South Korean DOHWA tasked with overseeing the works. The park will host textile and clothing manufacturers. The construction works for the industrial park in Kilinto have been awarded to the China Tiesiju Civil Engineering Group. This park will host manufacturers of high-tech medicines and products. The third industrial park will be built in Jimma by the China Communications Construction Company (CCCC) and will be dedicated to textiles, which is a strategic priority for Ethiopia's industrial development.

On 8 July 2017, prime minister Hailemariam Desalegn launched two more industrial parks dedicated

to textiles and clothing: one in Mekelle, the capital city of Tigray in the north and one in Kombolcha, Amhara. The construction works were carried out by China Civil Engineering Construction Cooperation (CCECC) and the CCCC.

## Special economic zone

Japan is also trying to catch up. The real estate company Tomonius signed a memorandum of understanding with the Ethiopian Investment Commission to develop and manage a special economic zone reserved to Japanese companies in the Bole-Lemi II industrial park.

Investing in Ethiopian industrial parks is particularly appealing due to the tax incentives. The favourable local tax regime may also often be supplemented with incentives in countries that most products are expected to be exported to, such as the USA. Ethiopia also benefits from the African Growth and Opportunity Act (AGOA), which allows goods manufactured in Ethiopia and sold in the USA to be tax free or subject to reduced taxes until 2025. Morocco, Tunisia and Egypt are not eligible, as the AGOA applies only to the Sub-Saharan Africa area. According to InfoAfrica, the AGOA has doubled trade with the USA and

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enabled the creation of 120,000 jobs in Africa. It is noteworthy how Chinese companies in Ethiopia manufacture and export products to the USA that are to be supplied to various brands, such as Tesco, H&M, and PVH, which supplies Calvin Klein and Tommy Hilffiger.

### Manufacturing opportunities

Ethiopia is positioning itself as an outpost for manufacturing and as the ideal location for Chinese companies, which are looking for lower labour costs compared with China and even Vietnam, plus the tax incentives. From an investor's standpoint, the real challenge is setting up a reliable supply chain. This is for two main reasons: the import of goods is often affected by shortage in hard currency, and the logistics are often complex and more expensive compared with China. For example, Chinese manufacturers of leather goods in Ethiopia that export to the USA import their leather mostly from Italy. The Ethiopian government – to maximise the value created within the country and with the support of United Nations Industrial Development Organization is launching an industrial park dedicated to the tanning and processing of leather: the Mojo Leather City. As Ethiopia ranks tenth worldwide in terms of livestock, this plan could enable Ethiopia to become a major leather manufacturer worldwide. The textile, clothing and leather goods



Agriculture and development of the agri-food industry is another pillar of Ethiopia's development. (Source: Shutterstock)

exhibitors and visitors, is considered the most important trade fair in the continent for these sectors.

Besides boosting the light industry, the government is keen to launch a parallel programme focused on integrated agro-industrial parks. In February 2017, the prime minister launched works for the construction of the first of four, which will be built in Bure, Humera, Ziway and Sidama.

Agriculture and development of the agri-food industry is another pillar of Ethiopia's development. Again, through industrial parks. The ambitious plan entails including the surrounding populations as active players in the parks. This integration will go through rural transformation centres, which will act as collectors of local production, which will be stored and undergo a first treatment

A crucial example is coffee: most of the production is exported as raw material.

To support development of the agro-industrial system, the government is considering developing renewable energies (not all the rural centres will be served by the national grid) and the irrigation system. For example, the World Bank and Ethiopian government funded the Jiangxi Water and Hydropower Construction project for a cost of US\$55mn to create an additional 13,000 hectares of cultivatable land. The Ethiopian Ministry of Water, Irrigation and Electricity also presented the second phase of a programme for the construction of biogas plants – thanks to promised EU funding of approximately €25mn.

The Ethiopian government has also invested heavily in infrastructure and energy, mostly in boosting its hydroelectric capacity. On 17 December 2016, the Gibe III Dam (built by the Italian company Salini Impregilo) was launched. It is the joint largest energy investment project ever in the country, together with the Great Ethiopian Renaissance Dam. It may allow Ethiopia to meet its future needs and still have room to export power to neighbouring countries. The latter is crucial when the need for hard currency comes into play.

### New international airport

Works have also begun for the construction of a new international

airport near Nekemte (300 kilometres west of Addis Ababa). The estimated cost (according to InfoAfrica) is approximately €30mn. Ethiopia is also planning to construct five new inland terminals (dry ports) for a cost of Br1.5bn, equivalent to almost €60mn. The new inland terminals will be in Hawassa, Dire Dawa, Mekelle, Kombolcha and Wereta. As soon as operational, the shipping costs and transit time – considered one of the country's greatest weaknesses by investors – will plummet.

The programme aims to improve the living standards of the beneficiaries by reducing carbon emissions and to promote environmental sustainability in energy, sanitary water, hygiene and agriculture. According to InfoAfrica, over 90 per cent of the cost is being covered by the EU and the remainder by the Ethiopian government. During the first phase, around 15,550 families in Amhara, Oromia, Tigray and the south regions received the equivalent of €500 as a contribution for the purchase of a biodigester, a tank which digests organic material biologically, with capacity of between four and ten cubic metres. The second phase, expected to last five years, aims to encourage another 15,500 families in rural areas to purchase biodigesters. These initiatives show that Ethiopia offers a land rich with opportunities. ■

“Agriculture and development of the agri-food industry is another pillar of Ethiopia's development”

BONELLIERE DE'S AFRICA TEAM

supply chain has also caught the eye of the private sector. The German firm Trade and Fairs Consulting chose Ethiopia for its Africa Sourcing and Fashion Week, which, with an annual attendance of over 4,000

to then be conveyed to closer integrated agro-industrial parks. The objective being to improve the country's agriculture industry and create value within the country by transforming raw materials locally.

# Power Nigeria to shine light on country's energy needs

“Nigeria remains an important investment destination and our vision is to continue building a trade platform that supports this,” says organisers.

Improving Nigeria's electricity reach will be at the top of the agenda at this year's Power Nigeria show.

Organised by Informa Industrial Group (IIG) for the sixth year running, the exhibition will be moving to a new location at the Landmark Centre in Lagos on 5 to 7 September, providing an extra 4,200 sq m of exhibition and conference space.

There are more than 100 major regional and international companies attending, with 16 influential speakers taking part alongside free workshops and new product launches.

The conference stream will focus on the financial and risk management of Nigeria's power market, renewable technologies and how to improve electricity supply to customers across the country.

Anita Mathews, group director - Informa Industrial Group said, “Nigeria remains an important investment destination and our



Exhibitors at Power Nigeria include Cummins and Skipper Seil. (Source: Informa Industrial Group)

vision is to provide a trade platform bringing the manufacturers and suppliers of equipment and technology in direct contact with the decision makers, specifiers and

distributors of products in the power generation, transmission and distribution, renewable and lighting sectors.

“Many of our international exhibitors view Nigeria as a major export market and with the country's urgent need to improve basic power infrastructure and systems, exhibitors are keen to offer their full services to the decision makers in Nigeria. Therefore, due to the government recognition and established presence of the event, Power Nigeria is the ideal platform for companies looking to introduce their products and services or grow their business network in the West African region.”

Cummins, Polycab, Gil Automations, Beta Transformator and Skipper Seil will be among the high-profile exhibitors.

IIG has a strong track record of organising and launching exhibitions in the Middle East and Africa, with the flagship event, Middle East Electricity holding the title of world's largest power event. Each year, across the eight events within the Informa Industrial Group, more than 3,000 exhibitors are connected to an audience of more than 48,000 unique buyers – putting the company in a strong position to present the latest developments in the industry and be a platform for exhibitors to launch new products to a developing market like Nigeria.

Power Nigeria draws on the strengths of IIG's geographical foothold in the Middle East and Africa through its partner events Electricx and Solar-Tec in Cairo and Middle East Electricity in Dubai. ■



# Solar street lights illuminate Bujumbura, Burundi

**B**ujumbura the capital of Burundi, has become a little brighter thanks to a partnership with Gigawatt Global.

In July solar-powered 'light islands' started appearing in the heavily congested central bus station and nearby marketplace, extending commercial hours and improving personal safety.


"The city of Bujumbura is very pleased to be working with Gigawatt Global on this important solar street lighting project," said Mayor Freddy Mbonimpa. "This project will enhance security as well as provide opportunities for economic development to the citizens of Bujumbura. It is the hope and wish of all involved that this project can spread throughout the city, as well

as expand to other cities in Burundi within the near future."

Gigawatt Global is now in discussions to scale the solar-powered 'light islands' programme throughout the city and in other major Burundian towns. "We are grateful and pleased to work with the city of Bujumbura, and the Honorable Mayor Freddy Mbonimpa to realise this important first step of the solar street lighting project," said Michael Fichtenberg, managing director of Gigawatt Global Burundi. "We intend to expand throughout the capital and to other locations as part of our larger programme of green electrification in Burundi, with 40 'light islands' planned in the first phase of the programme. Every country in which we develop



Gigawatt Global launches its off-grid programme in Africa, starting in Bujumbura. (Source: Gigawatt Global)




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commercial scale solar fields will receive additional benefits like these 'light islands' and rural electrification with mini-grids."

Gigawatt Global, which provides 100 per cent financing for its projects, pioneered commercial scale solar power plants in sub-Saharan Africa, launching the first one in Rwanda in 2014, which is supplying six per cent of the country's generation capacity. Gigawatt Global will complete a 7.5 MW solar field in the Gitega region of Burundi in the next six months, which will supply 15 per cent of the East African country's generation capacity. Similar projects are currently being developed in 10 African countries, including Liberia and South Sudan, among many others.

"Over 95 per cent of Burundi's 11 million people lack access to electricity. Gigawatt Global is honoured to play a role in advancing economic and social development through green power in the country," said Josef Abramowitz, CEO of Gigawatt Global. "By expanding our investments from commercial scale projects to include off-grid installations, we are positively impacting the lives of millions of people in Burundi and

throughout Africa, and are becoming a leading force in green energy projects across the continent."

The 'light islands' project in Bujumbura is produced by a team that includes local members Patrick Nzitunga, Gigawatt Global regional coordinator, and Deo Hugere, Gigawatt Global engineer. The engineering, procurement, and construction components of this project are being carried out by Asantys System. The pilot programme is supported by the Energy & Environmental Partnership (EEP), an initiative of the governments of the United Kingdom, Austria and Finland, and with an impact investment from entrepreneur Alex Goldberg.

"God bless the people of Burundi," said Goldberg. "In Bujumbura, we found a place ripe for innovation and open to economic development."

As part of Gigawatt Global's commitment to additional Corporate Social Responsibility, one of its investors, Mark Gelfand, funded and built the STEM Centre (Science, Technology, Engineering and Maths) at the Université Polytechnique de Gitega. ■



## AFDB APPROVES GRANT FOR GREEN MINI-GRID MARKET DEVELOPMENT

The AfDB approved a US\$3mn grant for Phase 2 of the Green Mini-Grid Market Development Programme (GMG MDP) via sustainable energy fund for Africa (SEFA). Implemented by the bank's sustainable energy for all (SEforALL) Africa hub, the GMG MDP's objective is to support the scale-up of investments in commercially viable GMG projects to improve the enabling environment.

The project aims to reduce the market barriers at regional scale and strengthen the ecosystem for the emergence of a thriving GMG sector in Sub-Saharan Africa.



The initiative aims to increase the development of green energy access in African region. (Source: Martin Abegglen/Flickr)

The GMG MDP has become a central point of reference for mini-grid activities on the African continent.

"Mini-grids are an important component to addressing the New Deal on Energy for Africa's target of universal energy access in Africa by 2025 and the GMG MDP will help to overcome some of the key barriers to increased private sector investments in mini-grids," said Amadou Hott, the Vice President for power, energy, climate and green growth of the AfDB.

The GMG MDP is increasing in scale as it evolves from Phase 1 to Phase 2 including additional activities under its five business lines on market intelligence, business development support, policy & regulatory support, quality assurance and access to finance. This includes an expansion of the help desk and the addition of a policy help desk aimed at public policy makers, additional GMG country market assessment and the development of a state of the mini-grid market in Africa assessment.

## GAMBIA SIGNS MOU WITH SENEGAL FOR CROSS-BORDER ELECTRICITY SUPPLY

Gambia and Senegal signed a memorandum of understanding (MoU) for a cross-border electricity initiative, which will strengthen energy cooperation between the two west African countries.

