

INSURANCE

Helping the private sector invest with confidence **P22**

GHANA

Preparing for a bright future **P19**

BANKING TECHNOLOGY

The power of going digital for the financial sector **P24**

LOGISTICS

How the latest innovations mean greater efficiencies **P29**

African Review

AUGUST 2020

of BUSINESS and TECHNOLOGY

P33

MINING SPECIAL

Our Construction and Mining Buyers' Guide returns for 2020

P50

MAJOR PROJECTS

Mining industry updates from West Africa and South Africa, plus the latest technology

32

Image Credit: Adobe Stock



An overview of major renewable energy projects across the continent.



56
YEARS
SERVING BUSINESS IN
AFRICA SINCE 1964

Better, tough, and “wow”



Hydraulic Excavator PC1250-11



Wheel Loader WA900-8

The new WA900 and PC1250, with their revolutionary features, will mark a new chapter for your business.

No doubt they will be gamechangers in your jobsite.

Yes, the days struggling with operational distress are numbered.

Guided by your voice, we present to you, our best.

WA900-8

Automatic dig, semi-automatic dump approach and push-button unload function

KomVision* (networked cameras) and KomVision Rader* (obstacle detection)

First-class comfort with a VIEW

PC1250-11

Power Plus (P+) mode for a horsepower boost

KomVision (networked cameras) Hydraulically operated stairway*

*optional

Models shown may include optional equipment. Available models may vary by region or country. Materials and specification are subject to change without notice.

KOMATSU

<https://home.komatsu/en/>



Cover picture: Adobe Stock
Cover inset: Adobe Stock

Editor: Samantha Payne

Email: samantha.payne@alaincharles.com

Editorial and Design team: Mariam Ahmad, Prashanth AP, Fyna Ashwath Miriam Brtkova, Praveen CP, Manojkumar K, Nonalynka Nongrum Abhishek Paul, Rahul Puthenveedu, Deblina Roy and Louise Waters

Managing editor: Georgia Lewis

Contributing editor: Martin Clark

Publisher: Nick Fordham

Sales Manager: Richard Rozelaar

Email: richard.rozelaar@alaincharles.com

Magazine Manager: Serenella Ferraro

Tel: +44 207 834 7676 Fax: +44 207 973 0076

Email: serenella.ferraro@alaincharles.com

India **TANMAY MISHRA**

Tel: +91 98800 75908

Email: tanmay.mishra@alaincharles.com

Nigeria **BOLA OLOWO**

Tel: +234 80 34349299

Email: bola.olowo@alaincharles.com

UAE **MURSHID MUSTAFA**

Tel: +971 4 448 9260 Fax: +971 4 448 9261

Email: murshid.mustafa@alaincharles.com

UK **RICHARD ROZELAAR**

Tel: +44 20 7834 7676 Fax: +44 20 7973 0076

Email: richard.rozelaar@alaincharles.com

USA **MICHAEL TOMASHEFSKY**

Tel: +1 203 226 2882 Fax: +1 203 226 7447

Email: michael.tomashefsky@alaincharles.com

Head Office: Alain Charles Publishing Ltd, University House, 11-13 Lower Grosvenor Place, London SW1W 0EX, United Kingdom
Tel: +44 (0)20 7834 7676, Fax: +44 (0)20 7973 0076

Middle East Regional Office: Alain Charles Middle East FZ-LLC, Office L2-112, Loft Office 2, Entrance B, PO Box 502207, Dubai Media City, UAE,
Tel: +971 4 448 9260, Fax: +971 4 448 9261

Production: Srinidhi Chikkars, Swati Gupta, Nelly Mendes and Arjun S
E-mail: production@alaincharles.com

Chairman: Derek Fordham

Printed by: Buxton Press

Printed in: JULY 2020

ISSN: 0954 6782

SUBSCRIPTIONS:

Rates for one year (11 issues):

Europe €107, Kenya KSh3400, Nigeria N6600, South Africa R460, United Kingdom £77, US\$140

To subscribe: visit www.africanreview.com/subscribe

For any other enquiry email circulation@alaincharles.com

Alain Charles Publishing

Serving the world of business

Editor's Note

Mining is in the spotlight in this issue of *African Review*. Starting on page 33, we have our annual Construction and Mining Buyers' guide, showcasing the leading suppliers across the industry. The mining industry across the continent is proving to be resilient, despite the challenges of 2020.

We take an in-depth look at some of the major projects across the western part of the continent (page 50) and South Africa (page 53), as well as the latest mining industry technology. From heavy vehicles to solutions for drilling and crushing, industry leaders are supplying mining operators across Africa with the equipment they need to stay efficient and productive as economies start to reopen.

Elsewhere in this issue, we learn more about an innovative insurance scheme which is giving private sector companies the confidence they need to invest in major projects that will propel sustainable development in Africa (page 22), and our economist, Moin Siddiqi, analyses how digital advances are transforming banking and providing more people than ever with access to financial services (page 24). It is encouraging to see countries across the continent adopt digital technology early and with enthusiasm – this can only prove beneficial during the period of economic recovery after the global lockdown.

Samantha Payne, Editor

Contents



04 News
News from across the industries in every part of the continent, quotes from a diverse range of African leaders across a selection of industries, and a round-up of the best from the *African Review* website.



19 Country report
Discover how Ghana is embracing digitalisation as part of an aggressive drive to modernise the economy as it seeks to forge new opportunities and make interactions with government more efficient.



22 Banking and finance
Investment into Africa is being stimulated with insurance to give companies confidence, plus an overview of how technology is driving powerful change across Africa's financial services industry in multiple markets with our economist, Moin Siddiqi.



27 Infrastructure
Commentary from African thought leaders on the importance of taking a broad, holistic approach to developing vital infrastructure, with people having equal importance to bricks and mortar.

30 Power
An interview with Jürgen Pump from Standard Aggregatebau Evers GmbH & Co on ensuring a reliable power supply with effective genset technology; plus energy efficiency in the UPS sector in all conditions, and opportunities for smart investment in renewables.

33 Mining and construction
An extensive Construction and Mining and Buyers' Guide; an overview of some major projects in the West African mining industry; an update on South African mining; all the latest technology in commercial vehicles for mining operations; innovative solutions for drilling and crushing; and explosion protection advances.

Support pledged for Sudan's reform efforts

At a high-level Sudan Partnership Conference held virtually on 25 June, the African Development Bank, the World Bank, and the International Monetary Fund (IMF) along with several governments affirmed their support for the country's Transitional Government and its economic recovery efforts. More than US\$1.8bn in pledges for Sudan were made during the conference, which marked an important step in the African nation's re-engagement with the international community.

Sudanese Finance Minister Ibrahim el-Badawi highlighted the comprehensive reforms that the Transitional Government of Sudan has launched to put in place a transparent, productive and resilient economy.

"We will pass an anti-corruption law, create an anti-corruption commission and reform the enabling environment for business and investment," el-Badawi said. He promised an era of transparently managed budgets that will focus on health, education and other sectoral reforms, including a transformed public service and a Family Support Programme. The Minister also called for partnerships at "every step of the way."

African Development Bank president Akinwumi Adesina assured the Sudanese Government of the Bank's continued support for ongoing reforms to ignite growth, lay the foundation for sustaining high and inclusive growth and spur transformation towards a knowledge-based economy. The Bank currently has a US\$511mn portfolio in Sudan. The IMF and Sudan on agreed a 12-month Staff Monitored Program (SMP) aimed at narrowing macroeconomic imbalances, reducing structural distortions hindering economic activity and job creation, and strengthening governance and social safety nets. The SMP will facilitate progress toward debt relief under the heavily indebted poor countries (HIPC) initiative.

World Bank president, David Malpass, said, "We have been working to design the Sudan Family Support Program to mitigate the impacts of the economic crisis. The programme is costed at US\$1.9bn and seeks to cover cash transfers of US\$5 monthly per person to 80 per cent of the population, using digital and other delivery mechanisms. Following months of intensive technical work, it is now being piloted and readied for implementation."



Image Credit: Adobe Stock

More than US\$1.8bn in support was pledged at the Sudan Partnership Conference.

CONTRACT FOR NEW HYDROCRACKING COMPLEX

TechnipFMC has signed a major Engineering, Procurement, and Construction (EPC) contract worth more than US\$1bn with Assiut National Oil Processing Company (ANOPC) for the construction of a new hydrocracking complex for the Assiut refinery in Egypt. The EPC contract covers new process units such as a vacuum distillation unit, diesel hydrocracking unit, delayed coker unit and distillate hydrotreating unit as well as a hydrogen production facility unit using TechnipFMC's steam reforming proprietary technology. The project also includes other process units, interconnecting, offsites and utilities.

The complex will transform lower-value petroleum products from Assiut Oil Refining Company's (ASORC) nearby refinery into approximately 2.8mn tons per year of cleaner products, such as Euro 5 diesel.



Image Credit: Adobe Stock

The complex will transform lower-value petroleum products into cleaner products.

Catherine MacGregor, president of Technip Energies, stated, "This award demonstrates TechnipFMC's long-standing relationship with the Egyptian petroleum sector and strengthens our expertise in the delivery of complex projects in the country. Assiut is considered one of the major strategic projects needed to meet growing local demand for cleaner products, and we are extremely honoured to have been selected by ANOPC to contribute to the largest refining project to be implemented in Upper Egypt."

EGYPT TO PRODUCE ELECTRIC VEHICLES

Egypt's state-owned El Nasr Automotive Manufacturing Company and China's Dongfeng Motor have signed an agreement to produce electric cars for the first time in Egypt, according to a report in Egypt Today. Production is scheduled to begin in 2021.

According to the agreement, El Nasr will produce 25,000 electric vehicles annually. Egyptian Minister of Public Enterprise Sector Hisham Tawfik said the agreement will mark a return to production for El Nasr, which has been closed since 2009. He is reported to have said that the Ministry of Electricity will build 3,000 charging stations across the country over three years to boost the EV market, and financial assistance will be provided to new buyers. Other incentives to be offered include the launch of a programme to replace 11,000 taxis with electric taxis and subsidies for investors, while government agencies will be required to replace five per cent of their vehicle fleet each year, to boost the acquisition of electric cars.

► BRIEFS

Algeria PV systems deal



Image Credit: Activ Solar/Flickr

The venture will make mounting structures for PV systems.

SPS, an Algerian metal sandwich panel manufacturer, is partnering with Dubai-based mounting system provider Qi-energy to make mounting structures for PV systems in Algeria, according to a report in *PV Magazine*. The initiative follows the Algerian government's recently announced plan to tender 4 GW of large-scale PV up to 2024 under a scheme that will include strong domestic content requirements for solar panels, cables and mounting systems.

Egypt gold deposit find



Image Credit: Uncle Nick/Flickr

The gold has been discovered in the southeast of the country.

Egypt's Ministry of Petroleum and Mineral Resources has announced that a gold deposit with estimated resources of 1 million ounces has been discovered in the southeast of the country. The deposit lies in the concession area of the military-controlled Shalateen Mining Company in the Eastern Desert's Iqaat area, it said in a statement. More than US\$1 billion is expected to be invested to develop the deposit over the next 10 years, the statement said.



DAL MINING

DAL Mining is a DAL Group company which specializes in the mining industry. DAL Mining provides an extensive range of world leading mining services to the Sudanese mining industry; in a manner which promotes safety, and protects the health of individuals and the environment.

Our vision is to be the leading national company in providing mining supplies, mining services, and operations. We are committed to provide our clients with superior quality products, as well as efficient and reliable services by means of our technology leading equipment, and highly skilled employees.

List of Services:



Minerals Exploration drilling; including Reverse Circulation (RC) and Core Drilling.



Mine contracting; including whole operation handling inside the mine (Blast-hole drilling, blasting, loading and holing up to plant).



Analytical services; sample preparation and analysis using ICP or Atomic Absorption Spectrometer (AAA), also working on adding Fire Assay.



Environmental and Social Impact Assessment (ESIA).

Processing plants design & execution for both Heap-leaching & CIL Plants.



Blast-hole drilling Rigs supply.



Spare parts supply.

Minerals processing chemicals supply; including activated carbon, borax, soda-ash, caustic soda.



Insulation material; including HDPE sheets and Geotextile sheets.