The Point reported that the power purchase agreement will connect cross-border points at Keur Ayib, Karang and Tamba Kunda areas.

Apart from finalising the MoU agreement, Société Nationale d'Électricité de Sénégal (SENELEC) and National Water and Electricity Company (NAWEC) initiated a concessional draft power purchase agreement.

The deal aims to ensure SENELEC supply between three megawatts to 10MW of electricity to the NAWEC, with expanding the supply as the capacity of the network grows. Through this initiative, most parts of rural Gambia are expected to have access to electricity, meeting a significant milestone of Gambian government's rural electrification programme for rural development.

Recently, a team of officials met to align policies and regulations of the two countries.

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## NEW HIGH PRESSURE GAS PIPELINE OPENS IN SOUTH AFRICA

Nampak Glass has commissioned a 1km-long high pressure underground pipeline to tie into its newly constructed Pressure Reduction Station at its head office in Germiston, South Africa. The pipeline feeds off the existing Sasol natural gas transmission network.

The construction of the pipeline was overseen by project management team, SAIYL, and commenced in April 2016, while Energas Technologies was commissioned to supply electric heaters, filter separators, flow meters, insulation joints and valves. A member of Southern African Gas Association, Energas is the distributor for Mokveld in South Africa.

“This high pressure pipeline and metering station is one of the few in South Africa that is not owned by Sasol,” said Morkel du Preez, Saiyl project engineer. “Tight schedule controls and project acceleration methods were instituted to ensure that the project was completed by its original commissioning date.”

The new pipeline construction includes a pressure reducing and metering station with two parallel lines; one in service and the other on standby.



**Nampak Glass commissioned a 1km-long underground pipeline to feed from the existing Sasol Gas transmission network. (Source: Nampak Glass)**

## Putting African architecture on the map

A new awards scheme, led by French construction giant Saint-Gobain, has highlighted the potential for nurturing architectural talent across Africa. “The Africa Architecture Awards have been established to highlight the continent’s innovative and collaborative style of solving problems – architectural or otherwise,” said Saint-Gobain representative, Evan Lockhart-Barker.

The scheme, which has sparked interest from hundreds of applicants, aims to create an awareness of the issues and opportunities inherent in the built environment in Africa.

Lockhart-Barker said the awards will promote an increased awareness of the role and importance of sound architectural theory and practice across Africa and the diaspora.

Architecture has the potential to shape, solve and innovate in Africa and, with 54 countries all varied in culture, geography, climate and societal structure, provides inspiration for the rest of the globe.

Lockhart-Barker added, “Saint-Gobain simply wants to be the catalyst that brings African architecture and its diaspora into the global conversation, in response to the clear need for such dialogue.”



**Evan Lockhart-Barker. (Source: Saint-Gobain)**



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## CONSTRUCTION OF GHANA PRIVATE HOSPITAL INCHES FORWARD

Construction of what will ultimately become West Africa’s largest private hospital took a big step forward last month after the project secured new financing from private investors.

Eco Medical Village will be built right in the heart of Accra, offering another example of Ghana’s fast-growing economy, off the back of its nascent oil and gas sector.

The new state-of-the-art facility is being developed by Eco Medical Village Ltd, a Ghana-based investment company. It signed a US\$300mn financing package with American private equity firm Milost Global Inc ahead of a series of IPO roadshows in the USA, Canada, and Africa during the month of August.

The goal is to develop a 500 ward (1,100 bed) international standard hospital complex for people across the region who would otherwise fly to South Africa, Europe or North America for treatment.

Peter Ahiekpor, chief executive of Eco Medical Village Ltd, said, “Our final objective is to replicate this medical facility model across the length and breadth of Africa. Once again, this investment shows there is a market in Africa for medical services that will improve the life expectancies of the average African.”



**New investment for West Africa’s largest private hospital. (Source: Eco Medical Village)**

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# Africa's construction market on the move, despite regional differences

**P**ositive growth across much of Africa, an uptick in investor appetite, and an urgent need for more infrastructure bodes well for the continent's construction sector.

This is evident in the movement of a number of flagship projects across the region recently, from the development of the railway network in Tanzania, to new thermal power plants in Ghana.

It is good news for local construction firms and for the international brands supplying equipment into this evolving region.

There is no reason to suggest that this momentum will not continue either, according to the African Development Bank (AfDB), which sees economic growth for the continent rising to 3.4 per cent in 2017, up from 2.2 per cent the year before. In 2018, growth is expected to rise further, it says, expanding by 4.3 per cent, if fuelled by a recovery in commodity prices. East Africa was the fastest growing region, followed by North Africa, as other areas struggled more.

## Regional spread

Still, with dynamic private sectors, great entrepreneurial spirit and its vast resources, Africa has the potential to grow faster.

Country differences are tangible, with Ghana drawing in huge private sector investment as it expands its energy sector, onshore and offshore.

Indeed, as a region, West Africa had the most number of projects (with 92 projects) and also the most terms of value, at US\$120bn, in a survey by consultants Deloitte on construction industry trends. Together, West Africa and southern Africa accounted for almost two-thirds of projects in the survey.

The private sector is responsible for carrying out the largest slice of construction activity, while leading international partners working on the ground, include China, Italy, France and the UK.

Similarly, project funding comes from various sources, with governments taking up the greatest share – around a third of spending.

In terms of industry sectors, transport is the primary focus for construction activity, accounting for about a third of all projects, followed by real estate developments, then energy, shipping and ports.

## Major projects

The number of major construction works underway best illustrates the high level of activity taking place right now across the continent. A high profile example is the development of Tanzania's railways sector, as part of plans by the East African country to boost trade with its landlocked neighbours.

Earlier this year, it signed a deal worth

US\$1.2bn with a consortium of international firms to build a 300 km line, connecting its main port with the interior.

In total, Tanzania wants to build a 2,561 km standard gauge railway network connecting its main Indian Ocean port of Dar es Salaam to eastern and southern Africa's hinterland, which loops into the Democratic Republic of the Congo, Zambia, Rwanda, Burundi and Uganda. State-run railway firm, Reli Assets Holding Company Ltd (RAHCO), is working with Turkish firm Yapi Merkezi and Portugal's Mota-Engil Engenharia e Construção África, South Africa.

Next door, in neighbouring Kenya, work has begun on what will be Africa's tallest skyscraper.

Known as The Pinnacle, it is scheduled for completion in December 2019. Pictured, right, is an artist impression.

The first tower at 300 m tall will be made up of luxury apartments and offices. The second 215 m tall tower will include a 255-room Hilton Hotel.

The developers are Jabavu Village, the Kenyan real estate arm of Hass Petroleum and White Lotus Group, which are ploughing US\$200 mn into the project, while the contract to build the towers went to China State Construction Engineering Corporation (CSCEC).

## PPP

Of course, obtaining funding for driving forward these major projects is often the greatest challenge, especially in the absence of abundant foreign cash from the Middle East or China.

This is feeding interest in collaborative project delivery methods, which are becoming increasingly popular.

Across Africa, the Public Private Partnership (PPP) model has become increasingly critical as a means to deliver both social (hospitals and schools) and economic infrastructure such as ports, railways, roads and airports.

"PPP arrangements are particularly useful for large complex infrastructure projects that require highly-skilled workers and a significant capital outlay to execute," Deloitte said in a recent update.

"The PPP model is also useful in countries that require the state to legally hold an interest in any public infrastructure, but permits a level of private sector participation."

In Africa's most populous state, Nigeria, there are multiple project examples, including Muritala Muhammed airport in Lagos, built under a Build Operate Transfer (BOT) basis, and, likewise, for the main airport road.

On a smaller scale – and potentially as a solution to Nigeria's perennial energy shortages – the

government has utilised similar models for the development and rehabilitation of small and medium-sized hydro power projects.

## Opportunities

Naturally, the uptick in activity spells opportunity for contractors on the ground, and for machinery and equipment suppliers from around the globe.

Shandong Lingong Machinery Company (SDLG) has just introduced its first asphalt compactor, RD730, to the Africa market to meet rising construction demand.

Shahir El Essawy, SDLG's area business director, highlighted the growth in infrastructure work in Africa as a major motivation behind the company's new double drum asphalt compactor.

"In Africa, wherever one travels, it seems they will find road-building crews these days," said El Essawy.

Major road projects include Senegal's Dakar-Diamniadio highway, which links the capital to the new economic centre of Diamniadio, and Blaise Diagne airport, and also serves as a junction between Dakar port and the Dakar-Bamako-Ouagadougou-Niamey trans-West African highway.

Underlining the confident mood, one of South Africa's top builders, Wilson Bayly Holmes – Ovcon Limited (WBHO) recently purchased a 40 per cent stake in UK construction firm, the Byrne Group, in order to develop its interests overseas.

WBHO recently highlighted a "strong local order book" for its South African business, with the award of the commercial crude oil terminal project at Saldanha in Western Cape. For its roads and earthworks division, it also cited an uptick in activity in the mining sector, reporting an 18 per cent increase in orders during the first half of 2017, and securing new mining projects in Guinea, Burkina Faso and Ghana. ■

By Martin Clark



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# Homogeneous mix from the laboratory to the plant

CIBER, leading manufacturers of hot mix asphalt plants, provides an insight into making quality concrete.



Asphalt plant in production.  
(Source: CIBER)

**P**roducing quality asphalt mix at a low cost is a challenge faced by constructors all over the world. Customising asphalt concrete according to the specific requirements of each road is necessary for the pavement's sustainability.

The manufacturing process of the asphalt coating starts with the creation of the mix project in the laboratory, which takes place under controlled conditions and depends on the materials available locally. The process continues in the asphalt plant and is influenced by equipment technology and by good machining practices. It is dependent on weathering and on the full logistic process of inputs. The production of a project that respects the laboratory and the plant's limits has a higher probability of success.

## Aggregates and asphalt cement

Regarding the evaluation of the

properties of aggregates, some of them influence the quality of the mix produced in the plant, such as water absorption, abrasiveness, and the equivalent sand index. In the laboratory, before the mix with bitumen, the aggregates are introduced in a kiln to remove all water from the rock, and this process may take up to 24 hours. In the plant, the aggregates spend approximately two minutes in the drying drum; then, the more porous aggregates (index higher than 1.5 per cent) may resist complete drying during large-scale production. Thus, changing the drying time according to porosity may be important. Marcelo Zubaran, product specialist and application engineer at Ciber Equipamentos Rodoviários said, "The rock presents a higher attraction to the water than to the binder. Therefore, if the water from the rock is not fully removed, the adhesiveness of the mix is

compromised. Another relevant parameter is abrasiveness, which may influence the breaking of aggregates during the mix in the plant, increasing the superficial area of the aggregates and reducing the thickness of the asphalt film on the faces of aggregates.

This phenomenon in the plant affects adhesiveness since it presents more aggregates faces for the binder coverage. In the laboratory, the mixer presents, in general a shearing force that is much lower than the plant and does not tend to break the aggregates. The sand equivalent measures the amount of clay contained in the fine fraction of the aggregates and it is a signal of the mix adhesive capacity. The clay affects the complete drying of aggregates since it maintains the moisture in this mineral and may damage the adhesiveness and homogeneity of the mix, but it has little influence in the project design in the laboratory.

The application of some materials also influences the mixes homogeneity and performance. The use of river sand reduces the mix's shearing resistance, both in the laboratory and in the plant. The impact of sand during the production in the plant is on the amount of water retained in the minerals, and it damages adhesiveness. Hydrated lime can be used as a filling material or an adhesiveness improver (when mixed with acid aggregates, such as granite). However, dolomitic origin lime almost does not react chemically with acid aggregates and is just used as a filling material.

As for the batch curve that, in the laboratory, can be drawn according to the volumetric and mechanical requirements of the mix without presenting homogeneity issues, in the plant, discontinuous curves or excess of large aggregates can reflect on the mixing time in order to obtain a homogeneous mix.

When it comes to asphalt cement, the impact of viscosity on the project and production in plant stand out. The binder used in the preparation of the project presents specific properties and it is heated in a kiln according to the need. Modified asphalts tend to improve the mix adhesiveness in the laboratory when heated precisely according to their viscosity. In the plant, it is relevant to measure the viscosity before machining and to correct the heating temperature of the binder whenever there is variation of property, a common fact when using modified asphalts.