Personal Protection Equipment supply; including complete range of PPE (e.g. helmets, safety shoes, face protection equipment).

Hani Girgis

Sales & Business Development Manager
DAL Mining

Mining in Sudan

Ancient historical records indicate that gold and iron mining in the country existed under the kingdom of Meroë and also during the reign of the kingdom of Nubia, the Pharaonic era and during the Roman period. The name 'Neb' in the Nubian language means 'Gold' and is attributed to the Nuba Region. It was also called the 'Country of Metal' by the British.

Geological studies performed have shown that Sudan has a wide variety of geology, rock compositional and textural structure. Foundation rocks "Basement Complex Rocks" covers more than half the size of Sudan. Most mineral formations of economic value in Africa are found in these rocks. Therefore, Sudan is one of Africa's most promising countries for the mining industry based on the studies conducted.

East Africa is the fastest growing region in the continent

Economic disruption caused by the COVID-19 pandemic has pushed East Africa's growth projection for 2020 down to 1.2 per cent, a rate that outstrips other African regions and is forecast to rebound to 3.7 per cent in 2021, according to the African Development Bank's (AfDB) East Africa Regional Economic Outlook 2020.

The projection is under the baseline scenario that assumes the virus is contained by the third quarter of this year.

Prior to the COVID-19 pandemic, the region's economic growth was projected at more than five per cent, well above the continent's average of 3.3 per cent and global average of 2.9 per cent. However, COVID-19-induced shocks and a locust invasion have contributed to job losses, increased humanitarian needs and will aggravate poverty and income inequality.

In the worse-case scenario, in which the pandemic persists until the end of 2020, growth is projected at 0.2 per cent, still above Africa's predicted average of -1.7 per cent and -3.4 per cent under the two scenarios.

At the launch of the report held in Nairobi, Simon Kiprono Chelugui, cabinet secretary of Kenya's Ministry of Labour, said East African countries could overcome the effects of COVID-19 and turn their economies around by mitigating the external and domestic risks.

"We need to implement a decisive and coordinated response to contain the spread of COVID-19; mitigate its health and socio-economic effects; accelerate structural transformation; improve the investment climate, and maintain the peace and security of our region," he said.

Nnenna Nwabuo, director general of AfDB's East Africa Regional Office, pledged Bank support to steer the region out of the crisis.

"Our ambition is to address the adverse effects of the COVID-19 pandemic and ensure that social and economic development across the continent is accelerated, including through the creation of an African workforce of the future," she said.



Image Credit: Adobe Stock

East African countries should accelerate a real structural transformation.

LOTUS ENERGY AND EFFORT GROUP SIGN AGREEMENT TO BUILD 500MW SOLAR COMPLEX IN ETHIOPIA

Australian clean energy company Lotus Energy has won a contract to develop a 500MW solar complex in Ethiopia's Tigray region.

The solar facility is set to boost the infrastructure of the Ethiopian Effort Group which is active and operational in cement, automotive and steel production in the East African country.

The Tigray complex will be located in the north of Ethiopia and combine solar power, battery storage and waste-to-energy capacity. As reported in Afrik21, the solar complex will include energy storage batteries and biomass power plant facilities. Additionally, a power grid will be built to connect the plants to industrial facilities, the source further added.



Image Credit: Adobe Stock

A number of major solar projects are underway in Ethiopia with an aim to boost access to electricity in Ethiopia.

The work for the US\$4.3bn facility is scheduled to start in September 2020.

A number of major solar projects are underway in Ethiopia with the aim of boosting access to electricity. These include the Gad and Dicheto solar power plants in the Somali and Afar regions. The facilities are expected to have a capacity of 250MWp.

The two solar projects are part of the 'Scaling Solar' initiative by the World Bank through the International Finance Corporation (IFC). The aim is to encourage the companies to invest in solar energy, to supply energy to the national electricity grid of the country concerned and to rapidly implement electricity projects through public-private partnerships (PPPs).

BEKO DEVELOPS EIGHT MWP SOLAR PLANT IN SOMALIA

Beco, the electricity utility company in Mogadishu, Somalia, has installed a solar photovoltaic power plant with the aim of reducing electricity costs in the region.

As reported in Afrik21, the Mogadishu solar photovoltaic power plant has a capacity of eight MWp. The Beco company has the ambition to increase the plant's capacity to 100MWp, with an investment of US\$40mn. The solar power plant is expected to be completed by 2022.

According to the US Agency for International Development (USAID), Somalia has an installed capacity of around 106MW. Most of the power generation companies rely on diesel generators.

With the solar photovoltaic power plant, Beco focuses on reducing the CO₂ emissions of the diesel-powered generators as well.

BRIEFS

Kenya and USA launch trade talks



Image Credit: Adobe Stock

Kenya aims to do a deal with the USA before the expiry of the AGOA.

The USA and Kenya have launched the formal negotiations for a trade agreement. As reported in Reuters, trade ministers of the USA and Kenya held an initial round of virtual talks due to the coronavirus. Kenya aims to do a deal with the USA before the expiry of the Africa Growth and Opportunity Act (AGOA) that allows sub-Saharan African states to export products to the USA without tariffs or quotas until 2025.

Danakali work at Eritrea potash project



Image Credit: Adobe Stock

The project is set to boost Eritrea's economy.

DRA Global has delivered preliminary materials to Danakali's Colluli potash project in Eritrea. The delivery is set to help identify the focus areas to manage the design and process risks during the design phase. The Colluli Mining Share Company (CMSC) project team is in the process of reviewing the deliverables. CMSC is a 50:50 joint venture between Danakali and the Eritrean National Mining Corporation (Enamco).

Webinar focuses on South Sudanese ambitions to preserve economic progress

Speakers at a webinar hosted by Africa Oil & Power have emphasised the importance of South Sudan continuing on a path towards prosperity, peace and economic growth, despite the challenges presented by the COVID-19 pandemic.

According to Makear Michael Dot, CEO, Nile Petroleum Services, “COVID-19 has [had an extreme] effect on the entire globe and South Sudan is a part of it because we are not isolated from the whole world. Since South Sudan is a landlocked country, we depend on our neighbouring regional countries for our gateway into the global market for the logistics and delivery of different services. Despite that we are a young nation that has been independent since 2011, so we are in need of a lot of expertise to come, especially from South East Asia where the [pandemic] started.”

Robert Mdeza, CEO, Trinity Energy, provided insights into the accessibility of funds for organisations, especially during the COVID-19 pandemic: “We have taken a medium to long-term view about our projects in the country. We work with Stanbic and other banks locally, for our local needs. We have taken a long-term commitment to the country. But we basically work with everybody because of the nature of our transactions. For us to handle the flows we have to have many connecting places.”

Commentary on investment attraction was provided by Felix Ataro, corporate banking head, Stanbic Bank Kenya: “Attracting investments into the country is quite important, however, from a commercial banking point of view, I wouldn't say there is much that has gone into that. The kind of organisations that will be better at that would be the Developmental Financial Institutions (DFIs) because they have mechanisms to be able to manage that. Infrastructure at the moment has come from DFIs. Banks have to think beyond the commercial type of interest that [they] would earn money and look at the other elements like being part of a community.”

The discussion touched on the issue of sanctions, which Mr Ataro explained has become a headache for financial institutions: “Especially for us to be able to guarantee safe transfer funds for our clients in and out of the country. It is increasingly becoming quite a bit of a pain on a daily basis with international correspondents, banking partners and financial institutions. Again, we should not just be commercially oriented, we should also look at how do we contribute to development because that's about community.”



South Sudan is hoping to attract investment for a wide range of infrastructure projects.

Image Credit: UNMISS

CANAL+ AND EUTELSAT PARTNER UP IN ETHIOPIA

Eutelsat Communications and CANAL+ have signed a multi-year, multi-transponder contract for Ku capacity on EUTELSAT 7C to support the launch by CANAL+ of a premium DTH platform in Ethiopia, with the partnership starting at the beginning of 2021.

Leveraging Eutelsat 7C's incremental capacity dedicated to Ethiopia, CANAL+ will launch a comprehensive broadcast offer encompassing a DTH pay-TV offer of 50 premium channels in a mix of standard and high definition, along with a selection of Ethiopian free-to-air content.

Commenting on the deal, Rodolphe Belmer, CEO of Eutelsat Communications said, “We are honoured to accompany our long-standing partner CANAL+ as it extends its services to the Ethiopian broadcast market which Eutelsat already knows well. This agreement highlights the appetite for high quality and varied programming in this dynamic country as well as throughout the broader African continent, which is the fastest-growing satellite broadcast market. It confirms the relevance of our investments in selected incremental resources to tap growth pockets in emergent video markets.”

Jacques du Puy, Chairman of CANAL+ International added, “We are delighted to launch our DTH pay-TV offer in Ethiopia relying on the experience of our trusted partner, Eutelsat, in this market. Our new platform, the first such offer in the Ethiopian market, will contribute to the already rich and diverse video landscape in this dynamic market and support our commitment to providing high quality, diverse programming in the African continent, where we are already present in 25 countries.”

The EUTELSAT 7C broadcast satellite entered into service in January and is co-positioned with EUTELSAT 7B at the 7° East position to form a two-satellite constellation, offering flexibility and connectivity.

EAST AFRICA DESERT LOCUST RISK REMAINS

Cyril Ferrand, Food and Agriculture Organization's (FAO) Resilience Team Leader for East Africa has given an update on the desert locust situation in East Africa, which has become a long-standing problem for many East African farmers throughout 2020. Mr Ferrand said that “significant progress” had been made in a number of countries, particularly in Kenya, where only two of the 29 counties that were infested in February have desert locusts today. However, he added that Ethiopia is still infested with a second breeding generation, and has been partly re-infested by swarms which have come in from Kenya, while Ethiopia is under threat from new swarms which have been arriving from Yemen.

“A lot of work has been done in Ethiopia, but unfortunately the battle will continue there until the end of the year. In Somalia we are also making progress, despite security issues, but breeding is expected in the north. We expect summer locust breeding in the Sudan and western Eritrea also,” Mr Ferrand said.

BRIEFS



Image Credit: Adobe Stock

Mobile payment in Tanzania.

Airtel joins Google in Tanzania

Airtel Tanzania subscribers can now pay for Google Play services and apps on their monthly phone bills or on their prepaid balances, with direct carrier billing on Google Play now enabled by DOCOMO Digital, a mobile business enabler. Carrier billing is an increasingly popular mode of payment for digital services, particularly in emerging markets, as it allows faster frictionless transactions in app stores, while ensuring transparency and control over purchases.



Image Credit: ENGIE

A boost to energy access.

Off-grid energy for Uganda

An estimated 1.4 million Ugandans will access reliable, affordable energy under new EIB - ENGIE initiative. People including smallholders and entrepreneurs in remote villages across Uganda are set to benefit from the new off-grid solar scheme which has been agreed between ENGIE through its solar home system company Fenix International and the European Investment Bank, which is one of the world's largest financiers of renewable energy.

Enaex, Sasol partner to establish explosives joint venture

Integrated chemicals and energy company Sasol and Sigdo Koppers Group subsidiary Enaex have announced the start of operations of Enaex Africa, an explosive joint venture in Southern Africa.

Enaex in partnership with Sasol will comprise certain assets and associated activities spun off from the current explosives and rock fragmentation value chain of the base chemicals business of Sasol South Africa. This JV includes the related business activities in both South Africa and other Southern African countries.

This agreement forms part of Enaex's strategic plan to continue to strengthen its international presence in the world's most important mining regions.

Francisco Baudrand, CEO of Enaex Africa, noted, "This is truly an incredible day for Enaex with a new venture on a new continent. This joint venture is a platform of growth for Enaex not only in Southern Africa, but also for us to become the leaders in explosives and blasting services for the mining industry on the African continent."

Meaningful participation for BBBEE has also been catered for in the shareholding structure in line with South Africa's transformation agenda, which is fully supported by both Sasol and Enaex.

Fleetwood Grobler, Sasol president and CEO, said, "We are delighted to announce that Enaex Africa in association with Sasol has officially started operating in South Africa and on the African Continent. Enaex is a Chilean company celebrating a 100 years of history and leadership in the explosives business in South America and together with Sasol will be a force to be reckoned with in the mining industry."