### Properties of the mix

Some properties of the mix influence the production in the plant, such as the volume of voids and the relation between filler and bitumen. The first consists of air voids in the mix that cause deformation of the pavement under load (bending). The international specifications demand a volume of voids of four per cent for dense mixes. Thus, dense mixes with a voids volume above four per cent may present a coating of asphalt on the aggregates' faces that is too thin and, in the plant, it may affect the mix adhesiveness, requiring a change of the mixing time. Another important parameter is the filler/bitumen relationship. The international specifications limit this relation to 0.6 to 1.2 (filler weight divided by the asphalt weight). The higher this index, the thinner the asphalt coating on aggregates, also damaging adhesiveness. In this case, there is a need to increase the time of the mix, a limited condition in the plant or an influencing one on the rate of production. In the laboratory, the time of the mix is determined by the mixer equipment used but it could be more than three minutes, a time that is much higher than the plant's time.

### Technologies and good practices

The asphalt plant is responsible for reducing the mix developed in the laboratory, but at a high production rate. Whereas in the laboratory it

may take over one day to produce a few samples, the plant may manufacture over 100 tons per mixing hour, depending on the model, conditions of materials, and place of manufacture. The main functions of the plant are dosing the aggregates, drying and heating them according to the project's temperature, filtering the gases coming from combustion, mixing the aggregates with the asphalt cement and storing the mix to be loaded to the truck later on.

As for the dosing, the plant should ensure the proportion of aggregates according to the project, as long as the batch size of the aggregates is homogeneous. In continuous production flow plants, it is necessary to check the batch size on the belts to confirm and compare to the batch size of the aggregates (dosing belts) and of the mix (conveyor belt). The technology applied on continuous plants, such as the pick up system for control and information on the real belt speed and the digital system of data transfer from the load cell to the plant's computer, translate the state-of-the-art of dosing in continuous production. It is also important in continuous flow asphalt plants not to mix aggregates among adjacent silos, and thus, the volume of the silo and the dosing width of the loader are important points.

Hydrated lime, when used in the project, should be introduced directly in the plant's mixer, preferably in dry mix zone (mix of aggregates only before bitumen injection) in discontinuous or continuous plants with external mixer pug mill type. Calcitic lime in contact with acid aggregates reverts the superficial polarity of those rocks, allowing for a better adhesive binding with the asphalt binder.

As for the bitumen dosing, its temperature is the main variable, which affects viscosity directly. In applications with modified asphalts, it is fundamental to check the viscosity of the binder when it gets to the construction site through a viscometer Brookfields before



In the laboratory, the time of the mix is determined by the mixer equipment used. (Source: CIBER)



Discharge bin with geometry to avoid heterogeneous mix. (Source: CIBER)

machining and to adjust the temperature of binder heating. The mix of aggregates with asphalt with viscosity above the ideal point (low temperature) may damage the mix adhesiveness. If the binder is heated above the ideal point (low viscosity), it may start an aging process, damaging the performance of the mix on the pavement through the loss of flexibility. In continuous plants, the asphalt pump depends exclusively on the flow of the plant and it is configured by the manufacturer regardless of the type of asphalt. The suction piping (between the tank and the pump) should be analysed according to the type of asphalt. The more viscous the binder, the larger the suction piping should be to fully fill the pumps' gears.

Regarding drying, the aim, in the plant, is to remove all the moisture from the rock, from its surface and absorbed by the rock. In a lab, it happens after 24 hours. It is important to adjust the drying time according to aggregates moisture,

which can be done mechanically or electronically, depending on the plant's technology. Aggregate samples after drying should be removed during the production (between the drying drum and the mixer).

The bin of ready mass can be adjusted also, according to the mix in order to avoid heterogeneous mix. Depending on the project, the mix tends to segregate. It is important to avoid the free fall of the mix for a long time. Cushioning the fall of the mix helps keep it homogeneous.

At the outlet of the ready mass bin, plates that guide the discharge of material into the truck may be applied.

Loading the mix into the truck that will take it to the point of application should happen in stages, that is, to load the front part or the back part of the truck's dump in sequence and load the middle part of it. The goal is to avoid the tilted plan that tends to generate heterogeneous mix. ■



Carmix 3500 TC  
(Source: Carmix)

# Carmix delivers for challenging mine site project

The Italian construction firm supplies a range of self-loading concrete mixers for North Mara gold mine in Tanzania.

Italy's Carmix is a long-established player in the Africa market, with a footprint that stretches across the continent.

The company supplies a range of critical machinery and equipment that has helped deliver major projects or in strategic areas, such as mining.

Among its project portfolio is the North Mara gold mine in Tanzania.

Carmix supplies a range of self-loading trucks, dumpers and silos that have been designed to meet all loading, mixing, transport and unloading requirements.

The machines are a familiar sight on many work sites in Africa, said Carmix marketing director Manuela Galante, Carmix.

"The African market plays an essential role for us, as for many years, Carmix has been selling with success in many countries all over Africa: from the north, like Tunisia, Algeria and Morocco, through to central states such as Chad, Ethiopia, Senegal, Côte d'Ivoire, Angola, Mali, and down to Tanzania, Namibia and South Africa in the south."

She said Carmix has built its success on delivering quantities reliably and consistently for many

years, and to multiple customers.

"What makes Carmix unique is our ability to mix, transport and deliver any kind of concrete directly to the job site, in any condition of work, latitude or climate, allowing the user to control the cost and the quality of each single cubic metre of concrete," says Galante.

## Carmix 3500 TC

She added, "Nowadays, even in the most remote corner of the world or on the smallest job site, quality and cost control are required. That's why our top selling model is Carmix 3500 TC equipped with Load Cells system and Promix. With these two features the operator can control the mix of the concrete produced and the stock of cement in the job site; moreover, he can certify the concrete on site."

Today, productivity means having more control and information to achieve consistent performance in terms of quality and quantity, which is where the machine's digital technologies can play a decisive role.

The Carmix 3500 TC offers aerodynamic lines and an attractive profile, and plenty of power, with a display in the cab receiving information in real time.

The concrete mixer has an actual yield of 3.5 m<sup>3</sup>, a double mixing blade, a mixing and jet speed.

It boasts a 600-litre loader with a hydraulic command opening to load the sand directly into the barrel. Finally, the machine can also handle, even when fully loaded, gradients up to 30 per cent.

Galante says the Carmix 3500 TC ensures extremely reliable data on the quality of the concrete supplied, inspired by the Carmix's philosophy that the self-loading cement mixer was born to offer a machine that can prepare concrete on site. Less mechanical stress, due to the mixing and transportation, results in a decreased need for additives.

## North Mara gold mine

Other machines too have played a major role in delivering some of Africa's big projects.

On the North Mara project, in north-west Tanzania, the Carmix 5.5XL was selected, a model that combines easy manoeuvring with high output in situations requiring power, versatility and precision.

The mine site works an average of 8,000 tonnes of minerals per day from two deposits.

A complete concrete mixer system on four wheels, the Carmix 5.5XL produced large quantities of concrete directly at the worksite. The mixer unit has a capacity of 7,600 litres, with an effective output for the mix of 5.5 m<sup>3</sup>. Inside it, a system with a double mixing blade, a drum with hydraulic rotation and a planetary reducer provide a uniform and compact mix.

In addition, a Perkins 112 kW motor with six water-cooled cylinders and an integrated four-wheel drive system ensure the power required to work at difficult worksites.

In Tanzania, for the underground seam the Carmix machine was required to produce the concrete necessary for strengthening the walls of the entrance tunnels, to avoid the detachment of debris.

The difficult terrain, with steep slopes, required a machine that could operate under extreme conditions, and yet still produce concrete of the highest quality.

The successful mine project has produced over two million ounces of gold since its start up, highlighting the strength of the concrete and other materials that underpin it. ■



# Leader of the pack

JCB, the iconic construction equipment manufacturer, is a familiar face on project sites across Africa.

One of the much loved names in Africa's construction market, JCB continues to innovate to bring the latest technology to project sites across the continent.

In fact, in many countries worldwide, the brand is practically synonymous with the industry.

JCB construction equipment and machinery have played a major role in delivering countless projects in numerous African states, with customers basing their decisions on quality, reliability and robustness.

One of the latest machines to come out of the JCB stable is the new 116D single drum soil compactor. It's a high-performance roller designed for infrastructure construction and maintenance, general construction and landscaping projects, initially available in Africa, Asia and the Middle East.

The 116D machine delivers low fuel consumption, high compaction performance and improved operator comfort.

Tim Burnhope, JCB's chief innovation and growth officer, said it is ideally suited for heavy-duty performance, perfect for the testing conditions presented in Africa.

"The new JCB 116D delivers improved compaction, reduced fuel consumption, is easy to service and has the looks to match its performance," he said.

"The machine covers up to 75 per cent of the non-legislated soil compaction market and represents a major advance in JCB's single drum roller history."

He said JCB has optimised the balance between the machine's dynamic force and its frame, to maximise compaction without transferring vibrating forces into the chassis. Insulating rubber mountings further reduces vibration for the operator.

The machine has a 2.1m drum width and a working speed of 0-5kph in both directions; maximum travel speed is 10.5kph, making it easy for operators to relocate the machine on site.

The 116D is powered by a proven JCB DieselMax four-cylinder engine with mechanical fuel injection, to allow the engine to run with lower quality fuels. It is also highly efficient: in trials with competitive machines, the 116D required up to 17 per cent fewer passes to achieve the desired

material density, saving time and money for customers.

## Customer facing

But the new compactor represents just a fraction of JCB's expanding portfolio, with a product range of more than 300 machines comprising backhoe loaders, industrial forklifts, generators, large excavators, telescopic handlers and much more. All of the equipment range is built to last and engineered to perform.

JCB's Africa advantage also comes through its long experience in the market, and proximity to customers.

It operates through a talented and experienced network, such as Kemach JCB, which is the sole distributor of JCB earthmoving equipment in South Africa, providing a full range of parts and product support.

In addition, it offers a 24/7 expert service by skilled technicians, through an extensive African footprint, from its national office based in Gauteng. Other regional offices are situated in Johannesburg, Pretoria, Middelburg, Rustenburg, Durban, Richards Bay, Bloemfontein, Mthatha, Cape Town, east London, Port Elizabeth and George.

To guarantee seamless operations throughout Africa, Kemach JCB's network of distributors and service dealers is also strategically positioned in markets further afield in Windhoek, Nelspruit, Swaziland, Polokwane, Upington, Schweizer Reneke, and Vryheid.

At the heart of JCB's success, however, is the customer.

Indeed, the newly released 116D compactor, for instance, comes as standard with JCB LiveLink. This telematics system is available for the first time on a JCB soil compactor of this type and allows managers to remotely access working hours, vibration and travel data. The system also provides a tracking service for improved machine security.

The technology is already available on other machines and across multiple territories.

In Mozambique, for instance, the new JCB 3DX Super is fitted with air conditioning and LiveLink telematics and is now on sale and available at Matola and Chimoio.

It's just another market where the iconic construction equipment manufacturer is making a big impact. ■



JCB's new 116D single drum soil compactor.  
(Source: JCB)

# Major road in northern Kenya opens up trade with Ethiopia

The construction of the Isiolo-Marsabit-Moyale road provides enormous economic potential to the East African region, once marginalised by governments. Mwangi Mumero reports.

The completion of the 505 km Isiolo-Marsabit-Moyale road in Northern Kenya has fostered trade with Ethiopia, opening up the neglected region as well as boosting tourism and investment.

The road forms part of the Great North Road that stretches from Namanga on the Kenya-Tanzania border, through Nairobi and up north to Moyale, on the Ethiopian border.

The road has become a major cog in the trading wheel with Ethiopia, South Sudan, Kenya and Tanzania.

Funded by the Kenyan government, the African Development Bank and the European Union, the road has cost an estimated US\$1.63bn, according to the Kenya Highways Authority.

“The road has had an impressive positive impact on the region’s security, having opened up an area that was previously viewed as ‘marginalized’. It will boost regional trade,” said James Macharia, Kenya’s transport cabinet secretary.

Since Independence, more than 50 years ago, northern Kenya has been marginalized as governments viewed the arid and semi-arid region as of little economic value. Insecurity caused by scarce resources, such as pasture and conflicts over livestock have also deepened its negative image.

## LAPSSET

However, discoveries of oil in the region, coupled with devolution of government services to the counties, have led to increased interest in marginal areas in the country.

The road is also part of the of the Lamu Port-South Sudan-Ethiopia Transport and Development



The development of the Isiolo-Marsabit-Moyale road has boosted trade in the East African region. (Source: Mwangi Mumero)

Corridor (LAPSSET), a project that will involve the development of an 800 km road system, a standard gauge railway, a 1,300 km oil pipeline, an oil refinery and an airport.

African Development Community (SADC), the African Development Bank (AfDB), the World Bank and the international Finance Corporation (IFC) are institutions in the LAPSSET project.

The new road has already started creating new business ventures. According to Marsabit Governor, Ukur Yattani – the county that has a 500km border with Ethiopia – has exported more than 30,000 sheep to Kenya’s northern neighbour, earning local herders millions of shillings. Beef cattle, goats and camels are also a common feature as they are transported to the slaughterhouses in Nairobi and Mombasa that has given a real boost to the local economy. The export of live animals from Marsabit to the Gulf States has also benefited from the new road.

To facilitate trade in meat exports, the county government is set to construct a Ksh 300mn (US\$3mn) international abattoir in Marsabit. Local pastoralists earn an estimated Ksh 1bn (US\$10mn) from livestock annually.

The county government recently signed a programme for sustainable

“ The road has had an impressive positive impact on the region’s security ”

JAMES MACHARIA, KENYA’S TRANSPORT CABINET SECRETARY

This is part of the Lamu Port development – a joint venture by Kenya, Ethiopia and South Sudan that is expected to cost US\$22.5bn. The three countries will share the cost that will be undertaken through a Private Public Partnership.

## Boosting development

The African Union, COMESA, the East African Community (EAC), the South

Recent completion of the Isiolo airstrip and the adjoining resort – all part of the LAPSSET project – have boosted travel in the region, making the road an important aspect of the development agenda.

The goal of the LAPSSET project is to facilitate trade, promote regional economic integration and interconnectivity between nations of the Horn of Africa and East Africa.

peace and socioeconomic transformation funded by the United Nations Development Fund (UNDP) in a bid to promote trade with Ethiopia.

Marsabit County relies on pastoralism and little crop farming as it is arid with little rainfall. In the neighbouring Turkana County, oil was discovered by Tullow Inc and production is underway.

Beyond the cross-border trade, the road has spurred growth in local towns such as Marsabit and Moyale. Previously dull and sleepy towns, the two urban centres are now vibrant with traders and investors flocking from Kenya and beyond looking for business opportunities.



The road has boosted growth in the local towns of Marsabit and Moyale. (Source: Mwangi Mumero)

## “ Vast tracks of land lying idle are calling for developers ”

**BENSON KINYUA,  
BANKER**

“It has become easy for goods and people to flow into the region. It takes just six hours from Nairobi to Marsabit by road. Vegetables, fresh fruit and other merchandise are now available in Marsabit,” said Hamdan Harub, a local resident and an investor in Marsabit town.

The cost of doing business has also dropped as fuel consumption and vehicle repairs have reduced

with the construction of the road, according to local traders.

### **Bandit attacks**

Marsabit town is 503 km north of Kenya’s capital Nairobi. Before the new tarmac road, it took 13 hours for a hard-body, four-wheel vehicle to travel the rough stretch to Isiolo, the closest town connected to the tarmac road. Only lorries and trucks used the road, which was prone to bandit attacks along the bushy, parched areas.

“Attacks on the roads have declined as buses and other vehicles using the roads move faster. Investors constructing new townships have elevated security levels,” said Harub.

Today, small saloon and pick-up vehicles are often seen passing along the Isiolo-Marsabit road that

cuts through rich wildlife hinterland with elephants and giraffes often spotted – boosting tourism.

Alongside investor appetite has come demand for land and real estate development, and space for various services, such as education and financial institutions, and general retail – overstretching existing facilities.

Land prices have also risen to new levels with a 50 metre by 50 metre plot selling at Ksh 2 million (US\$20,000) compared with Ksh 400,000 (US\$ 4,000) two years ago. Modern hotels, supermarkets, conference facilities and office blocks are some of the real estate projects underway in the now bustling township of Marsabit, a former colonial outpost.

“Real estate remains grossly under-developed, leading to shortage of housing. This is one area investors should venture into to reduce crippling shortages, even as demand soars. Vast tracks of land lying idle are calling for developers,” said Benson Kinyua, a banker working in the town.

Sewage services are also being improved by the county government while the national government is currently constructing a Ksh 2.6bn (US\$26mn) dam to supply water to residents and its environment.

### **Tourism boost**

Tourism is another sector that has

seen immediate benefits of the new road. The northern tourism circuit that includes Mt. Kenya, Samburu, Meru, Aberdares and Marsabit National Parks as well as a number of conservancies has opened up.

“We are now better connected to country, there is less insecurity and economically, we are well off compared to before. With the opening up of the last Kenyan section of the Trans-Africa Highway Corridor, Northern Kenya will take off, with lots of economic activities,” said Hussein Dado, another Marsabit resident.

The Isiolo-Marsabit-Moyale road is part of the wider programme to improve infrastructure and invigorate investment and development in marginal areas in the East African region.

In recent years, regional trade between member states of the East African Community (EAC) has increased by 40 per cent, prompted by good road and rail networks.” The East African Community seeks to improve regional transport infrastructure to support economic and social development programmes in the region, promote tourism and foster regional integration and at the same time reduce the cost of doing business by supporting cross-border and international trade,” said Gabriel Negatu, AfDB’s Regional Director for the East Africa Resource Centre. ■



Improving the quality of roads in East Africa. (Source: Mwangi Mumero)

## LIEBHERR R 936 CRAWLER EXCAVATOR WITH STAGE IV / TIER 4F EMISSION STANDARDS

Bodarwé was looking for a replacement for its versatile Liebherr R 934 crawler excavator and decided on the successor model from Liebherr, the R 936.

This excavator is characterised by its high level of driving and operating comfort and complies with the current emission standards. The Belgian company operates in road construction, earthmoving, mining, as well as in transport, and places high demands, which Liebherr has been fulfilling for over 30 years.

The new R 936 has clocked up 1,000 operating hours. The excavator is used for diverse applications mainly in road construction, earthmoving and civil engineering. R 936 crawler excavator has a powerful diesel engine with 170 kW / 231 hp, which complies with the current Stage IV / Tier 4f emission



Liebherr's new R 936 crawler excavator can be used for applications in road construction and earthmoving. (Source: Liebherr)

standards. It also has a LC undercarriage and 750 mm wide track pads.

With an operating weight of 35 tonnes and a counterweight of 6.3 tonnes, the excavator can be easily transported from one construction site

to the next. In order to ensure maximum productivity and versatility, the model has an adjustable boom of 6.80 m and an extended stick of 3.10 m. For earthmoving work the crawler excavator is equipped with a 1.75 m<sup>3</sup> bucket and quick coupler.

The operators at Bodarwé benefit from the machine's adjustable boom, which allows them to dig deeper than with a traditional mono boom, and which better meets their requirements and covers their diverse range of applications.

The final key to success in daily use is the particularly comfortable operator's cab, which is mounted on viscoelastic bearings to absorb the vibration emissions of the machine.

The clamps that secure the hose lines are fitted with rubber cladding to further reduce noise levels.

### NEW APP TO QUANTIFY SUSTAINABILITY OF COIL COATINGS

Beckers Group, leading worldwide supplier of coil coatings, has launched a tool to quantify the sustainability of its coating products.

The Beckers SI app is designed for architects, designers, building planners and steel makers: individuals or companies who are involved in the planning or construction of a building and aim to work with green materials without compromising on the design.

For different applications such as roofing or façade systems, the Beckers SI app shows users the collective impact of the materials used to make the coating, as well as the value certain functions add to a construction. This enables them to make an educated decision and can also be rewarded by green building rating schemes such as LEED and BREEM.

"At Beckers, we strongly believe in providing solutions that meet today's needs without compromising those of future generations. The Beckers SI app offers an easy way to find more sustainable coil coating materials and shows clearly that our coatings can do much more than decorate," said Bernd Vogel, chief technology officer of Beckers.

Nicklas Augustsson, Beckers' Global Sustainability Director added, "With the Beckers SI app we lead the way towards a more sustainable building design. We show which of our coatings are produced with sustainable raw materials and highlight functions that fully support green building trends."

The Beckers Group is a leading worldwide supplier of industrial coatings and the global market leader of coil coatings. Beckers is focused on developing sustainable coatings.

### Virtual technology now used for blast training in SA

Training for underground blasting has just taken a technological leap forward, with the installation and commissioning of Africa's first virtual reality blast wall with rear-view projection, powered by Simulated Training Solutions, at the Murray & Roberts Cementation Training Academy near Carletonville, west of Johannesburg.

"We are excited about the value that this facility will bring to our integrated learning programme," said Tony Pretorius, education, training and development (ETD) executive at Murray & Roberts Cementation. "A tool like this is long overdue in the underground mining space, as traditional teaching and training methods for underground blasting practices are not as immersive and hence, effective as we would have liked them to be."

Normal whiteboard training methods are limited to unrealistic representations, so many learners do not fully grasp the full concept of correct marking and timing of a blast round, he says. The VR blast wall, by contrast, offers a three-dimensional impression through the use of 3-D glasses in a containerised application which replicates the underground environmental conditions, and provides a more super realistic 'look and feel', right down to the workplace temperatures and sound effects.

"The VR blast wall is designed to teach workers practically how to take line and grade, mark off the blast pattern/burden and time the round to ensure the correct firing sequence in pursuance of a safe quality blast," he continued. "We have invested in this technology because it can improve the performance of the learners in our three key priority areas to achieve a daily, safe, quality blast. There is no silver bullet in the learning process, but advances like these continually improve the combined impact of all our integrated educational initiatives."



The virtual reality blast wall teaches workers to achieve a daily, safe, quality blast. (Source: Murray & Roberts Cementation)

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# CONSTRUCTION & MINING Buyers' Guide

Section One: Listings by Category

Section Two: Suppliers

Section Three: Agents & Subsidiaries in Africa

Please mention African Review when contacting your supplier

## Section One: Listings by Category

### AIR COMPRESSORS

Coelmo SpA  
Cummins Power Generation  
D&J Exports Ltd.  
Doosan Portable Power

### Diesel Driven

Aggreko  
Atlas Copco Portable Energy Division  
Doosan Portable Power  
MAN Truck & Bus AG  
Yellogen Ltd.

### Electric

Altaaq Global Caterpillar Rental Power  
Atlas Copco Portable Energy Division  
DHYBRID Power Systems GmbH  
HELUKABEL South Africa (Pty) Ltd.  
HIMOINSA  
Kohler Power Systems  
Lovato Electric S.p.A.  
Marelli Motori S.p.A.  
Phoenix Contact  
YorPower Ltd.

### AIR CONDITIONING

KTI - Plersch Kältetechnik GmbH

### BUILDINGS

Cavatorta France SAS  
CONMIX Ltd.  
Kirkoskar Proprietary Ltd.  
MERLO GROUP  
Topcon Positioning Middle East and Africa FZE  
Weckenmann Anlagentechnik GmbH & Co. KG  
Weiler GmbH  
Zamil Steel Building Co. Egypt

### CERAMIC AND HEAVY CLAY MACHINERY

ACIMAC-Association of Italian Manufacturers of Machinery and Equipment for Ceramics  
ANIVI Ingegneria SA

### COMPONENTS AND SPARE PARTS

Bertram Conveyor-Systems  
D&J Exports Ltd.  
DEM Group  
ELB Equipment  
ERLAU AG  
Filtration Ltd.  
habermann materials GmbH  
IREM S.p.A. a socio unico  
Kirkoskar Oil Engines Ltd.  
Kohler Power Systems  
MAN Truck & Bus AG  
Marelli Motori S.p.A.

Shandong Shantui  
Construction Machinery Import & Export Co. Ltd.  
SMT Group  
Specialinsert S.r.l.  
TVH  
Wear and Spare Parts  
Wirtgen Group Holding GmbH  
YorPower Ltd.