Founded in 1920 in Chile, Enaex's core business is ammonium nitrate production – Enaex is the third-largest industrial grade ammonium nitrate producer in the world – explosives production and blasting services, according to Sasol. This deal is part of the strategic plan of Enaex to continue strengthening its international presence in the most important mining regions of the world, according to Sasol.



Image Credit: Enaex
Enaex S.A. was selected as Sasol's preferred strategic partner to create the explosives business on the African continent.

USING DIGITAL TOOLS FOR ECONOMIC TRANSFORMATION

The Zambia Digital Economy Diagnostic, a new report developed by the World Bank, finds that Zambia is making significant progress towards using digital tools to achieve the goals of social and economic transformation set out in its Vision 2030.

The report commends Zambia's rapid expansion of mobile network access, and the progress made through SMART Zambia in digitising government services.

Ellen Olafsen, the lead author of the report, said, "These services, if fully optimised, can bring about increased efficiency in government services directed towards citizens and the business community. The foundation is also now in place to fully leverage digital payments in the public and private sector. This is critical when contactless transactions and rapid transmission of funds to the vulnerable are vital to Zambia's COVID-19 resilience."

The report assesses Zambia's strengths and weaknesses with respect to five pillars that together form the foundation upon which the benefits of digital transformation can be realised. These pillars are digital infrastructure, digital skills, digital entrepreneurship, digital platforms, and digital financial services.

Martine Mtonga, deputy secretary to the Cabinet for e-government division in the office of the president, said, "Digitisation can help us get resources to the vulnerable quickly and transparently. It can also help us reduce the cost of doing business through digitally optimised systems that reduce the time spent to bring goods across the borders and make compliance easy and transparent."

Sahr Kpundeh, World Bank country manager for Zambia, said, "The digital economy report is a vital guide to accelerating digital transformation in Zambia, while also ensuring that the safeguards for data security and consumer protections are in place."

NAMIBIA'S ANIREP ACQUIRES MAJORITY STAKE IN TWO SOLAR COMPANIES

The Namibian investment company Alpha Namibia Industries Renewable Energy Power (ANIREP) has finalised the acquisition of majority shareholdings in solar energy companies, Hopsol Africa and Hopsol Power Generation.

ANIREP managing director Iyaloo Nangolo said, "Concluding these transactions provides ANIREP a sustainable platform from which we will pursue an expansion of the existing grid connected 10 MW solar PV capacity. ANIREP provides a bridge for capital markets into the Infrastructural Renewable Energy Projects and is well placed to raise such additional capital and project finance as will be required for solar PV capacity expansion, by unlocking a higher investment allocation by institutional investors to infrastructure investments, based on our sustainable long-term cash flows. This will undoubtedly differentiate and distinguish ANIREP on its journey to becoming a significant utility with sustainable long-term cash flows."

► BRIEFS



Image Credit: Dominik Wany/Dropsplash
Phase 1 drilling operations at KML's Kitlanya project have now resumed.

Drilling resumes in Botswana

Mining investor Metal Tiger stated that drilling operations had resumed at 62 per cent-owned Kalahari Metals' Kitlanya East copper project in Botswana.

The drill rig is now drilling hole KIT-E_03 which is designed to test a disruption in marker conductors delineated from detailed airborne electromagnetic data.

A follow-on drill hole has been designed to test for mineralisation including copper and silver.

Rare earths miner enters London Stock Exchange



Image Credit: Chris Barbauld/Dropsplash
The project's bankable feasibility study will be completed by October.

Pensana Rare Earths, an Australian exploration firm, has listed its Longonjo project in Angola on the London Stock Exchange, representing the first resource-focused IPO since COVID-19. The Longonjo project contains vast deposits of neodymium and praseodymium (NdPr), which are used in the manufacturing of large permanent batteries for electric vehicles and wind farms. The project's bankable feasibility study will be completed by October, with construction commencing in 2021.

BORN TO

SAVE MONEY AND TIME



DOMBRAYDING.COM

1 CRUSHER BUCKET

Transforms waste material into reusable material for backfill.

2 SCREENING BUCKET

Screens very type of material to the needed size directly on site.

3 DRUM CUTTER

Work any type of road surfaces with accuracy and without unnecessary vibrations.

4 SORTING GRAPPLE

Move and position construction material with total precision and safety.



ONE SYSTEM TO
REDUCE > REUSE > RECYCLE
IN MANY APPLICATION AREAS



▶ SCAN & PLAY

info@mcrusher.com
MBCRUSHER.COM

BUA Cement to establish cement plant, 50MW power plant in Adamawa

BUA Cement, one of West Africa's leading cement companies, is set to establish a three million metric tonnes cement plant and 50MW power plant in Guyuk and Lamurde local governments of Adamawa state in the North Eastern region of Nigeria.

This was revealed when the chairman of BUA, Abdul Samad Rabiu led the BUA Cement management team on a courtesy call to the Adamawa State Governor, Ahmadu Umaru Fintiri at Government House, Yola.

Abdul Samad Rabiu said that preliminary findings show that the two local governments of Guyuk and Lamurde are reputed to have good quality of limestone deposits and BUA Cement is ready to begin the investment in the state. He added that the BUA will use technologies to supply power to the proposed cement plant and communities of Guyuk and Lamurde in addition to providing 3,000 direct and 5,000 indirect jobs.

The Guyuk Cement Plant will be the major investment in the North East by BUA, which solicited the support of Governor Umaru Fintiri to set up the factory in Guyuk. Rabiu said the company has made a decision to source its raw materials locally and has invested billions of dollars in various sectors across Nigeria, and therefore urged the state government to support BUA to realise the Guyuk Cement project.

Governor Ahmadu Umaru Fintiri said that his administration's effort in exploring local content has started yielding results, and thanked BUA for showing interest in establishing the cement plant in Guyuk. He further assured the management team of BUA that government will do whatever is needed and provide the necessary support to create an enabling environment so that the BUA Cement company in Guyuk will become a reality.

He also expressed the readiness of the government to protect the investment once it is established, and said that his administration will maintain a good relationship with the company for the benefit of the state.



Image Credit: BUA Cement

The Guyuk Cement Plant will be a major investment in the North East.

WORLD BANK FUNDING FOR DIGITAL TRANSFORMATION IN NIGER

The World Bank has approved an International Development Association (IDA) funding of US\$100mn for Niger.

The funding, which includes US\$50 credit and US\$50mn grant, will help Niger implement an ambitious programme to use digital infrastructure and services to modernise its economy and strengthen access to basic services.

The Smart Villages for Rural Growth and Digital Inclusion project aims to increase access to cellphone and broadband services in rural areas and to provide digital financial services to selected underserved regions of Niger.

In particular, the Smart Villages project will increase digital connectivity by supporting reforms that will help create an enabling environment for private telecommunications sector investment.

It will promote the access of women to telecommunications and financial services by helping develop a national digital equity strategy. Around 1,240,000 people (most of whom are farmers) in 2,111 selected villages will benefit from the project's significant activities which include, inter alia, financing digital infrastructures, conducting digital and financial literacy campaigns, modernising farmers' cooperatives' payments devices to allow digital payments, and creating digital data platforms for farmers.

"The COVID-19 pandemic has highlighted the necessity to accelerate digital transformation to help countries like Niger to maintain private sector activities and save lives and jobs," Tim Kelly, World Bank's lead digital development specialist, and co-task team leader for the project said.

In Niger, despite the presence of several mobile network operators, approximately half the population is not covered by mobile broadband, and there are huge gaps in coverage between urban and rural areas where most people live.

USAID ANNOUNCES FINANCIAL SUPPORT FOR A NEW SUPPLY-CHAIN MANAGEMENT TRAINING CENTRE IN GHANA

The U.S. Agency for International Development (USAID) announced US\$15mn, on 14 July 2020, to support a partnership between Arizona State University and the Kwame Nkrumah University of Science and Technology in Ghana to create an innovative research and training centre to improve African supply chains.

The new Centre for Applied Research and Innovation in Supply Chain-Africa (CARISCA) will train researchers and practitioners, produce new research, and translate and apply state-of-the-art research from around the world to improve local supply chains, particularly in healthcare and agriculture.

The partnership aims to establish Kwame Nkrumah University of Science and Technology as Africa's preeminent source of expertise on the sustainable management of supply chains. The centre will leverage the private sector, governments, and civil society partners to connect African businesses, researchers and practitioners in supply chain management to global resources.

► BRIEFS

Nigeria's Glo slashes international call costs

Image Credit: Maria, Swenke



To help subscribers stay in touch with their loved ones abroad, Globacom has made its costs more affordable.

Nigeria's national telecommunications operator Globacom has cut tariffs for international calls by as much as 55 per cent.

According to a press statement, Globacom said, "We understand the need for our subscribers to stay in touch with their friends and family overseas now more than ever before. With the ban on international travel imposed by most countries because of the COVID-19 pandemic, people are unable to travel to reunite with loved ones."

AEG Power converters crucial for Nigerian microgrid

Image Credit: AEG



The storage system provides grid-forming and balances load requirement with different sources of supply.

AEG Power Solutions has announced that Convert SC Flex storage converters are running successfully as backbone of the hybrid off-grid power plant of the Bayero University Kano (BUK) in Nigeria.

Andreas Becker, head of grid and storage, AEG Power Solutions, said, "Convert SC Flex embeds unique off-grid features, can be easily combined with any type of batteries and is easy to maintain."

Nigerian Petroleum Minister inaugurates domestic gas pricing framework

TIMPRE SYLVA, NIGERIAN Junior Petroleum Minister, has set up a committee to examine the domestic gas pricing framework, even as the Nigerian National Petroleum Company (NNPC) said it has continued to increase its gas production in the country.

Sylva said an appropriate gas pricing system within the country would be helpful to the manufacturing industry, the people of Nigeria, and would certainly boost the gas industry domestically and internationally.

“Without appropriate pricing we cannot have it right. We have to ensure that gas becomes affordable. That is the only way our country can strive. It is sad to note that we sell gas cheaply to investors while the price is high in the domestic sector, and once we solve the issue of gas in Nigeria, we would have solved a lot of problems in Nigeria.”

The NNPC announced that it increased the daily natural gas supply to power plants in April 2020 by 19.14 per cent, an average 788 million standard cubic feet of gas (mmscfd), and a monthly equivalent of 226.51 standard cubic feet.

The NNPC said, “136.44BCF of gas was commercialised, consisting of 36.99BCF and



Image Credit: pjm/Albino Stock

The NNPC increased the daily natural gas supply to power plants in April 2020 by 19.14 per cent.

99.45BCF for the domestic and export market, respectively.

Out of the 1,233.01mmscfd of gas supplied to the domestic market in April 2020, about 787.70mmscfd, representing 63.88 per cent was supplied to gas-fired power plants, while the balance of 445.31mmscfd or 36.12 per cent was supplied to other industries.”

INFRACO AFRICA FUNDING FOR BUMBUNA HYDRO II IN SIERRA LEONE

INFRACO AFRICA, PART of the Private Infrastructure Development Group (PIDG), has signed an agreement with lead developer Joule Africa to provide US\$6mn of funding to the 143MW Bumbuna Hydro II initiative in Sierra Leone.

Bumbuna Hydro II is expected to begin construction in 2021. The project is being delivered by experienced renewables developer, Joule Africa, through local project company, Seli Hydropower.

“Bumbuna Hydro II is expected to have a tremendously positive impact, powering sustainable economic development in Sierra Leone,” InfraCo Africa’s CEO Gilles Vaes said.

InfraCo Africa is committed to supporting the government of Sierra Leone’s National Renewable Energy Action Plan. This investment into the country’s renewable energy sector complements InfraCo Africa’s work elsewhere in the country to develop the pioneering Sierra Leone Mini-grid project.

CARMIX EVERYWHERE YOU BUILD

READY. MIX. EVERYWHERE. CONCRETE.