### CONCRETE EQUIPMENT

ANIVI Ingegneria SA  
Bobcat  
CIFA  
HawkeyePedershaab  
HMD Africa (Offshore)  
IVECO S.p.A.  
KTI - Plersch Kältetechnik GmbH  
Liebherr- Export AG  
Masa GmbH  
Meka Crushing & Concrete Batching Technology  
MERLO GROUP  
Parker Plant Ltd.  
Shandong Shantui  
Construction Machinery Import & Export Co. Ltd.  
Spiroll Precast Services Ltd.  
Trelawny SPT Ltd.  
Vortex Hydra S.r.l.  
Wacker Neuson (Pty) Ltd.  
Weiler GmbH

### Batching Plant

Carmix - Metalgalante S.p.A.  
CIFA  
Ermont SAS / Marini-Ermont  
Fiori Group S.p.A.  
habermann materials GmbH  
HMD Africa (Offshore)  
Jessop & Associates (Pty) Ltd.  
LINTEC GmbH & Co. KG  
Marini S.p.A.  
Masa GmbH  
Meka Crushing & Concrete Batching Technology  
Vortex Hydra S.r.l.  
Weiler GmbH

### Block/Tile- Making Equipment

Jessop & Associates (Pty) Ltd.  
Masa GmbH  
Vortex Hydra S.r.l.

### Breakers

Bobcat  
ELB Equipment  
Fritsch GmbH Milling and Sizing  
HMD Africa (Offshore)  
Indeco Ind S.p.A.  
Jubaili Bros  
Lovato Electric S.p.A.  
Powerscreen  
Soosan Heavy Industries Co. Ltd.  
Wacker Neuson (Pty) Ltd.

### Concrete Equipment - Other

Carmix - Metalgalante S.p.A.  
Cavatorta France SAS

CIFA  
Doosan Portable Power  
Fiori Group S.p.A.  
habermann materials GmbH  
HMD Africa (Offshore)  
Jessop & Associates (Pty) Ltd.  
KTI - Plersch Kältetechnik GmbH  
LINTEC GmbH & Co. KG  
Masa GmbH  
RATEC GmbH  
Vortex Hydra S.r.l.  
Weiler GmbH

### Concrete Pumps

CIFA  
HMD Africa (Offshore)  
Kirkoskar Proprietary Ltd.  
RATEC GmbH

### Formwork

Agria Machinery Services & Co. Ltd.  
Doka Industries GmbH  
Form - Scaff  
HMD Africa (Offshore)  
RATEC GmbH  
Weckenmann Anlagentechnik GmbH & Co. KG

### Mobile Mixing Plant

ANIVI Ingegneria SA  
Bobcat  
Carmix - Metalgalante S.p.A.  
Ermont SAS / Marini-Ermont  
Fiori Group S.p.A.  
HMD Africa (Offshore)  
LINTEC GmbH & Co. KG  
Marini S.p.A.

### Pipe Making Equipment

Dowson & Dobson Industrial  
habermann materials GmbH  
HawkeyePedershaab

### Recycling

Bertram Conveyor-Systems  
CDE Global  
ELB Equipment  
HMD Africa (Offshore)  
Indeco Ind S.p.A.  
Keestrack n.v.  
Marini S.p.A.  
MB Crusher  
McCloskey International Ltd.  
Powerscreen

### CONSTRUCTION VEHICLES

Aquamec Ltd.  
Bell Equipment Co. SA (Pty) Ltd.  
Caterpillar SARRL  
D&J Exports Ltd.  
DEM Group  
Filtration Ltd.  
HMD Africa (Offshore)  
IVECO S.p.A.  
JCB  
KAMAG Transporttechnik GmbH & Co. KG  
MAN Truck & Bus AG  
NICOLAS Industrie SAS  
Ritchie Bros. Auctioneers

Shandong Shantui  
Construction Machinery Import & Export Co. Ltd.  
SMT Group  
Terex Trucks  
Van Vliet Trucks Holland  
Volvo Construction Equipment

### Construction Vehicles - Other

Caterpillar SARRL  
HMD Africa (Offshore)

### Dump Trucks and Haulers

BKT Tires  
Caterpillar SARRL  
HMD Africa (Offshore)  
IVECO S.p.A.  
MAN Truck & Bus AG  
Mantrac Group  
Panafrikan Group

### Engines, Components and Accessories

Caterpillar SARRL  
Dresser-Rand (A Siemens Business)  
Filtration Ltd.  
HIMOINSA  
Jubaili Bros  
Kirkoskar Oil Engines Ltd.  
Mahindra & Mahindra Ltd.  
MAN Truck & Bus AG  
Motorenfabrik Hatz GmbH & Co. KG  
MTU South Africa (Pty) Ltd.  
Perkins Engines Co. Ltd.  
Volvo Penta

### Site Dumpers

Carmix - Metalgalante S.p.A.  
Caterpillar SARRL  
HMD Africa (Offshore)  
MAN Truck & Bus AG  
Wacker Neuson (Pty) Ltd.

### Tractors

Action Construction Equipment Ltd.  
BKT Tires  
Caterpillar SARRL  
Grupos Electr6genos Europa SA (GESAN)  
IVECO S.p.A.  
MAN Truck & Bus AG  
Mantrac Group  
MERLO GROUP  
NICOLAS Industrie SAS

### Trailers

BEDELCO SPRL  
BKT Tires  
Faymonville Distribution  
Goldhofer Aktiengesellschaft  
IVECO S.p.A.  
KAMAG Transporttechnik GmbH & Co. KG  
MAN Truck & Bus AG  
NICOLAS Industrie SAS  
Wacker Neuson (Pty) Ltd.

### Truck Mounted Platforms

ANIVI Ingegneria SA

IVECO S.p.A.  
MAN Truck & Bus AG

### CONSULTANCY SERVICES

Cummins Power Generation  
Doka Industries GmbH  
NUBA Screening Media  
RATEC GmbH  
Spiroll Precast Services Ltd.  
The Development Initiative Ltd.  
Weckenmann Anlagentechnik GmbH & Co. KG

### CONVEYOR SYSTEMS

Aury Africa (Pty) Ltd.  
Bertram Conveyor-Systems  
IVECO S.p.A.  
ELB Equipment  
FLSmith (Pty) Ltd.  
Keestrack n.v.  
Magni Telescopic Handlers  
McCloskey International Ltd.  
Parker Plant Ltd.  
Phoenix Conveyor Belt Systems GmbH  
QUARRY MINING LLC  
Terex Minerals Processing Systems  
Voith Turbo (Pty) Ltd.

### DEMOLITION EQUIPMENT

Bobcat  
Doosan Portable Power  
Indeco Ind S.p.A.  
JCB  
MB Crusher  
McCloskey International Ltd.  
Powerscreen  
Rockster Recycler  
Volvo Construction Equipment

### DRILLING

ELB Equipment  
MAN Truck & Bus AG  
Soosan Heavy Industries Co. Ltd.  
**Components and Accessories**  
ERLAU AG  
Filtration Ltd.  
HELUKABEL South Africa (Pty) Ltd.  
NUBA Screening Media  
Voith Turbo (Pty) Ltd.  
Weckenmann Anlagentechnik GmbH & Co. KG

### Drilling Machinery and Plant

Bauer Maschinen GmbH  
Doosan Portable Power  
**Drilling - Other**  
Doosan Portable Power

### Piling

Aquamec Ltd.  
Bauer Maschinen GmbH  
CONMIX Ltd.

### Trenching and Pipe Laying

ELB Equipment

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Liebherr- Export AG  
Metallurgica Abruzzese S.p.A.  
Topcon Positioning Middle East and Africa FZE

**EARTHMOVING EQUIPMENT**

Action Construction Equipment Ltd.  
Bell Equipment Co. SA (Pty) Ltd.  
Bobcat  
Caterpillar SARM  
D&J Exports Ltd.  
DEM Group  
ELB Equipment  
HMD Africa (Offshore)  
JCB  
Liebherr- Export AG  
MB Crusher  
Panafrikan Group  
Ritchie Bros. Auctioneers  
Shandong Shantui Construction Machinery Import & Export Co. Ltd.  
SMT Group  
Terex Trucks  
Trimble Germany GmbH  
Van Vliet Trucks Holland  
Volvo Construction Equipment

**Attachments and Accessories**

Bobcat  
Caterpillar SARM  
Indeco Ind S.p.A.  
Magni Telescopic Handlers  
SENNEBOGEN  
Maschinenfabrik GmbH  
TVH

**Backhoe Loaders**

Action Construction Equipment Ltd.  
BKT Tires  
Caterpillar SARM  
ELB Equipment  
HMD Africa (Offshore)  
JCB  
Mantrac Group  
New Holland Construction Machinery  
Swazi-Trac (Pty) Ltd.

**Dozers**

BKT Tires  
Caterpillar SARM  
ELB Equipment  
HMD Africa (Offshore)  
Liebherr- Export AG  
Mantrac Group  
New Holland Construction Machinery

**Dumpsters**

Swazi-Trac (Pty) Ltd.

**Earthmoving Equipment - Other**

BEDELCO SPRL  
BKT Tires  
Caterpillar SARM  
Liebherr- Export AG  
MB Crusher  
Ritchie Bros. Auctioneers

**Equipment**

Action Construction Equipment Ltd.  
CDE Global  
HIMOINSA  
IREM S.p.A. a socio unico  
IVECO S.p.A.  
Kohler Power Systems  
Snorkel

**Excavators**

Aquamec Ltd.  
BKT Tires

Caterpillar SARM  
D&J Exports Ltd.  
ELB Equipment  
JCB  
Liebherr- Export AG  
Mantrac Group  
New Holland Construction Machinery  
Swazi-Trac (Pty) Ltd.  
Wacker Neuson (Pty) Ltd.

**Loaders - Other**

BKT Tires  
Bobcat  
Caterpillar SARM  
ELB Equipment  
Fiori Group S.p.A.  
HMD Africa (Offshore)  
Mantrac Group  
New Holland Construction Machinery  
Wacker Neuson (Pty) Ltd.

**Materials**

CONMIX Ltd.  
Interplast Ltd.  
Lafarge  
SENNEBOGEN  
Maschinenfabrik GmbH

**Mini-Excavators**

Bobcat  
Caterpillar SARM  
Fiori Group S.p.A.  
HMD Africa (Offshore)  
JCB  
Liebherr- Export AG  
Mantrac Group  
New Holland Construction Machinery  
Wacker Neuson (Pty) Ltd

**Motor Graders**

Action Construction Equipment Ltd.  
BKT Tires  
Caterpillar SARM  
ELB Equipment  
HMD Africa (Offshore)  
Mantrac Group  
New Holland Construction Machinery  
Swazi-Trac (Pty) Ltd.

**Paints**

CONMIX Ltd.

**Scrapers**

Caterpillar SARM  
HMD Africa (Offshore)  
Mantrac Group  
Trelawny SPT Ltd.

**Services**

Multotec  
The Development Initiative Ltd.

**Skidsteer Loaders**

BKT Tires  
Bobcat  
Caterpillar SARM  
ELB Equipment  
HMD Africa (Offshore)  
JCB  
Mantrac Group  
New Holland Construction Machinery  
Swazi-Trac (Pty) Ltd.  
Wacker Neuson (Pty) Ltd.

**FREIGHT/LOGISTICS**

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**Dozers and bulls**

D&J Exports Ltd.

**LIFTING EQUIPMENT**

Action Construction Equipment Ltd.  
Bell Equipment Co. SA (Pty) Ltd.  
ERLAU AG  
Grupos Electrógenos Europa SA (GESAN)  
HMD Africa (Offshore)  
IVECO S.p.A.  
JCB  
Kresta Laurel Ltd.  
Liebherr- Export AG  
Magni Telescopic Handlers  
Snorkel  
Terex Trucks  
TVH  
Van Vliet Trucks Holland  
Volvo Penta

**Access**

Snorkel

**Components and Accessories**

ERLAU AG  
HELUKABEL South Africa (Pty) Ltd.

**Cranes**

Action Construction Equipment Ltd.  
D&J Exports Ltd.  
HMD Africa (Offshore)  
Kresta Laurel Ltd.  
Liebherr- Export AG  
SENNEBOGEN  
Maschinenfabrik GmbH  
Soosan Heavy Industries Co. Ltd.

**Hoists**

FLSmith (Pty) Ltd.  
HMD Africa (Offshore)  
Kresta Laurel Ltd.  
Liebherr- Export AG

**Hydraulic**

Voith Turbo (Pty) Ltd.

**Lift Trucks**

BKT Tires  
Mantrac Group  
TVH

**Mechanical**

Voith Turbo (Pty) Ltd.

**Other Materials Handling**

Action Construction Equipment Ltd.  
ANIVI Ingenieria SA  
Aury Africa (Pty) Ltd.  
QUARRY MINING LLC

**Pneumatic**

BEDELCO SPRL

**Telescopic Handlers**

BKT Tires  
Bobcat  
ELB Equipment  
HMD Africa (Offshore)  
JCB  
Magni Telescopic Handlers  
MERLO GROUP  
New Holland Construction Machinery  
SENNEBOGEN  
Maschinenfabrik GmbH  
Snorkel  
Wacker Neuson (Pty) Ltd.

**MOBILE POWER SUPPLY UNITS**

Aggreko  
Aksa Power Generation  
Altaaqa Global Caterpillar Rental Power  
Coelmo SpA  
Cummins Power Generation  
D&J Exports Ltd.

Doosan Portable Power  
FG Wilson  
Green Power Systems S.r.l.  
JMG Ltd.  
Kirkoskar Oil Engines Ltd.  
Kohler Power Systems  
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**Generator Sets**

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Altaaqa Global Caterpillar Rental Power  
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DHYBRID Power Systems GmbH  
Dresser-Rand (A Siemens Business)  
FG Wilson  
Fronius International GmbH  
Generac Mobile Products  
Green Power Systems S.r.l.  
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JCB  
JMG Ltd.  
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Kirkoskar Oil Engines Ltd.  
Kohler Power Systems  
Kohler SDMO  
Kresta Laurel Ltd.  
Lovato Electric S.p.A.  
Mahindra & Mahindra Ltd.  
Marelli Motori S.p.A.  
Morris Site Machinery  
Motorenfabrik Hatz GmbH & Co. KG  
MTU South Africa (Pty) Ltd.  
Visa S.p.A.  
Weiler GmbH  
Yellogen Ltd.  
YorPower Ltd.

**MOTORS/DRIVERS/ CONTROLS**

Phoenix Contact

**PUMPING EQUIPMENT**

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Generac Mobile Products  
HMD Africa (Offshore)  
IVECO S.p.A.  
Kirkoskar Proprietary Ltd.  
Morris Site Machinery  
Varisco S.p.A.  
Visa S.p.A.  
Wacker Neuson (Pty) Ltd.  
Weir Minerals Africa (Pty) Ltd.

**Concrete**

Agria Machinery Services & Co. Ltd.  
Bobcat  
CONMIX Ltd.  
Lafarge  
Meka Crushing & Concrete Batching Technology

**Submersible**

Atlas Copco Portable Energy Division  
Kirkoskar Proprietary Ltd.  
Varisco S.p.A.  
Wacker Neuson (Pty) Ltd.  
Weir Minerals Africa (Pty) Ltd.

**Truck Mounted**

Action Construction Equipment Ltd.  
BKT Tires  
HMD Africa (Offshore)  
MAN Truck & Bus AG

**Pumping Equipment - Other**

D&J Exports Ltd.

FLSmith (Pty) Ltd.  
HMD Africa (Offshore)  
Interplast Ltd.  
Kirkoskar Oil Engines Ltd.  
Motorenfabrik Hatz GmbH & Co. KG  
Varisco S.p.A.

**RAW MATERIALS**

Aury Africa (Pty) Ltd.  
DEM Group  
Lafarge  
SMT Group  
Voith Turbo (Pty) Ltd.  
Wear and Spare Parts

**Crushing, Screening and Washing**

ANIVI Ingenieria SA  
Aury Africa (Pty) Ltd.  
CDE Global  
ELB Equipment  
FLSmith (Pty) Ltd.  
Fritsch GmbH Milling and Sizing  
HMD Africa (Offshore)  
Keestrack n.v  
McCloskey International Ltd.  
Meka Crushing & Concrete Batching Technology  
Minyu Machinery Corp.  
Multotec  
NUBA Screening Media  
Parker Plant Ltd.  
Powerscreen  
QUARRY MINING LLC  
Rockster Recycler  
Terex Minerals Processing Systems  
Volvo Penta  
Wear and Spare Parts  
Weir Minerals Africa (Pty) Ltd.  
Wirtgen Group Holding GmbH

**Grinding Equipment**

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FLSmith (Pty) Ltd.  
Fritsch GmbH Milling and Sizing  
HMD Africa (Offshore)  
Trelawny SPT Ltd.  
Weir Minerals Africa (Pty) Ltd.

**Mixing**

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habermann materials GmbH  
HMD Africa (Offshore)  
MAN Truck & Bus AG  
Masa GmbH

**Quarrying**

Aury Africa (Pty) Ltd.  
CDE Global  
Doosan Portable Power  
Filtration Ltd.  
HMD Africa (Offshore)  
Keestrack n.v  
Liebherr- Export AG  
Magni Telescopic Handlers  
Meka Crushing & Concrete Batching Technology  
Minyu Machinery Corp.  
Powerscreen  
Ritchie Bros. Auctioneers  
Soosan Heavy Industries Co. Ltd.  
Terex Minerals Processing Systems  
Wear and Spare Parts  
Yellogen Ltd.

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Caterpillar SARM  
Cavatorta France SAS  
Ciber Equipamentos Rodoviarios Ltda.  
Doosan Portable Power ELB Equipment  
Ermont SAS / Marini-Ermont  
HMD Africa (Offshore)  
JCB  
Liebherr- Export AG  
MB Crusher  
Panaffrican Group  
Shandong Shantui Construction Machinery Import & Export Co. Ltd.  
Trimble Germany GmbH  
Van Vliet Trucks Holland  
Volvo Construction Equipment  
Wacker Neuson (Pty) Ltd.  
Wirtgen Group Holding GmbH

**Asphalt Plant**  
Ciber Equipamentos Rodoviarios Ltda.  
Ermont SAS / Marini-Ermont  
LINTEC GmbH & Co. KG  
Marini S.p.A.  
Parker Plant Ltd.

**Compaction Equipment**  
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Agria Machinery Services & Co. Ltd.  
BOMAG GmbH  
Caterpillar SARM  
ELB Equipment  
JCB  
Mantrac Group  
Panaffrican Group  
Wacker Neuson (Pty) Ltd.  
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**Management Systems**  
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BOMAG GmbH  
Caterpillar SARM

ELB Equipment  
Mantrac Group  
Panaffrican Group

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Bobcat  
BOMAG GmbH  
Fritsch GmbH Milling and Sizing  
Liebherr- Export AG  
LINTEC GmbH & Co. KG  
Rockster Recycler  
SENNEBOGEN Maschinenfabrik GmbH  
Soosan Heavy Industries Co. Ltd.  
Terex Minerals Processing Systems

**Rollers**

Action Construction Equipment Ltd.  
Agria Machinery Services & Co. Ltd.  
BOMAG GmbH  
Caterpillar SARM  
ELB Equipment  
HMD Africa (Offshore)  
Wacker Neuson (Pty) Ltd.

**Road Building Equipment - Other**

Agria Machinery Services & Co. Ltd.  
BEDELCO SPRL  
Bobcat  
Caterpillar SARM  
Cavatorta France SAS  
Doosan Portable Power  
HMD Africa (Offshore)  
Metallurgica Abruzzese S.p.A.

**Software - Other**

Phoenix Contact

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D&J Exports Ltd.  
Doka Industries GmbH  
Metallurgica Abruzzese S.p.A.

**STEEL**

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KAMAG Transporttechnik GmbH & Co. KG  
Magni Telescopic Handlers  
Zamil Steel Building Co. Egypt

**Fabrication and Structures**

Form - Scaff  
QUARRY MINING LLC  
**Steel - Other**  
ERLAU AG  
Metallurgica Abruzzese S.p.A.  
Zamil Steel Building Co. Egypt

**TOOLS**

DEM Group  
Doosan Portable Power  
Dowson & Dobson Industrial  
MERLO GROUP  
Phoenix Contact  
SMT Group  
Trimble Germany GmbH  
TVH

**Hydraulic**

Kirloskar Proprietary Ltd.

**Mechanical**

D&J Exports Ltd.  
Yellogen Ltd.

**Pneumatic**

BEDELCO SPRL  
Doosan Portable Power  
Dowson & Dobson Industrial  
Trelawny SPT Ltd.

**Tools - Other**

Doosan Portable Power  
Grupos Electrógenos Europa SA (GESAN)  
Specialinsert S.r.l.

**UNDERGROUND & MINING MACHINERY**

Aggreko  
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BKT Tires  
Generac Mobile Products  
JCB  
KTI - Plersch Kältetechnik GmbH  
Liebherr- Export AG  
Magni Telescopic Handlers  
MAN Truck & Bus AG  
Topcon Positioning Middle East and Africa FZE

**USED EQUIPMENT**

Atlas Copco Portable Energy Division  
Bauer Maschinen GmbH

Bell Equipment Co. SA (Pty) Ltd.  
Caterpillar SARM  
D&J Exports Ltd.  
Doka Industries GmbH  
ELB Equipment  
Grupos Electrógenos Europa SA (GESAN)  
JCB  
MAN Truck & Bus AG  
Mantrac Group  
Morris Site Machinery  
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Snorkel  
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Vortex Hydra S.r.l.  
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DHYBRID Power Systems GmbH  
Fronius International GmbH  
HELUKABEL South Africa (Pty) Ltd.  
Jubaili Bros  
Lovato Electric S.p.A.  
Phoenix Contact

**Rental Equipment**

Altaaqa Global Caterpillar Rental Power  
Bauer Maschinen GmbH  
Caterpillar SARM  
Cummins Power Generation  
FG Wilson  
JCB  
Kohler Power Systems  
Mantrac Group  
Visa S.p.A.  
Weir Minerals Africa (Pty) Ltd.

**WELDING EQUIPMENT**

Coelmo SpA  
D&J Exports Ltd.  
Green Power Systems S.r.l.  
Grupos Electrógenos Europa SA (GESAN)  
Interplast Ltd.  
Kohler SDMO  
Kresta Laurel Ltd.  
Morris Site Machinery

**OTHER SITE EQUIPMENT AND MATERIALS**

ANIVI Ingegneria SA  
Bobcat  
Coelmo SpA  
Cummins Power Generation  
DHYBRID Power Systems GmbH  
Doosan Portable Power  
IREM S.p.A. a socio unico  
KTI - Plersch Kältetechnik GmbH

**Fencing**

Cavatorta France SAS  
Interplast Ltd.  
Metallurgica Abruzzese S.p.A.

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Doosan Portable Power  
Generac Mobile Products  
Green Power Systems S.r.l.  
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Jubaili Bros  
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Morris Site Machinery  
Wacker Neuson (Pty) Ltd.

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Interplast Ltd.

**Sand Blasting Equipment**

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Doka Industries GmbH  
Form - Scaff  
HMD Africa (Offshore)

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Web: www.acimac.it  
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ACIMAC is the association of Italian suppliers of plant, machinery, equipment, semi-finished products, raw materials and services for the ceramic (ceramic tiles, sanitaryware, tableware), heavy clay and refractories industries. ACIMAC members include the majority of the sector's companies of various sizes based throughout Italy.

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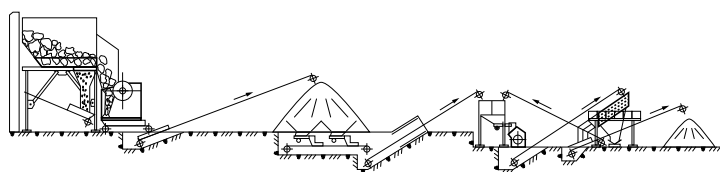
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E-mail: paul.humphreys@be.atlascopco.com

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Construction Technique  
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Liberia - Atlas Copco Senegal SARL  
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Malawi - Atlas Copco Zambia Ltd.  
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Mauritania - Atlas Copco Senegal SARL  
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Construction Technique  
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Togo - Atlas Copco Senegal SARL  
Uganda - Atlas Copco Tanzania Ltd.  
Zambia - Atlas Copco Zambia Ltd.  
Zimbabwe - Atlas Copco Zimbabwe Pvt. Ltd.