CARMIX MOBILE BATCHING PLANTS, BEST PERFORMANCE ON THE TOUGHEST JOBSITES

[f](#)
[t](#)
[in](#)
[carmix.com](#)
 Metalgalante S.p.A. - T. +39 042165191 - info@carmix.com

Upcoming Events Calendar 2020

AUGUST

4-6

TYREXPO AFRICA (TEAF)

Johannesburg, South Africa
www.tyrexpoafrica.com

25-28

IEEE POWERAFRICA CONFERENCE

Virtual event
ieee-powerafrica.org

27-28

CONNECT NIGERIA BUSINESS FAIR

Lagos, Nigeria
www.connectnigeria.com/bizfair/2020

SEPTEMBER

14-18

POWER WEEK AFRICA

Johannesburg, South Africa
www.power-week.com/africa

15-17

6TH AFRICA MINI GRIDS SUMMIT

Nairobi, Kenya
www.africaminigrids.com

OCTOBER

20-22

AFRICA ENERGY FORUM

Amsterdam, The Netherlands
www.africa-energy-forum.com

NOVEMBER

3-6

ECOMONDO

Rimini, Italy
www.ecomondo.com

4-5

POWER & ELECTRICITY WORLD AFRICA

Johannesburg, South Africa
www.terrapinn.com/exhibition/power-electricity-world-africa/index.stm

5

THE AFRICA DEBATE 2020

London, UK
www.investafrica.com/event/africa-debate-2020/

24-26

AFRICAN UTILITY WEEK AND POWERGEN AFRICA

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

Transformations in infrastructure and construction sector innovation in focus at the Big 5 Digital Festival Africa

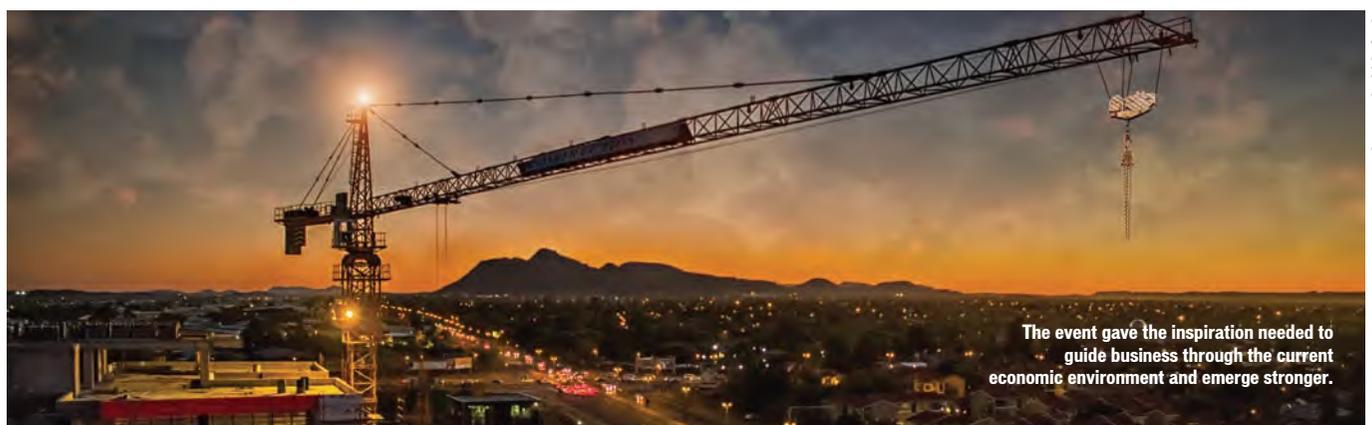


Image credit: Adobe Stock

The event gave the inspiration needed to guide business through the current economic environment and emerge stronger.

The Big 5 Digital Festival Africa was held from 21-23 July 2020, highlighting the transformations in Africa's infrastructure and construction sectors.

As the first of its kind in Africa, The Big 5 Digital Festival Africa was an online gathering of the infrastructure and construction community in Africa, delivering insight, inspiration and direction. The three days of high-level content and innovative product demos focused on rebuilding confidence in the African infrastructure and construction community, while defining the path to recovery.

Organised by dmg events, the Big 5 Digital Festival Africa's inspirational programme delivered incisive, forward looking analysis and thought leadership, giving the inspiration companies need to guide business through the current economic environment and emerge stronger. Some of the topics discussed include:

- Importance of infrastructure and construction in Africa
- Shifting to and embracing a 'Project Economy' culture in post-pandemic times
- Restart: architectural eco-tech strategies
- Business continuity during unprecedented

times, what is the best step forward?

- Construction as a major driver for sustainable economic development for African countries.
- The digital festival platform provided the attendees with the ability to directly message and book meetings with other delegates, speakers or sponsors at the event. Additionally, it hosted a revolutionary matchmaking service, connecting individuals with those best matched to their specific interests and objectives.

For more information, visit <https://thebig5digitalfestivalafrica.com/>

“The coronavirus will change the way the world lives and works for the next 100 years. The first casualty will be globalisation.”



NTUTHUKO SHEZI
 Founder and CEO, Livestock Wealth

“We see digitalisation gaining pace and 5G is becoming an ever-closer reality, with more than three-quarters of global telecom operators expecting to be delivering 5G services by 2021.”

JOACHIM FISCHER
 EMEA channel sales director, Vertiv

“My passion is education, how to improve people’s life through education and training. I was deeply influenced by my own emigration experience, and the tragedies of other who have less luck than me while trying to leave Africa.”

YANICK KEMAYOU
 Founder and CEO, Kabakoo

“Geospatial technologies and agricultural data represent an opportunity to find new ways of reducing hunger and poverty through more accessible and integrated data-driven solutions.”

QU DONGYU
 Director-general, FAO

“The global development community is united to support Africa at this time of need. The European Investment Bank is pleased to join forces with UNDP and BearingPoint to identify smart and cost-effective technological investment that can increase the resilience of African countries to COVID-19.”

AMBROISE FAYOLLE
 Vice president responsible for innovation and development, European Investment Bank

“For the past 25 years, NSIA Group has been developing bank and insurance solutions to address the needs of African people and make them available to as many people as possible. We know that electronic banking is vital for the financial inclusion of our customers. We are proud to have combined our expertise and human capital with that of Orange to create the fully digital Orange Bank Africa.”

JEAN KACOU DIAGOU
 CEO, NSIA Assurances & Banque

“Our growth [in Africa] has been well balanced between greenfield projects and strategic take-overs of existing hotels. We aim to further accelerate our presence across the continent through conversions, especially as liquidity remains a critical challenge. We have revisited our brand architecture to enable us to quickly integrate existing hotels to our network.”

RAMSAY RANKOUSSI
 Vice president, development, Africa & Turkey, Radisson Hotel Group

“Through the availability of domestic gas, the [Mozambique LNG Area 1] project stands to facilitate the development of gas-fired electricity in Mozambique. This will play a key role in providing reliable and affordable energy for the country and the wider region.”

WALE SHONIBARE
 Director, energy financial solutions, policy and regulation, African Development Bank

“I am privileged and excited to take on this challenge to drive GE’s business in Southern Africa, building into its 120-plus years of impact in the continent. I’m looking forward to working across our businesses in power, healthcare, renewable energy and aviation to create value for our countries, customers and people, as we rise to the challenge of building a world that works.”



NYIMPINI MABUNDA
 CEO, General Electric, Southern Africa

“Vantage Capital is excited to be investing in the affordable housing space, making access to affordable housing a reality for hundreds of South Africans. We are very impressed with Alleyroads’ strong management team, vision and track record of quality execution over the past 12 years.”

WARREN VAN DER MERWE
 Managing partner, Vantage Capital

▶ QUOTES

“The bank is making excellent progress in accelerating Africa’s development. I am excited with the opportunity to work with President Adesina and the bank’s leadership and teams to further provide top-notch policy, knowledge- and capacity-building support for African countries.”



DR RABEH AZREKI

Newly-appointed chief economist and vice president, economic governance and knowledge management, African Development Bank

“We see a surging demand in cloud adoption and SaaS based-models in the region which is being accelerated by the coronavirus pandemic as banks require more resilient and agile technology propositions.”

JEAN-PAUL MERGEAI

Managing director, Middle East & Africa, Temenos, on the company’s partnership with Al Ain Finance

“We leverage human capabilities and other core resources to partner for African transformation. We are passionate about co-designing partnerships to drive change at community levels across our pan-African footprint.”

CARL MANLAN

Chief operating officer, Ecobank Foundation

“Harsh conditions for global trade are exacerbated by the tightening of the export credit insurance market – leaving many member country businesses highly exposed. Now more than ever, international partners must come together in solidarity to support countries as they face this once in a generation crisis.”

OUSSAMA KAISSI

CEO, Islamic Corporation for the Insurance of Investment and Export Credit

“The renewed development of OML109 will bring a boost to local content development in Nigeria, and support the industry’s recovery following the COVID-19 crisis. As Nigeria multiplies efforts to build domestic capacity and develop the Nigerian content, we intend to live up to expectations as one of the country’s major indigenous players.”

PRINCE ARTHUR EZE

Executive chairman, Atlas Oranto

“It is critical that Africa and Middle East governments implement alternatives to quarantine measures. Africa and the Middle East have the highest number of countries in the world with government-imposed quarantine measures on arriving passengers. The region is effectively in complete lockdown with the travel and tourism sector shuttered. This is detrimental in a region where 8.6 million people depend on aviation for their livelihoods.”

MUHAMMAD ALBAKRI

Regional vice president, Africa and the Middle East, IATA

“Helping the Sokoto state government to provide free satellite internet services to isolation centres is very important to us. It shows our engagement to deliver high-speed Internet anywhere in Nigeria and to help communities in crisis. Eutelsat Konnect has been a very important partner for us, and with such initiatives, is showing its commitment to the Nigerian market.”

SHAHIN NOURI

CEO, Coolink

“I call on governments, developing partners and civil society organisations to work together to remove barriers which prevent women, children, and people in rural areas to enjoy their full rights. Only then, solutions will be sustainable.”



GRAÇA MACHEL

Chair, Graça Machel Trust

“The ultimate goal is to mobilise South African and Zambian business communities to consider taking up investment opportunities in both countries and to build on previous outward trade and investment missions held in Zambia between 2015 and 2019.”

NOMALUNGELO GINA

Deputy minister, trade, industry and competition, South Africa

“Our strategy is to lead the fight against the pandemic by opening the economy to make COVID-19 response management sustainable. Therefore, we are committed to ensuring that Mozambique remains an important destination for business now and after the pandemic.”



FILIFE NYUSI
President, Mozambique

“The recent challenges we have faced with the COVID-19 pandemic highlight the need for additional investment and smarter policies to deploy shared infrastructure to make access to broadband a reality for more Africans at a price they can afford.”

FUNKE OPEKE
CEO, MainOne

“COVID-19 has presented a unique opportunity to accelerate transition to that clean, affordable, reliable and renewable energy source offered by the sun. Nigeria is committed to the full utilisation of this abundant solar energy source. The Federal Government has already removed fossil fuel subsidies and included five million solar connections in our post-COVID economic sustainability plan – first steps to new jobs and a cleaner, healthier environment.”

PROFESSOR YEMI OSINBAJO
Vice president, Nigeria

“To help grow the crypto community, industry businesses are increasingly collaborating to uplift each other in providing more options for their users.”

RAY YOUSSEF
CEO and co-founder, Paxful

PRO TILE
EQUIPMENT

Concrete roof tile equipment manufactured by
JESSOP & ASSOCIATES (PTY) LTD

USED
WORLDWIDE
SINCE 1985

1

JESSOP & ASSOCIATES is the only manufacturer in the southern hemisphere producing high speed concrete tile extrusion plants

Installed more than 100 concrete roof tile plants in Africa to date

Supplies over 1000 different spare parts from its stores in South Africa

Manufactures extrusion machines capable of multi-profile concrete roof tile production

TEL: +27 16 421 2521
INFO@PROTILE.CO.ZA | WWW.PROTILE.CO.ZA

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

TUNISIA BOOSTING RENEWABLE ENERGY DRIVE

Image Credit: Adobe Stock



The project will be one of the first wind independent power producers (IPP) in the country.

Climate Fund Managers (CFM) and UPC Renewables (UPC) will develop the 30MW Sidi Mansour wind farm in Tunisia.

The project will be one of the first wind independent power producers (IPP) in the country. Climate Fund Managers is participating as co-developer, sponsor, financial adviser and E&S adviser to the project, through the development and construction financing facility under its management, Climate Investor One (CI1).

UPC will lead the development of the project with its local team that will lead land securitisation, permitting, grid connection, wind resource assessment and engineering and procurement contracts.

"We can start the construction of the Sidi Mansour wind farm in 2020, helping stimulate the Tunisian economy, create local jobs and a social plan for local communities while respecting international environmental protection guidelines," said Brian Caffyn, chairman of the UPC Group. The Sidi Mansour Wind Project is set to assist Tunisia in meeting its renewable energy goals. "As potentially the first wind IPP in Tunisia, this project will be a testament to how CI1's full lifecycle financing solution can unlock investment in renewable energy in new markets," according to Sebastian Surie, regional head of Africa for CFM.

EBRD GIVES US\$100MN LOAN TO BCP TO TACKLE COVID-19 IMPACT IN MOROCCO



Image Credit: Adobe Stock

The strong focus is on micro, small and medium-sized enterprises.

Responding to the COVID-19 impact on the Moroccan economy, European Bank for Reconstruction and Development (EBRD) has provided US\$100mn loan to Banque Centrale Populaire (BCP) for on-lending to local private businesses.

The loan is the second in the country under the EBRD Solidarity Package, established to meet the immediate short-term financing needs of existing clients and to strengthen the resilience of the financial sector during the coronavirus crisis.

BCP will extend EBRD funds to corporations and small and medium-sized enterprises that are experiencing a decrease in activity, turnover and profitability to help them address liquidity needs.

The EBRD expects to dedicate the entirety of its activities to combatting the economic impact of the crisis and stands ready to provide support worth US\$24.35bn over 2020-21. BCP is part of Group Banque Centrale Populaire and the second largest bank in Morocco in terms of lending. It offers a wide range of retail, corporate and investment banking services with a strong focus on micro, small and medium-sized enterprises.

Morocco is a founding member of the EBRD and became a country of operations in 2012. To date, the EBRD has invested US\$2.78bn in Morocco through 65 projects.

DJIBOUTI CELEBRATES MAJOR MILESTONES, BOOSTS REGIONAL INTEGRATION



Image Credit: Adobe Stock

Djibouti is accelerating infrastructure to bolster regional trade.

Djibouti has achieved two major milestones in boosting regional integration.

In the first, Djibouti Shipping Company welcomes its first ship and the Tadjourah-Balho road receives its first major cargo shipment. In the other, Djibouti has received M/V Spar Capella at Tadjourah Port. This ship arrived carrying 50,000 tonnes of coal destined for Ethiopia.

Djibouti Shipping Company's first ship (M/V African Sun) arrived in Djibouti on 19 July and is set to drastically reduce transit time for merchandise travelling from Turkey to the region. With this, the transit times from Turkey to Djibouti will reduce from 30 days to nine days. Transit times from Turkey to Mogadishu will reduce from 40 days to 20 days.

Djibouti received M/V Spar Capella on 17 July at Tadjourah Port. The arrival of this ship marks the first major use of the Tadjourah-Balho road corridor. The cargo was met at the port by 1,250 lorries which have taken the coal to Balho, Ethiopia by road.

This third road corridor between the two countries will strengthen regional cooperation and further position Djibouti as trade and logistic hub for Africa.

AFDB-FUNDED TRAINING BUILDS SKILLS FOR GHANA'S FUTURE ECONOMY

A six-year project to develop industrial skills among Ghana's workforce has



Image Credit: Adobe Stock

The aim is to support the Ghana government's efforts to reform the TVET sector.

improved the engineering and manufacturing skills of young people, promoted economic competitiveness and contributed to an improvement in the quality of life of beneficiaries and a reduction in poverty, according to an African Development Bank (AfDB) report.

The Development of Skills for Industry Project (DSIP) was implemented between 2013 and 2019 with US\$95.2mn in financing from the African Development Fund of the AfDB. Its goal was to support the Ghanaian government's efforts to reform the Technical and Vocational Education Training (TVET) sector and enhance technical and professional schools' capacity at the intermediate level.

The project achieved significant results. Over the period, 2,010 students enrolled in two technical universities and 10 technical institutes (40.7 per cent of whom were women) aided by scholarships, with the goal of increasing the participation of disadvantaged groups. In addition, 2,500 apprentices, more than half of them women, benefited from this scholarship programme. In total, scholarships were granted to 4,510 people, including 2,173 disadvantaged students, according to the Project Completion Report prepared by a team led by Efua Amissah-Arthur, social development specialist at the AfDB.

The project improved access to 13 public technical institutions in 38 districts of Ghana's 10 former regions, through the development of new infrastructure.

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

FINNISH ICS UNVEILS OPTICS TECHNOLOGY TO TRANSFORM SOLAR INDUSTRY ECONOMICS

Image Credit: ICS



The ICS SEO Film is produced in a highly economical roll-to-roll process.

ICS has developed a technology platform and a film solution to enhance solar energy economics and bring solar energy to the front line of sustainable energy solutions on a global scale.

The Solar Energy Optics (SEO) film solution is one of the major outcomes from comprehensive industrial research and development around light guide technology.

“We have found a way to capture and very precisely redirect light beams,” explained Kari Rinko, chief technology officer at ICS. “Our SEO film technology is based on embedded cavity optics, which is not exposed to external influences or contamination and therefore lasts as long as the solar panel itself. The SEO film is as effective as if the optics would be mounted on the whole surface of the solar panel.

“We use an ultra-thin film produced in a cost-efficient roll-to-roll process,” Rinko said. “Thus, our technology is truly scalable and ready for seamless industrial adoption on a global scale. This unique technology platform determines and enables the new sustainable energy goals for the whole photovoltaic industry.” Rinko further pointed out that the SEO technology focuses on controlling and redirecting more sunlight into the solar cells – not on the structure of the mono- and polycrystalline silicon cells themselves.

600W+ PHOTOVOLTAIC OPEN INNOVATION ECOLOGICAL ALLIANCE ANNOUNCED



Image Credit: Adobe Stock

The aim is to bring more value to customers and promote sustainable development of the PV industry.

A total of 39 photovoltaic companies have banded together to give industry a fillip as the 600W+ Photovoltaic Open Innovation Ecological Alliance.

The 600W+ Photovoltaic Open Innovation Ecological Alliance aims to create a collaborative and innovative ecosystem through open collaboration, synergising the main resources of the industry chain and integrating core processes such as R&D, manufacturing and applications.

In a declaration adopted by the 39 members of the alliance, member companies said that they will work together to build products, systems and standards for a next-generation technology platform, committing to maximise the customer values of 600W+ ultra-high power modules and other related solutions at the application end.

PV is becoming one of the strongest driving forces for energy transformation. To bring more value to customers and promote sustainable development of the PV industry, open innovation is critical. The member companies come from silicon, wafers, cells, modules, trackers, inverters, materials and equipment manufacturers.

Some of the 600W+ Photovoltaic Open Innovation Ecological Alliance companies include Arctech Solar Holding, China Datang Corporation Ltd, Cybrid Technologies, DNV GL Singapore Pte and others.

CANTONI MOTOR 

**DRIVING
YOUR
BUSINESS
RESPONSIBLY**



ELECTRIC MOTORS

from **0,04kW** up to **6000kW**

including **mining motors**

www.cantonigroup.com

Sustainable solutions for a better future

MYTILINEOS is transforming its traditional EPC business with a strong focus on sustainable energy innovations to propel the company towards an environmentally responsible future.



MYTILINEOS, an international company active in metallurgy, energy, gas trading and solar activity, foresees the global trends in energy transition and pioneers once more, by elevating its EPC business, into the fascinating world of sustainable energy solutions.

The company announced that the brand METKA – which was absorbed by the mother company MYTILINEOS in 2017 – is now called Sustainable Energy Solutions Business Unit (SES BU).

By implementing its strategy, the unit is enriched with a renewed orientation and is ready to skyrocket to the future.

The new course aims at the transition from construction of thermal power generation plants, traditionally carried out by the business unit, towards dynamic sustainability projects development: water and solid waste management, hybrid and off-grid energy projects, energy upgrading projects and implementation of innovative first-of-kind energy projects, such as hydrogen projects.

In parallel to growing its presence in sustainability projects, MYTILINEOS is planning to continue capitalising on its competitive advantage in thermal power generation plants construction and to further expand in the field of transmission and distribution, and pursue a targeted growth in the field of infrastructure through PPP projects and other projects requiring a high level of know-how.

Moreover, MYTILINEOS will be more focused at geographical level, looking to expand in important markets such as Africa, Europe and Middle East, where the company can enhance its activity around its priorities.

To optimally support its strategic plan, MYTILINEOS plans to change the organisational structure.

In particular, the dynamic new organisational structure includes four departments of activity (Conventional Business, Infrastructure, Environmental Solutions, New Energy Solutions), two projects development departments, each with selected geographical focus (Greece, Africa, Europe, and Middle East) and five departments of technical and general business unit support.

As defined in its mission statement, MYTILINEOS operates in local and international markets, showing resourcefulness, efficiency

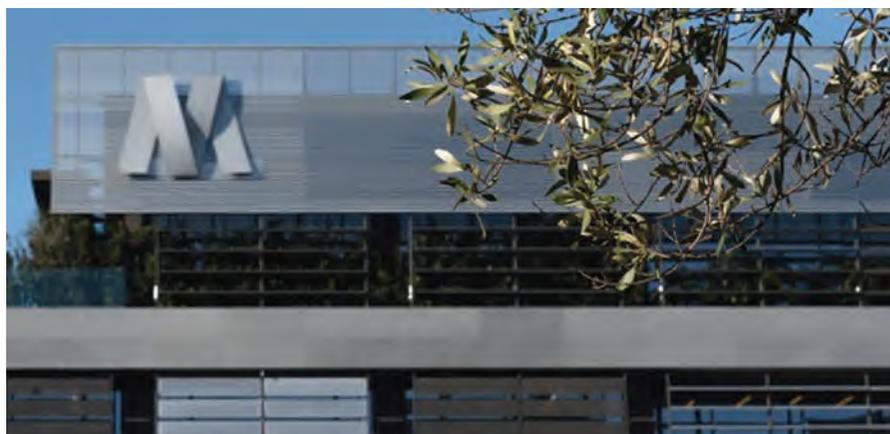


Image Credit: MYTILINEOS

SUSTAINABLE ENGINEERING SOLUTIONS BUSINESS UNIT (SES BU)

Transforming the EPC BU – METKA “Launching” into the future

MYTILINEOS aims at the dynamic development of sustainable projects (Sustainability).

- Solid and liquid **waste** management
- Hybrid** and off-grid energy projects
- Energy **upgrade** projects
- Execution of innovative **first-of-kind energy projects** (eg, hydrogen projects)

WE ARE RENAMING THE BU

in a way that **reflects its new Strategic Direction** and our vision for its future:
Sustainable Engineering Solutions Business Unit (SES BU)

WE ARE CHANGING THE BU'S ORGANIZATIONAL STRUCTURE AND BUSINESS MODEL

The new structure is based on **four key features**:

- **Flexible and efficient** shape
- Emphasis on optimizing project **execution costs**
- Distinction of responsibilities and **performance management**
- **Maximizing synergies** with the rest of the Business Units

AT THE SAME TIME, THE COMPANY IS ESTABLISHING ITSELF

in the **construction** of thermal power stations and selected projects.

An infographic from MYTILINEOS to explain the business model and how the company operates sustainably.

and respect for the environment and for the society. With the contribution of its new Sustainable Engineering Solutions Business

Unit, MYTILINEOS seeks to continue to create value for its shareholders, its employees and international clients. ■

Ambitious Ghana goes digital

Ghana is looking at multiple ways to further modernise its economy with digital technology, a process which has been accelerated out of necessity during the COVID-19 lockdown. Georgia Lewis reports.



Convenient online transactions and mobile money applications are on the rise in Ghana.

Image Credit: Adobe Stock

Among Ghana's immediate responses to the COVID-19 pandemic was a series of measures to make digital transactions easier. In March this year, the Bank of Ghana and the Ghana Interbank Payment and Settlement Systems decided to waive or reduce charges for online transactions and discourage the use of cash to prevent the spread of coronavirus. This was coupled with other measures, such as a two per cent reduction in interest rates, a two-month extension for filing annual tax returns, a waiver of penalties for taxpayers who redeemed outstanding debts by the end of June this year, and a soft loan scheme for micro, small and medium-sized businesses.