**Aury Africa (Pty) Ltd.**

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South Africa  
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Web: www.auryafrica.co.za  
E-mail: matt@auryafrica.co.za

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Web: www.barloworld-equipment.com  
E-mail: info@barloworld-angola.com

**Barloworld Equipment**

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Web: www.barloworld-equipment.com  
E-mail: marketing2@barloworld-equipment.com

**Bauer Maschinen GmbH**

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E-mail: info@bm-fink.de

**BEDELCO SPRL**

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Web: www.benninghoven.com  
E-mail: info@benninghoven.com

**Bertram Conveyor-Systems**



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Fax: +971 4 2767204  
Web: www.bobcat.com  
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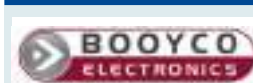
**BOMAG GmbH**

Hellerwald, Boppard, 56154, Germany  
Tel: +49 6742 1000  
Fax: +49 6742 3090  
Web: www.bomag.com  
E-mail: info@bomag.com

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Contact for African Region:  
BOMAG GmbH  
Daniel Werner-Meier  
Area Sales Manager Africa  
Hellerwald  
56154 Boppard  
Germany  
Email: daniel.werner-meier@bomag.com

**Booyco Electronics**



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E-mail: jdengine@johndeere.com

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**Jubaili Bros**

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**Masa GmbH**

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**MTU South Africa (Pty) Ltd.**

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Web: [www.newholland.com](http://www.newholland.com)  
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New Holland Construction is a global, full-line construction equipment brand, with a network of 800 dealers and over 2,100 outlets. The company brings together the strength and resources of its worldwide commercial, industrial and finance organizations. New Holland Construction is a brand of CNH Global NV, a majority-owned subsidiary of Fiat Industrial S.p.A. For more information [www.newholland.com](http://www.newholland.com).

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**NICOLAS Industrie SAS**

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NICOLAS is member of the TII Group, which is world market leader in the manufacture of heavy-

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Web: [www.eu.nlmk.com](http://www.eu.nlmk.com)

**NUBA Screening Media**



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[international@nubasm.com](mailto:international@nubasm.com)

NUBA Screening Media was founded in 1968 and now is one of Europe's most important manufacturers of screening media and accessories for the aggregate and mining industries, encompassing all the products related with screening and classification. Also, have turned a global company in the design and projection of aggregate plants.

**Pan Mixers SA (Pty) Ltd.**



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Fax: +27 11 3974721  
Web: [www.pmsa.com](http://www.pmsa.com)  
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**Panafrican Group**



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The Panafrican Group operates in various countries across Africa where they are recognized leaders in providing equipment and aftersales support solutions including training to the large mining, light and alluvial mining, cement and aggregates, agriculture and forestry, civil infrastructure and power and energy sectors.

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**Parker Plant Ltd.**

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Fax: +44 116 2610812  
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Parker Plant manufactures and supplies a comprehensive range of crushing, screening, asphalt and concrete plants as well as bitumen / road surfacing equipment and bulk handling conveyor systems.

**Perkins Engines Co. Ltd.**

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Web: [www.perkins.com](http://www.perkins.com)  
E-mail: [webmaster\\_perkins@perkins.com](mailto:webmaster_perkins@perkins.com)

**Phoenix Conveyor Belt Systems GmbH**

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Phoenix conveyor belts, headquartered in Germany Hamburg, is an international group company that is more than 150 years old. Phoenix Conveyor Belt Systems GmbH has produced significant advancements in conveyor belt design, which include world records such as the Strongest Belts, the Steepest Overland and the World's Heaviest Belt, to name a few.

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**Powerscreen**

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**Putzmeister South Africa (Pty) Ltd.**

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Web: [www.putzmeister.co.za](http://www.putzmeister.co.za)  
E-mail: [geyserl@putzmeister.co.za](mailto:geyserl@putzmeister.co.za)

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**QUARRY MINING LLC**

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Web: [www.quarrymining.net](http://www.quarrymining.net)  
E-mail: [info@quarrymining.net](mailto:info@quarrymining.net)

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**RATEC GmbH**

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**Rockster Recycler**

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Fax: +43 7223 81000329  
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**Shandong Shantui Construction Machinery Import & Export Co. Ltd.**

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**SMT Group**

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**Terex Minerals Processing Systems**

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**The Development Initiative Ltd.**

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**Topcon Positioning Middle East and Africa FZE**

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**Trelawny SPT Ltd.**

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E-mail: sales@trelawny.co.uk

Trelawny are the leading manufacturer of surface preparation equipment producing products such as concrete, grinders, floor planers and concrete scabblers. Established over 60 years and located in the UK, Trelawny operate through a network of distributors on a global basis. Trelawny want to expand business into the African region.

**Trimble Germany GmbH**



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**Van Vliet Trucks Holland**



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**Voith Turbo (Pty) Ltd.**

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**Volvo Construction Equipment**



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**Volvo Penta**

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**Vortex Hydra S.r.l.**

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Tel: +39 0532 879411  
Fax: +39 0532 866766  
Web: www.vortexhydra.com  
E-mail: vh.sales@vortexhydra.com

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**Wear and Spare Parts**

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The Wirtgen Group is an internationally active group of companies in the construction equipment industry, comprising the brands Wirtgen, Vögele, Hamm, Kleemann and Benninghoven. Products include cold milling machines, recyclers, slipform pavers, surface miners, asphalt pavers, rollers, crushers, screens and asphalt mixing plants.

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- Angola - Movicortes Angola - Equipamentos & Serviços, Lda
- Benin - DEM Ghana
- Botswana - WIRTGEN South Africa (Pty) Ltd.
- Burkina Faso - DEM Group SA
- Burundi - Panafrican Equipment Ltd.
- Cameroun - Kanu Equipment Cameroun Sarl
- Cape Verde - Moviter Equipamentos Lda
- Comoro Islands - UMCL Ltd.
- Congo Brazzaville - Kanu Equipment Congo S.A
- Congo DR - DEM D.R. Congo
- Cote D'Ivoire - DEM Côte d'Ivoire
- Djibouti - Moenco
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- Eritrea - Ergcot
- Ethiopia - Moenco
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- Guinea - DEM Group SA
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- Lesotho - WIRTGEN South Africa (Pty) Ltd.
- Liberia - Kanu Equipment Libéria Ltd.
- Libya - WIRTGEN Libya J. C.
- Madagascar - SODIREX
- Malawi - Machinery Spares and Trading Limited
- Mali - DEM Senegal SARL
- Mauritania - DEM Mauritania
- Mauritius - UMCL Ltd.
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**Yellogen Ltd.**

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Fax: +20 2 38283399 / 97  
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E-mail: egyptmarketing@zamilsteel.com

Zamil Steel established in 1977 in Saudi Arabia, specializes in the design, manufacture and supply of pre-engineered steel buildings. Since its inception, Zamil Steel has supplied more than 50,000 buildings to over 90 countries worldwide, through a dedicated network of 65 direct sales offices in 36 countries.

**Zest WEG Group**



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The Zest WEG Group, a subsidiary of leading Brazilian motor and controls manufacturer WEG, has a strong commitment to contributing to the development of the African region, and has been servicing the mining sector on the continent for more than 35 years.

An in-depth understanding of the harsh conditions found within this sector and years of experience on the continent have ensured the Zest WEG Group service offering is fit-for-purpose. By leveraging best practice engineering and manufacturing capabilities, the group can offer a range of standard off-the-shelf products and end-to-end energy solutions.

From single product installations to individually customised solutions, which are application specific, the latest technology is used to ensure optimum performance and reliability without compromising on energy efficiency. Zest WEG Group's product line-up includes low- and high-voltage electric motors, vibrator motors, variable speeds drives, softstarters, power and distribution transformers, MCC's, containerised substations, mini-substations, diesel generator sets, switchgear and cogeneration and energy solutions, as well as electrical and instrumentation engineering and project management services.

**Agents:**  
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# Section Three: Agents & Subsidiaries in Africa

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**Doka Algeria SARL**

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**EURL Aksa Generateurs Algeria**

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E-mail: contact@aksa-dz.com

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**T.P.S. SARRL Tractor Parts Services**

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**Auto Sueco - Angola**

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**Carlos Spinola**

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**CI & MA Comp. Ind.**

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**Cummins Angola**

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**Himoinsa Angola**

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**Jembas Assistencia Technica Lta.**

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Fax: +244 222 637038  
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**Movicortes Angola – Equipamentos & Serviços, Lda**

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**Benin**

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**DEM Ghana**

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**DEM Group SA**

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The Zest WEG Group, a subsidiary of leading Brazilian motor and controls manufacturer WEG, started out as a South African company and maintains its strong commitment to contributing to the development of the African region.

An in-depth understanding of the harsh conditions found within the mining sector and years of experience on the African continent, have ensured that the Zest WEG Group service offering is fit-for-purpose.

WEG products are engineered to facilitate a safe and reliable mine and plant with operational stability and the highest possible production levels as an objective. Reduced maintenance and ease of serviceability assist in lowering the total cost of ownership for the mine.

The Zest WEG Group has been servicing the mining sector for more than 35 years and by leveraging best practice engineering and manufacturing capabilities, the group is able to offer a range of standard off-the-shelf products as well as end-to-end energy solutions.

From single product installations to individually customised solutions, which are application specific, the latest technology is used to ensure optimum performance and reliability without compromising on energy efficiency.

Supporting customers is key and the Zest WEG Group operates a strategically situated network of branches and distributors across the continent. This ensures the highest levels of technical support as well as easy access to product and parts.

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Metso Lokotrack LT106 mobile plant.  
(Source: Metso)



# Crushing and mining go hand in hand

The demand for large crusher wear parts and machinery is growing in Africa's mining industry.

In the mining sector, crushing machines form a familiar part of the landscape at each and every mine. A crusher is a machine designed to reduce large rocks into smaller rocks, gravel, or rock dust. It's also big business for a number of leading players from around the world. And high growth Africa – a major producer from gold, diamonds through to copper and uranium – is a natural draw.

Among the leading players is Finland's Metso Minerals, a

manufacturer of mobile crushers globally. Typically, mobile crushing plants are used by contractors, which is why equipment must be capable of being flexibly moved from one production site to another. Africa and the Middle East account for about a quarter of all its sales.

Metso underlined its interest in the region recently with a US\$3.5mn investment in crusher wear parts manufacturing in South Africa to meet rising industry demand. The investment will ensure the availability of Metso's heavy crusher wear parts globally.

"The demand for large crusher wear parts is growing in the mining industry," said Joni Meronen, director of Mining Crusher Wears at Metso. "With this investment, we ensure we can meet our customers' needs. Through the renewal of the foundry, we will improve our capabilities to deliver high quality heavy wear parts."

The Isithebe plant is part of Metso's global foundry network. It will be able to manufacture wear parts for the Nordberg MP2500 cone crusher as well as for Metso and third-party primary gyratory wear parts, using the very latest

manufacturing technologies. The first product deliveries from the new furnace are scheduled for May 2019.

Indeed, South Africa's influence in this market segment is strong right across the continent, although international competition is intensifying.

India's Puzzolana recently tied up with Tata Africa, which will help to distribute its crushers across the continent.

## In demand

Indigenous companies are holding their own though, especially in South Africa, a nation built on its vast mining industry.

And the scale of Africa's mining sector generally also underpins a high level of demand.

Among many other ongoing projects, London-listed gold producer Goldplat plc, has recently bolstered production and capacity at its Kilimapesa mine in Kenya. This was made possible, it said, by treating previously stockpiled fine material which did not require crushing, as well as by the relocation and installation of a spare crusher as a temporary measure.

In Tanzania, Australia's Intra

Energy Corp (IEC) hopes to double output from its Tancoal coal mine with the introduction of a new crusher this September. In May, it produced a monthly record tonnage of 51,013 tonnes; it hopes to raise annual production to more than 1,000,000 tonnes.

"Productivity improvements and new crushing equipment will support further expansion of capacity," said Graeme Robertson, IEC's chairman. He says the new crusher will help the company to meet the increased demand from East African manufacturing customers for sized coal; it will also allow Tancoal to reduce costs by eliminating its current double handling of coal.

In addition, he said the new crusher uses rollers instead of impact which reduces fines significantly and will help lower moisture during the rainy season and allow greater capacity to screen products for customers with customised sizing of their coal.