Looking beyond simply mitigating the short-term economic impact of

COVID-19, in May, Ghana's Ministry of Finance launched a series of policy initiatives to further digitise the economy, improve financial inclusion, reduce poverty and boost economic development.

There are three main pillars of this strategy. The first is the National Financial Inclusion and Development Strategy, which was created in conjunction with the World Bank, and it aims to increase financial inclusion from 58 per cent to 85 per cent by 2023.

The second is the Digital Financial Services Policy, which has been developed in partnership with the Consultative Group to Assist the Poor, and this builds on existing technology to further bolster the digital financial ecosystem.

Thirdly, the Cash-Lite Roadmap, designed with the United Nations-based Better Than Cash Alliance, puts forward concrete steps to build an inclusive, digital payments system across all of Ghana. This includes better access to financial

services, improved regulation and oversight and greater promotion of consumer protection.

A statement from the ministry said that in the context of the COVID-19 pandemic, these policies reinforce the government's commitment to digitising the Ghanaian economy and providing soft infrastructure to enable the private sector, payment service providers and other ecosystem players to innovate digital financial solutions. In practical terms, the government has established the Digital Payments Coordination Unit to drive effective stakeholder engagement and implementation of the vital actions that will be required to make policy tangible.

Prior to the May launch, Vice President Mahamudu Bawumia launched QRPay and Proxypay on

“ Digital payments help drive transparency, accountability and efficiency, and help with greater women's participation.”

KEN OFORI-ATTA, FINANCE MINISTER, GHANA

behalf of the Bank of Ghana in March, calling on financial institutions, telecommunications companies and the fintech sector to find innovative solutions for turning mobile phones and mobile money platforms into “vehicles of economic emancipation”, especially in the informal economy.

Speaking at the May launch, Ken Ofori-Atta, Ghana’s finance minister, commented, “Digital payments help drive transparency, accountability, efficiency, as well as greater women’s participation in the economy. Moving away from cash helps our country advance towards achieving many of the Sustainable Development Goals.”

Mr Ofori-Atta stressed the importance of the private and public sectors to work together to digitise the economy “in a responsible manner, to turn these new policy initiatives into tangible benefits for all Ghanaians”, adding that this was “even more relevant in the era of the COVID-19 pandemic.”

Dr Ruth Goodwin-Green, managing director of the UN’s Better Than Cash Alliance praised Ghana for already being recognised as a “global digital payments success story”, describing the latest initiatives as an “ambitious, cash-lite road map” that needs to be accelerated “in a way that is responsible and responsive to the needs of all Ghanaians.”

The financial empowerment of women is an important part of Ghana’s push towards further economic digitisation.

Along with the Ghanaian government policy initiative, GSMA marked four years since the launch of its GSMA Connected Women programme by announcing the first wave of operators to renew their



Greater access to the tools of digital commerce has the potential to transform every level of the Ghanaian economy.

Image Credit: Adobe Stock

commitment to the programme through to 2023, including MobileMoney Limited, a subsidiary of MTN Ghana. The initiative was launched in 2016 to take action to close the mobile gender gap and, since then, 39 mobile operators across Africa, Asia and Latin America made formal commitments to reduce the gender gap in their mobile money and mobile internet customer base, as well as driving greater digital financial inclusion for women, who are disproportionately affected by a lack of access to financial services.

For its part, the World Bank has provided US\$115mn in financing towards the eTransform Ghana Project, which aims to further digitise the Ghanaian government’s service delivery and boost internet access, especially in remote areas where improved connectivity can be economically transformative.

“The project will help underpin a comprehensive COVID-19 digital response by increasing broadband

provision in underserved parts of the country and preventing service disruptions,” said Michel Rogy, World Bank practice manager, digital development, for Africa and Middle East.

“Restoring jobs and livelihoods for micro, small and medium enterprises is critical for promoting the economic recovery of the country and is at the heart Ghana’s COVID-19 response,” said Pierre Laporte, World Bank Country Director for Ghana of the project.

The impetus is certainly there for greater digitisation of the economy, partly thanks to the temporary economic shutdown caused by the pandemic. Digital payments captured by the Ghana Interbank Payment and Settle Systems increased by 81 per cent in the first quarter of this year, including credit cards, banking apps, mobile transactions, digital cash, smartcards and electronic billing.

This enthusiasm for greater migration to digital transactions should further sharpen competition in Ghana’s already lively mobile money market. This sector is dominated by AirtelTigo, MTN and Vodafone - these three companies comprise a total market share of around 96 per cent. This has been supported by a large agent network, which is even bigger than that of Kenya (Ghana has 226,000 agents

while Kenya has 205,328), along with strong regulations and around half the adult population of Ghana still unbanked. Companies which are keen to make their moves on the mobile money triopoly include Ghana Commercial Bank and fintechs such as Zeepay.

Another example of Ghana’s progress in this sector is the launch in May this year of a national QR code payment solution by HPS in conjunction with the Bank of Ghana. This made Ghana the first African country to launch a QR code payment system at a national level, enabling users to make instant payments for goods and services regardless of the payment method.

The growth of e-commerce in Ghana, which was on the rise before the pandemic and continues apace, is another means of accelerating the digital economy. For example, MallforAfrica, an online retailer that gives Africans access to more than 250 US and UK online retailers, is already a solid performer in Ghana.

On its expansion across more African markets this year, MallforAfrica’s CEO Chris Folayan said, “Current customers in Nigeria, Kenya, Ghana, and Rwanda love our platform, which is why we are rolling out in 11 additional countries and will continue to expand our platform to meet the needs of customers worldwide.” ■

“Ghana is a global digital payments success story and its ambitious, cash-lite road map needs to be accelerated.”

DR RUTH GOODWIN-GREEN, MANAGING DIRECTOR, BETTER THAN CASH ALLIANCE

Say Hello To Innovation GCNet Makes This Possible



www.gcnet.com.gh



GCNet

Ghana Community Network Services Limited

Reducing the risks across the continent

The African Trade Insurance Agency (ATI) is changing the economies of countries all over Africa. In 20 years, it has become an important development finance institution, especially in emerging markets.

Access to finance helps countries such as South Sudan develop and complete projects.



Image Credit: UNMISS/Flickr

The African Trade Insurance Agency (ATI) is a multilateral provider of investment and trade credit insurance, offering insurance against political and commercial risks, by attracting foreign direct investments across the continent. The acting chief executive officer, chief underwriting officer, and a senior underwriter talked to *African Review* about how ATI is making a difference across multiple markets while remaining resilient during a turbulent year.

This pan-African institution, which has 18 member countries including Burundi, Côte d'Ivoire, the Democratic Republic of Congo and Zimbabwe, (the most recent additions being South Sudan in 2017 and Togo in 2020) has been going from strength to strength.

In 2019, ATI insured US\$6.4bn worth of investments and trade across Africa. This represents a

35 per cent increase over the previous year and it is part of a larger trend that has seen ATI continue to post record results over the past eight years.

And not even a global pandemic has had a negative impact on this agency – earlier this year, S&P Global Rating published its annual assessment of ATI's performance reaffirming the company's creditor rating of 'A' with a Stable Outlook (A/Stable) and noting ATI's 'policy importance' to the region.

This is ATI's thirteenth annual S&P rating, which has remained consistent despite occasional economic downturns and instability in the past decade.

In affirming this rating, S&P said in a statement, "Even amid weakening economic fundamentals in the region following the outbreak of COVID-19, we expect that ATI's members will uphold ATI's preferred creditor status, recovering any payouts on non-commercial claims."

John Lentaigne, the acting chief

executive officer, who was appointed in June 2019 commented, "This report from S&P affirming ATI's rating amid such unprecedented market turbulence, supports our recent statements to the financial markets about our capacity and institutional commitment to stay the course and help our African member countries through the anticipated COVID-19 storm."

"ATI's standing as an important partner for other development finance institutions, global and regional financial sector institutions, and African governments is, to my mind, imperative to our ability to help ensure that investments and trade continue to flow in the region particularly during the current pandemic," Mr Lentaigne added.

ATI started in 2000, when a group of east African countries, under the leadership of COMESA,

“ATI's standing as a partner for other development finance institutions is imperative to our ability to ensure trade and investments flow in the region.”

JOHN LENTAIGNE, ACTING CEO, ATI

commissioned a World Bank-funded study to look into why the region wasn't attracting more foreign direct investment, despite myriad opportunities. The results showed political risk to be the biggest concern for investors. Seeing a gap in the market, ATI was launched just a year later to fill that gap, and provide risk solutions for investors. Over the years, their services have expanded in keeping with the needs of the markets across Africa.

Membership of ATI opens a whole new path for countries to reduce their debt levels, as it provides global investors and financiers with the reassurance that sovereign transactions and other investments are back-stopped by a highly rated and reputable insurance guarantee agency. This has certainly been the case with the joining of South Sudan, which became a member country in 2017.

Albert Rweyemamu, a senior underwriter at ATI, said, "Generally, ATI supports limited projects in non-member states as we cannot confer our Preferred Creditor Status (PCS), which offers protection against political risks, to non-members."

On the addition of Africa's newest country to ATI's ranks, Mr Rweyemamu commented, "With

South Sudan joining the agency, ATI is now able to offer potential investors products that protect against sovereign and investment risks, which is a prevalent risk in the market."

In regard to the other ways ATI helps reduce the risks associated with investing in emerging markets, he added, "Our PCS adds another layer of comfort for investors because it ensures that, in the event of a claim, ATI-backed transactions will be prioritised by the government. Since the country has joined, ATI has supported several projects including the importation of petroleum. To date, our total support to South Sudan is valued at over US\$500mn."

He was candid about the risks of working with a country such as South Sudan, which has been finding its feet politically and economically since it was founded in 2011: "Being one of the youngest and the most oil-dependent countries in the world, there are related political and economic challenges that the Republic of South Sudan is currently facing. ATI stands ready to be part of the solution by offering its insurance innovation, which will help the country explore various

“ There are political and economic challenges facing South Sudan and ATI is ready to be part of the solution, helping the country explore borrowing options.”

ALBERT RWEYEMAMU, SENIOR UNDERWRITER, ATI

borrowing options."

In regard to debt management, Togo, Benin, Côte d'Ivoire and Niger, have all benefitted, via ATI, from a blended finance tool that uses credit enhancement measures, or guarantees, from multilateral institutions to lower their cost of borrowing and obtain loans with longer tenures. These west African countries have used these proceeds to buy back more expensive and short-term debt, thereby lowering their debt servicing costs to the tune of well above 100 per cent in many cases. In the current COVID-19-affected environment, these transactions, which largely took place before the pandemic, are now viewed in a different light.

Benjamin Mugisha, ATI's chief underwriting officer, said, "ATI's main objective is to provide useful

solutions to our African member governments. These reprofiling transactions are popular because they address governments' desire to more sustainably manage their debt loads, which we predict will become a priority for many countries as the COVID-19 pandemic continues to take an economic toll."

ATI's business model is premised on the strength of its Preferred Creditor Status (PCS), among other factors. Mr Rweyemamu, says, "Through these legal instruments, ATI is guaranteed preferential payment/ reimbursement by member states for any claims resulting from their payment delays or breach of sovereign or sub-sovereign obligations.

"In recent years, ATI has taken practical measures to boost its PCS, which has resulted in near-zero sovereign claims in 2019. In addition, we have been able to mitigate a total of US\$91mn recoveries, thereby resolving payment default situations before they result in claims," he added.

Rweyemamu explained how ATI works to assist in increasing investment and trade flow into its member countries: "ATI's main mandate is to attract trade and investment into Africa through risk mitigation products that target both local and international private sector players, ranging from financiers to suppliers of goods and services. As a major provider of risk-mitigation solutions on the African continent, ATI develops insurance solutions for transactions that would not be insurable in the commercial insurance market, and, where needed, ATI has the flexibility to design innovative solutions." ■

Countries such as Togo are looking forward to brighter economic days ahead with better managed finances.



Image Credit: Francisco Anzola, Flickr

How digital technology will foster prosperity

Africa has embraced digital technology, sometimes leapfrogging other regions in the process. Economist Moin Siddiqi explains how this needs to continue so the continent can become more economically successful.

South Africa is a leader on the continent in terms of far-reaching mobile connectivity.



Image Credit: Adobe Stock

Digitalisation is radically transforming and speeding up government and private businesses worldwide, thus impacting people’s lives and prosperity. Digital technology has facilitated working from home and enabled businesses and households to adapt faster to the new reality of social distancing, as well as providing access to public services during the health emergency.

In sub-Saharan Africa (SSA), e-commerce, e-learning, e-transfers, e-payments, and e-governance are finally catching up. The digital transformation is a big winner from the global health crisis.

“Clearly, many organisations are not going back to the old ways of working we knew before the pandemic. We have seen that we can telecommute effectively. We know that we can organise work more flexibly and accommodate our staff’s conditions and preferences. So, we are going to see a rapid

modernisation in how we operate,” said International Monetary Fund (IMF) managing director Kristalina Georgieva.

Digital connectivity in SSA is expanding rapidly thanks to mobile connectivity. Internet penetration has risen tenfold since the early 2000s, compared with a threefold hike globally – with most people accessing the internet via mobile rather than fixed line broadband. Digitalisation has made huge inroads into financial sector, where some SSA countries (led by South Africa, Kenya and Nigeria) are global

leaders in mobile money – money transactions as a share of GDP average around 25 per cent, against just five per cent globally.

Many regional governments are leveraging mobile technology to help their citizens since the outbreak of COVID-19. In SSA, more than 80 per cent of measures announced in recent months were in the form of cash transfers – compared to 30 per cent globally.

The GSMA has launched the Innovation Fund for Rural Connectivity, which aims to expand digital inclusion through

technology solutions for connecting unserved rural communities.

“Mobile operators are committed to advancing connectivity in rural areas as they work to deliver commercially sustainable solutions to accelerate progress against the UN’s Sustainable Development Goals (SDGs),” said John Giusti, chief regulatory officer, GSMA. “The Innovation Fund for Rural Connectivity will drive partnerships aimed at developing new ways of using mobile technologies to close coverage gaps in rural areas so that more citizens have access to life-enhancing mobile services.”

“Many organisations are not going back to old ways of working. We have seen that we can telecommute effectively, that we can organise work more flexibly.”

KRISTALINA GEOGIEVA, IMF MANAGING DIRECTOR

Digital policy solutions

Many countries have deployed digital tools to cushion the effects of Covid-19 on their economies, while promoting social distancing. Digitalisation has allowed African businesses to continue partial operations via telework and e-commerce innovations.

The former is limited to fewer companies and services operating within the small formal sector but enabled some countries to minimise disruptions in core public services.

In Rwanda, the judiciary is increasingly using videoconferencing for court proceedings.

Meanwhile, in Côte d'Ivoire, a new ePassport agency manages the service online from the first application through to appointment booking and payments.

Kenya's e-Citizen portal has led to increased usage for services, such as civil and vehicle registration. Tax authorities are also encouraging the use of e-tax services.

In Kenya, Namibia, and Nigeria, taxpayers are encouraged to use existing online platforms for filling tax returns, making tax registrations, applying for tax refunds, and communicating with tax officers during the lockdown.

Online orders are reported high in Kenya and Nigeria, while an e-commerce platform in Senegal offers easy access to websites of small-and medium-sized enterprises selling essential goods.

In Uganda and Kenya, for example, authorities have used social media to share information on where consumers can purchase

food with e-money and delivered via ride-hailing apps.

The region's less reliable internet connectivity and electricity supply affect telework arrangements – with average mobile download speed of 7.4MB per second, which is more than three times slower than the average for the rest of the world.

Cross-country examples

Countries are targeting 'social safety nets' to vulnerable people and hardest hit businesses through e-money, electronic cash transfers, and virtual engagement in countries such as Benin, Côte d'Ivoire, The Gambia, Lesotho, Madagascar, Namibia, Togo, Uganda, Zambia and Zimbabwe.

Some central banks have relaxed e-money regulations to support retail transactions in order to limit the spread of COVID-19 through bank notes. Telecom operators have also eased the terms of service to encourage increased use of e-money.

Togo's 'NOVISSI' cash transfer scheme distributed emergency aid to 500,000 people in under two weeks using mobile phones.

E-money transfers are being used to deliver income support (Namibia) and unemployment benefits

“ Mobile operators are committed to advancing connectivity in rural areas as they work to deliver commercially sustainable solutions.”

JOHN GIUSTI, CHIEF REGULATORY OFFICER, GSMA

(Zambia). In Gabon and Senegal, the authorities provide utility bills relief for people on low incomes by digitally crediting the beneficiaries' accounts with utility companies.

Nigeria has partnered with mobile network operators to identify vulnerable informal workers in urban areas through airtime purchase patterns. Technology firms in South Africa and Kenya are developing contact tracing apps. In Rwanda, anti-epidemic robots are monitoring patients, delivering food and medication, while free online consultation tools are helping Nigerians to self-assess infection risk and get tested based on symptoms. International health experts offer advice on hospital management, emergency response and staff medical training via webinars with Mozambique's frontline doctors.

Countries are leveraging digital platforms to enhance education, especially in rural areas.

Côte d'Ivoire and Kenya have launched online education services, and Sierra Leone is using digitalisation to upgrade teacher recruitment processes and evaluate student progress.

Educational television and radio programmes have also been launched in Angola, Burkina Faso, Cameroon, Madagascar, and Malawi. Although fewer higher educational institutes have moved online compared to other regions, virtual campus apps and websites provide free study materials during school and university closures in countries such as Côte d'Ivoire, Ghana, Kenya, Liberia and Uganda.

In Rwanda, drones fitted with megaphones are used to raise awareness and enforce lockdown measures and in Botswana, people can request passes for domestic movements via an online platform. Digitalisation has provided essential tools to tackle the socio-economic impact of the COVID-19 virus in unprecedented ways.

In sum, digitalisation can help to increase productivity, skilled jobs, and growth. It can support Africa's post-pandemic recovery through the diffusion of knowledge and innovative products/services, as well as supporting further financial inclusion and deepening. According to IMF research, expanding the region's internet access by an extra one-tenth of the population could boost real per capita GDP growth by one to four percentage points. ■

For more on Ghana's digital economy, turn to page 19.

Online learning has helped students across Africa continue their studies during the COVID-19 pandemic.



Image Credit: Adobe Stock

Egypt banking on renewables to meet demand

To meet energy demand, Egypt is turning to renewables. But are its ambitious targets realistic? Toufik Khitous, business development manager for North Africa, Wärtsilä Energy Business shares his views.

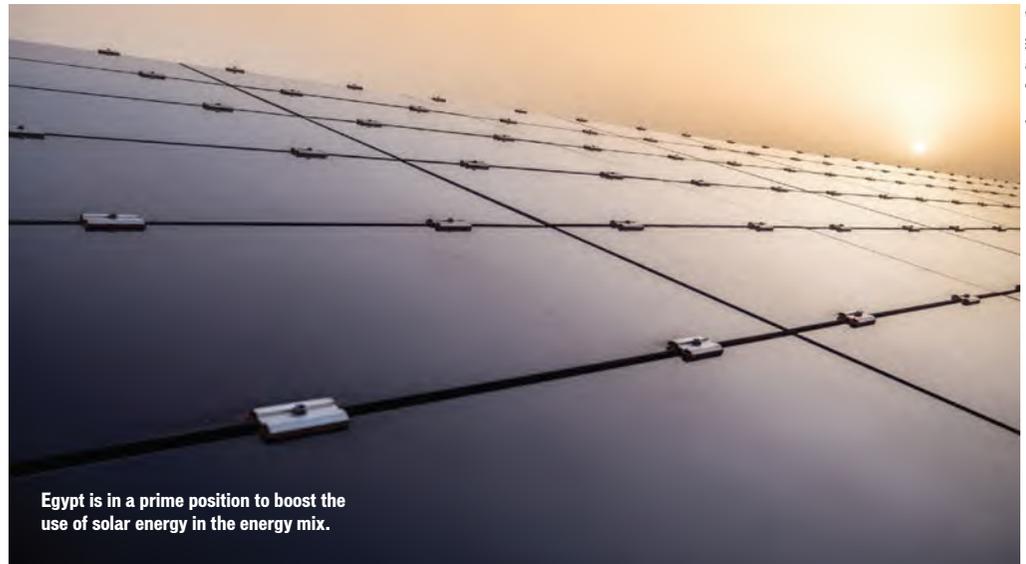
Egypt's population has now passed 100 million. As one of the most populous and fastest-growing nations on the African continent, providing electricity to all its citizens is a matter of priority for the Egyptian government.

To ensure continuous security and stability of energy supply, Egypt has launched an energy diversification strategy, known as the 2035 Integrated Sustainable Energy Strategy (ISES), which aims to step up the development of renewable energy and energy efficiency in the country.

Egypt aims to produce 20 per cent of its electricity using renewable sources by 2022 and 42 per cent by 2035. For the second target, the goal is for wind to provide 14 per cent, hydropower two per cent, and solar 25 per cent. This is a hugely ambitious energy plan, but it is one that is necessary for Egypt to flourish. In particular, the country wants to diversify its mix of power sources. Egypt has introduced nuclear power and it is developing megaprojects that will bring a massive amount of gas into its energy mix.

This is in stark contrast to 2014, when, due to electricity shortages, Egypt was forced to introduce more coal into its energy mix to lower its dependence on imported gas. Rising demand, the falling costs of renewable energy, and the discovery of new natural gas sources have allowed Egypt to diversify its energy mix and become a gas exporter.

Furthermore, environmental concerns over the generation and use of coal have reinforced this ecological approach. Egypt has signed up to the United Nations Framework Convention on Climate Change (UNFCCC), meaning that it has no option but to reduce its dependence on fossil fuels.



Egypt is in a prime position to boost the use of solar energy in the energy mix.

Tapping into renewable energy will benefit Egypt in ways more than one. It will enhance the country's economic growth and bring revenues in foreign currency. The increased usage of renewable energy is expected to lead to exporting fossil fuels or using them in other areas domestically, such as industrial production.

The transition to renewable energy sources is also expected to help local businesses in Egypt, since the cost of electricity is an essential factor for business owners. While solar power and sustainable electricity are not widely available in the country yet, there is merit in Egypt's plan to tap into renewable energy sources in the long run. More factories will lean towards sustainable renewable energy sources if it is economic, due to the cost of production and increasing price of electricity.

But to leverage the benefits of the transition to renewable energy, Egypt needs to overcome a few infrastructural and geographic hurdles. A report by the International Renewable Energy

Agency (IRENA) provides a comprehensive assessment and recommendations for primary measures that Egypt must consider to achieve the goals set out in ISES. The report points out the need to update Egypt's electric power sector strategies to reflect the growing cost advantages and other benefits of renewable energy. It focuses on reforming the existing market framework to improve the economic feasibility of projects.

Additionally, the country is very much split in two by the fabled river Nile, with many regions in the south still not connected to the national grid. Egypt is very keen to invest in the tourism sector along the Red Sea, meaning there is a need for not only infrastructure but also the power to supply to these regions.

Egypt's situation has changed a lot since 2011. Nowadays, the issue is distribution rather than consumption. Egypt has a tradition of setting its energy distribution vertically. This has a rather negative impact on how the energy is consumed, but it can change, since we are starting to see more

industries coming into the country as Egypt is encouraging private sector participation.

Between 2022 and 2027, Egypt plans to install an additional thermal power plant and two clean coal technology power plants. These initiatives are expected to exceed the nation's peak power and electricity demands.

Of the renewable energy targets for 2022, solar and wind are considered achievable. In particular, the Benban Solar Complex project, one of the largest solar PV power plant projects in the world, with a total installed capacity of 1.8 GW, is foreseen to come online alongside a number of utility-scale wind farm projects in the Gulf of Suez.

Egypt has a lot of unanswered questions, but it seems to be on the right track. Three big parts – gas, sea turbines and renewables – need to play their part going forward. Egypt has no choice; it must invest in renewables. This sector only makes up around two per cent of the energy mix, but these announcements could increase it to 20 per cent – this is almost a revolution. ■

Hurdles to infrastructure development in Africa

The world is eager to do business with Africa but finds it difficult to access the continent's markets because of poor infrastructure, writes Tonny Tugee, managing director, SEACOM, East Africa.