IEC also hopes to benefit from the construction of a new 270 megawatts (MW) coal-fired power plant being developed by Chinese investors, boosting overall demand. ■



The MP2500 cone crusher saves costs as fewer crushers and related infrastructure and maintenance are required. (Source: Metso)

# Waste not, want not

Cluster Holdings recovers valuable plaster sand fines from ponds with CDE EvoWash

**C**DE is a leading provider of washing equipment for quarries, mines and recycling operations on the global market. The company, based in Northern Ireland, has a global footprint but is highly active in the African market, aiding projects in the mining industry, as well as the construction, recycling, specialist industrial sands and environmental sectors.

One of its customers, Cluster Holdings in West Rand, South Africa, had given up on ever recovering fines its sand screw classifier system had discharged into ponds. However, with the introduction of the CDE EvoWash 71 sand washing plant to its operations, it is now producing high quality plaster sand from waste pond material; meaning fines are fully recovered and turned into profit, boosting overall return on investment.

The South African company is a family firm that washes materials for the construction sector, and runs a farming business. Cattle graze and crops grow in fields adjacent to the family's quarry located half way between Carletonville and Randfontein.

Rich in decomposed granite, the area presented ideal terrain to develop a materials processing business to supply local construction companies with washed plaster sand, said Wayne Warren, CDE's business development manager for sub-Saharan Africa, who noticed the site while on the road visiting another client in the area.

He said: "Being in a reasonably remote area, the road past Cluster Holdings' mining area allows you to get an overview of their operations. I could see where issues might be and knew that CDE had solutions that could go up against most current washing plants. Little did I realise that this site had such extreme potential in what up until then was called 'waste'. In effect, unknown to our customer, plaster sand was laying in abundance, hidden at the bottom of ponds, and with adapted CDE technology could be recovered and processed into a valuable product."

At the start of its washing operations back in 1986, Cluster Holdings originally opted for sand screw classifiers to wash the granite,



Left to right: Wayne Warren, CDE business development manager for sub-Saharan Africa and Kobus Jv Rensburg of Cluster Holdings in front of the EvoWash on the Cluster Holdings site in West Rand, South Africa. (Source: CDE)

a cheap and popular choice in South Africa, but it is an option that creates a lot of waste to ponds and loss of potential profits. The subsequent switch to a cyclone tower resulted from identifying the potential in the plaster sand market in the area, but did not achieve the desired results in quality, leading to wet stockpiles.

And so Cluster Holdings provided CDE with some samples for tests. It turned out that the waste sand had one of the best plaster sand gradings, Warren had seen for some time. "It became Cluster Holdings's priority to recover it," he added.

The CDE EvoWash 71 materials washing plant was subsequently commissioned and installed to process the raw decomposed granite feed. The new system can produce up to 50 tonnes per hour of plaster sand, which can be used by the local construction sector to plaster buildings.

"The EvoWash has long been a favourite of South African quarries," says Warren. "It is modular and compact, and can fit in the most challenging spaces, but also very economical to run and consistent in producing sands in quality and quantities required by the customer." ■

## Do you need proximity detection systems for your **SURFACE** operation?





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Panafrican Group provides Komatsu and Wirtgen equipment across Africa. (Source: Panafrican Group)



# Panafrican Group: Wholly dedicated to Africa

Scott McCaw, CEO of Panafrican Group — a leader in providing Komatsu and Wirtgen equipment across the continent — speaks to *African Review* on market developments and celebrating its 20th anniversary.

## What new products has the Panafrican Group launched in Africa?

There have been some exciting developments at Panafrican Group. Firstly, building on a strong foundation with our Komatsu Franchise and our service/support capability, we have been extending our offering in certain regions, with the successful award of the Wirtgen product range (Wirtgen, VOGELE, HAMM, Kleemann, Benninghoven and Ciber) and the AGCO product range (Massey Ferguson, Valtra and Challenger). These product lines are world-class additions to Panafrican Group, consistent with our strategy of representing only premier global



Scott McCaw, CEO of Panafrican Group. (Source: Panafrican Group)

brands that form a complementary solution for our customers. From a target industry perspective, these lines also enhance our capability of offering more complete solutions to the civil and infrastructure, agriculture and aggregates/minerals markets.

The reaction in our markets has been extremely supportive, bringing new customers to Panafrican Group and extending and enhancing our relationships with existing customers through a more comprehensive solution. Another exciting development has been the extension of our market-leading technical training, from an internal development strategy to an external customer offering. These programmes, developed with the College of the Rockies in Canada, enable us to provide internationally recognised Canadian equivalent Red Seal standards to our customers as a means of enhancing our support, while further integrating ourselves within their organisation.

## Which markets in Africa are most important to the group?

Each of our markets plays an important role in any given year. With offerings now in Kenya, Tanzania, Uganda, Rwanda,

Burundi, Ghana, Nigeria and Sierra Leone, we are well-diversified across countries, markets and product offerings. Ghana, Sierra Leone and Tanzania are mainly influenced by the commodity sector; in Nigeria, Uganda and Kenya, agriculture and civil/infrastructure are major economic drivers for our products (excluding oil and gas).

With global or localised cycles in mining, agriculture, and infrastructure development, as well as election and fiscal cycles across all our markets, in any given year a few of our markets are challenged, while others are growing. This can change yearly. For example, from 2013 to 2015, Ghana was impacted by the global downturn in mining. Accordingly, we had to adjust our business model to adapt, while expanding our business in other markets. Similarly, in Nigeria, leading up to 2013-2014, the markets were confident, however the downturn in oil and the impact of foreign exchange controls have held back that economy in 2015 to 2016. Meanwhile, we are seeing a resurgence in Ghana.

The key is maintaining a core base within each territory on the customer-facing side (technical support, parts and sales), while

keeping flexible in terms of resource allocation for people and capital. Panafrican Group has adapted to this cyclical influence through centralised support services such as finance, HR, IT, treasury and inventory/logistics for economies of scale, while also retaining portable and flexible technical support on the ground. This leaves us a core base in each territory, for embedded customer support and populations, while enabling short-term flexibility for reallocation of support as needed. For example, we have Ghanaian technical staff in Tanzania. We have enhanced technical requirements in Ghana on a temporary basis with Nigerian staff. We have utilised temporary technical specialists from East Africa in Sierra Leone. This flexibility is a major ingredient to ensuring that all markets remain important, with the necessary support to address any opportunity when needed.

## What are Panafrican's plans for the future in Africa?

Panafrican Group remains wholly dedicated to the African markets. We're celebrating our 20-year anniversary this year. Our plans remain focused on existing territories, customers and product



lines, while preserving opportunity for managed growth. As an exclusive distributor for our territories, we see the opportunity to fill in market product gaps, working with the OEMs (for example, the recent appointment of Massey Ferguson in Nigeria) or through business acquisitions, such as our purchase of FMD (Massey Ferguson in Kenya, Tanzania and Uganda).

We also see an opportunity for further territorial expansion with our OEM partners (that is, extension of Wirtgen into Rwanda and Burundi). We continue to build economies of scale. In essence, we follow our existing customers into new markets with a consistent support solution.

Finally, the company is pursuing a broader offering in customer

finance. Access to capital in these markets remains challenged for small and mid-tier customers. The traditional banks struggle to operate in a pure asset backed financed environment. These markets also have yet to develop strong independent leasing organisations. As a result, this falls back to the distributor or EOM financing to fill the gaps. We are working on a range of potential solutions here and are hoping for some interesting announcements later this year.

All in all, Panafrican Group is committed to the African markets and the territories in which we operate. We continue to develop and grow in a measured way every year, to expand and enhance this commitment across our territories, our product offering, and our



Massey Ferguson products add to Panafrican Group's world-class offering to African markets. (Source: Panafrican Group)

support capabilities. It is this strategy that has enabled us to continue to build a strong, sustainable business in some of the most challenging periods in our

markets. Of course, this can only be achieved with the confidence and support from our customers –support we always appreciate deeply. ■

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# Getting South Africa fired up for the future

*African Review* catches up with Theun Ehlers, head of project finance at Barclays Africa, for his thoughts on the South African gas economy.



Theun Ehlers, head of project finance, Barclays Africa. (Source: Barclays Africa)

**What does your role at Barclays Africa involve?**

I head up a resource and finance team which provides finance for our mining, oil and gas clients, for projects on the continent, these include brownfield expansions and corporate/acquisition financing. We also provide traditional project finance for power plants and infrastructure, such as roads and rail.

**At the Africa Energy Forum in June H.E Honourable Thembisile Majola, deputy minister of energy, South Africa, heralded natural gas as the next potential resource for power generation. What do you think as a long-term energy solution?**

Shale gas is not something we have investigated ourselves. However, I understand it's one of the options the South African government is considering. Our understanding is that more work needs to be done to look at the feasibility stage, around the reserves and the infrastructure to make it a viable long-term option. Obviously, if you look at what has happened in the USA, we agree with the minister that it can be a game changer, but the actual commercialisation of the resource is probably still a few years away.

**What do you expect to happen in the meantime?**

So, for the interim period before looking at shale gas as a long-term option, in the context of the South African gas economy, the immediate plans will be more around importing

gas from Mozambique; looking at the pipeline and importing LNG gas for the power stations.

**Additionally, the minister mentioned that South Africa could be a leader of LNG plants – what's your opinion?**

We do have the technology to build these plants, especially with Sasol, an integrated energy and chemical company in Johannesburg, which has operations across the world. But we need to think around the practicalities about how we start the process.

To introduce natural gas to the country you need to find an off-taker, which is why the

Department of Energy (DOE) is working on establishing two gas-fired plants; one in Richards Bay in the KwaZulu-Natal province and the other in Coega in the Eastern Cape. They will effectively act as the off-takers, then act as a starting block towards building a broader and deeper gas economy. Unlike Europe and the USA, South Africa does not have a proper gas distribution network. Sasol is the main party, through their gas field in Mozambique and it has a pipeline coming down, but most of that is used for their own purposes and operations. There are existing gas lines going to some other areas

of the country, but it is really small scale. But I believe natural gas does present a significant opportunity for our industrial clients, especially in the transport sector. Replacing expensive diesel fuel with gas represents real cost-savings, which is the real aim in the long-term.

The key for the government is to make sure they get the procurement for the plants and the necessary structures around that, so that we have a decent appetite from investors and banks to participate.

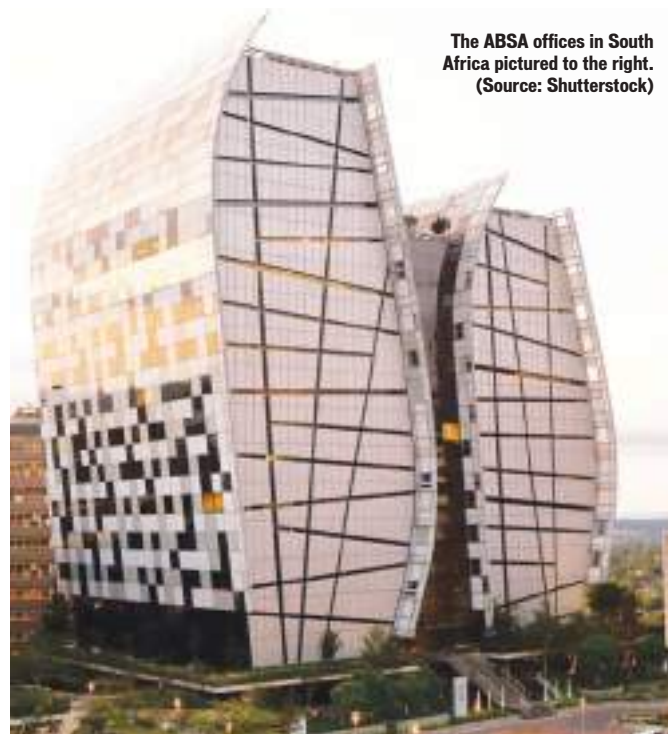
**Which sectors would the new plants support?**

In the Eastern Cape, we already have motor parts manufacturing, with international car brands, such as VW and Toyota running their operations from there.

And, in KwaZulu-Natal we have aluminium smelters, which use substantial power. Sectors such as these would be great beneficiaries of the power from these plants.

**In what way is Barclays Africa helping the government ensure the plants are bankable projects for investors?**

We have been asked to participate in workshops to test bankability issues and get views from the private sector with regards to the plants. The bottom line is that we fully agree with the DOE's objectives that we think this is the future for South Africa. The gas-fired plants will be a good way to complement our renewable energy portfolio. ■



The ABSA offices in South Africa pictured to the right. (Source: Shutterstock)

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