Without a doubt, Africa is one of the world's fastest-growing economic hubs. Crucial to this development is the ability to meet the demand for infrastructure. At the end of last year, a World Bank economic update reported that Kenya has seen its ICT sector grow at an average of 10.8 per cent annually since 2016, becoming a significant source of economic development and job creation with spillover effects in almost every sector of the economy. While this is hugely encouraging news for Kenyans, it raises questions about the factors which might impact the ongoing positive trajectory of infrastructure development, in Kenya and the rest of the continent.

Fixed-line networks: In 2019, Kenya invested US\$59 million in the Djibouti Africa Regional Express (DARE) submarine fibre-optic cable system, which reached the shores of Mombasa during March this year. The others include SEACOM, East African Marine System (TEAMS), Eastern African Submarine Cable System (EASsy) and Lion2 systems. According to Njoroge Nani Mungai, chairman of Kenya's Communications Authority, the investment demonstrates the government's desire to improve Kenya's position as a regional IT hub. It is aimed at guaranteeing access to a faster, more secure, and more reliable internet connection. Revenues generated by the digital economy should reach US\$23,000bn by 2025, thanks to investments 6.7 times higher than those in other sectors. In addition, terrestrial fibre networks have continued to expand, offering more connectivity options and better network redundancy – great news for land-locked countries. However, according to



Tonny Tugee outlines the ICT infrastructure improvements needed to boost investment.

Image Credit: SEACOM

MainOne's CEO, Funke Opeke, these remain underutilised due to high prices and a failure to establish an enabling environment.

Mobile network coverage: Telecommunications has continued to register positive growth, with increased uptake and usage of mobile services. High-bandwidth internet infrastructure has become more widely available, while the rollout of 4G infrastructure by the MNOs has led to substantial growth in subscriptions to data and internet services. With the expansion of fibre-optic infrastructure across Kenya, more homes will be connected to better quality broadband services, which will be extended to the rural areas. Consequently, the increase in mobile network coverage has led to a decline in fixed-line networks. Alternative solutions need to be considered to ensure a stable internet connection throughout

Kenya to bridge the rural and urban digital development divide.

Poor infrastructure: The world is eager to do business with Africa but finds it difficult to access markets because of poor infrastructure. Greater economic activity, enhanced efficiency and increased competitiveness are hampered by inadequate transport, communication, water, and power infrastructure. The World Bank economic update highlighted challenges relating to the inadequate power supply, transport networks and communication systems as crucial to ensuring ongoing connectivity and continent-wide economic development. It found that the poor state of infrastructure in sub-Saharan Africa reduced national economic growth by two percentage points every year and cut business productivity by as much as 40 per cent. It is estimated

that around US\$93bn is needed annually over the next decade to overhaul sub-Saharan African infrastructure. Around US\$60bn of that is needed for new infrastructure and US\$30bn for the maintenance of existing infrastructure. Only about US\$25bn annually is being spent on capital expenditure, leaving a shortfall that must be financed.

Economic potential: The economic climate of Kenya will determine access to the tools needed to build the relevant infrastructure. According to André Pottas, Deloitte's corporate finance advisory leader for sub-Saharan Africa, this translates into exciting opportunities for global investors who need to look past the traditional western view of Africa as a homogeneous block and undertake the detailed research required to understand the nuances and unique opportunities of each region and individual country.

With governments across the continent committing billions of dollars to infrastructure, Africa is at the start of a 20 to 30-year infrastructure development boom. Fortunately, we have access to a global network of exports, which we need to be utilising optimally to ensure a stable infrastructure, both digital and physical. However, in preparation for the boom, the only way for Africa's infrastructure backlogs to be cleared and to unlock connectivity and communications in Kenya is through globally competitive, growth-oriented, mobile, and digital technology businesses. It is imperative to establish partnerships with trusted private sector players who already cater to the local and international communications market with reliable connectivity solutions. ■

“So much more than bricks and mortar”

Carl Manlan, chief operating officer at Ecobank Foundation, discusses the corporate social responsibility aspects of infrastructure development and why taking care of people is an important part of any major project.

Often when people speak about the need for infrastructure development in Africa, they are discussing bricks and mortar, physical structures such as transportation links, hospitals and schools. But creating a world in which the African continent can truly flourish and provide long term stability and growth for millions of people relies – arguably more heavily – on invisible infrastructure, the hidden strength behind those physical health centres, roads and community hubs.

Five years ago, the Ecobank Foundation collaborated with the Charities Aid Foundation (CAF) to design a strategy that would help us become the ‘go-to’ partner in Africa in development of improved access to health and education, along with financial inclusion. It has been a rewarding journey. With a financial institution as our foundation, we needed to explore how we could best deliver on what was an ambitious goal. We wanted to leverage what we already knew how to do to deliver the foundation’s mission to achieve social change, while helping to battle life-threatening diseases such as HIV/AIDS, tuberculosis, and malaria.

We have been guided by CAF’s in-depth research into growing giving in four countries in Tanzania, Kenya, Uganda, and South Africa. With an aim to capturing the size and scope of giving among these countries’ emerging middle classes, the reports examined individual giving and the enabling environment. Recommendations included supporting the development of the invisible infrastructure which supports civil society. Among them was promoting new ways of safe and secure giving to develop the potential for mass engagement and individual giving.

For the foundation, the need for secure giving translated into using the access given by the Ecobank mobile app to reach potential donors, be they local or part of the African diaspora, and help them to give across Africa. It meant engaging with our staff to test dedicated fundraising appeals such as World Malaria Day and was used successfully to fundraise for the victims of Cyclone Idai in March 2019 and other initiatives that build on the giving culture of Ubuntu.

To move towards our goals, our foundation has harnessed the talents of Ecobank employees across 33 countries. In addition to our direct



Improving access to mobile banking has far-reaching benefits, especially in rural areas.

Image Credit: Adobe Stock

financial support of malaria prevention programmes in Mozambique and Nigeria, we are supporting the Global Fund and its local partners to develop technology-led solutions to finance challenges such as cash management and mobile money support. An example of this is providing mobile banking services to street children in Togo with a local charity acting as custodian to safeguard their savings. This is an example of what we knew from the outset about successful corporate social responsibility – it will only translate into real-world impact if it is borne out of the local context – you need a deep understanding of the problem you are hoping to help solve to best use your resources.

For Ecobank Foundation, a cornerstone of this approach was the collaboration with the Ecobank Academy, a corporate university which provides training for finance managers working in health programmes that supported large relief organisations such as The Global Fund and the United Nations Population Fund (UNFPA). Drawing on our strengths, we created an initiative to bridge the knowledge gap between financial institutions and colleagues working in development on the ground. Leadership and financial management training was designed for the International Federation of the Red Cross

and Red Crescent Africa to support national societies.

From here, they were able to improve their individual governance and reporting standards, demonstrate their professionalism, strengthen relationships with funders, and connect with colleagues in similar organisations in other regions to share successes and lessons learned along the way. Therein lies a crucial piece of that ‘invisible’ knowledge infrastructure that will help to solve the transformation puzzle of development in Africa. Amid our work in support of those affected by the pandemic, our foundation has not lost sight of the battle against malaria, which continues to inhibit African development. We launched the Zero Malaria Business Leadership Initiative and joined with the RBM Partnership and African Union Commission Zero Malaria Starts With Me campaign so that we can continue to work with like-minded institutions.

Despite the current crisis, we have cause to be hopeful. The foundation and CAF are working together to help create desperately needed basic systems and services, as well as the more complex ‘invisible’ civil society infrastructure which, done thoughtfully and with a sense of purpose, tangibly improves the lives of millions. ■

The new shape of logistics and warehousing

Macroeconomic factors, tenant needs, last-mile delivery and ever-rapid technology developments are all factors that are reshaping the demand and design for warehousing and logistic networks. Abhishek Paul reports.

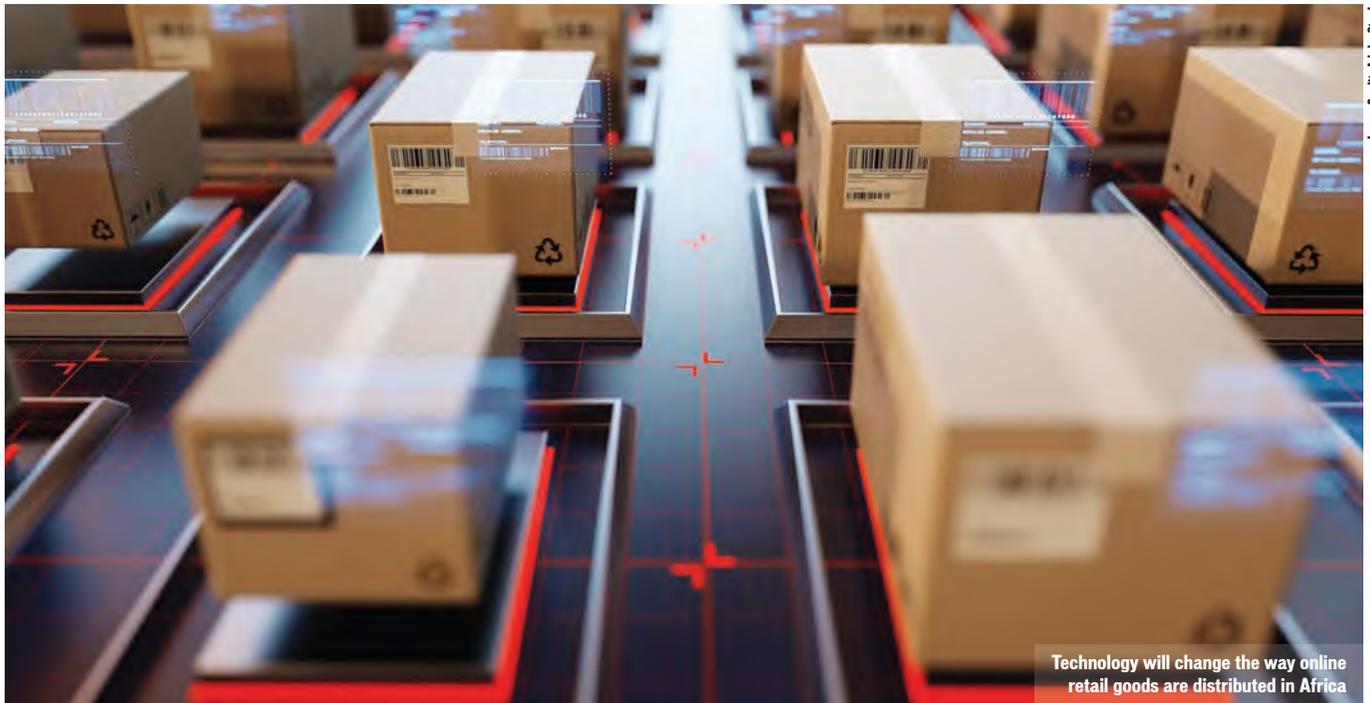


Image Credit: Adobe Stock

Technology will change the way online retail goods are distributed in Africa

The materials handling webinar ‘Forecasting future demand for logistics and warehouse space’, hosted by Messe Frankfurt, has discussed the strategic evolution of supply chain strategies and focus on the growing demand to satisfy inventory controls, supply chain diversification and e-commerce needs in the COVID-19 era.

Giving a top-line overview of implications of COVID-19 on the industrial and logistics market, Peter Haywood, from industrial and logistics agency JLL, noted that the trend is shifting from retailers to e-commerce platforms and sophistication of the supply chain.

“The impacts of COVID-19 have not fully materialised, but the initial impacts have been felt,” Mr Haywood said. “There is optimism that the abruptness of these events has forced the markets into adapting, which will have a positive outcome for the future.”

The future of retail is changing at an accelerated pace as the businesses are choosing advanced warehouses, new technologies, automation and re-shoring, he said.

Logistics firms offering services to hard-hit sectors such as retailers, manufacturing, automotive are facing challenges due to the pandemic, said Mohsen Ahmad, CEO, Logistics District, Dubai South. To mitigate the impact of COVID-19, it is imperative to look at reducing the operating costs, collaborating with customers, addressing cash flow challenges and finding innovative operational methods, according to Mr Ahmad. How to keep the business functional even in the lockdown is a lesson learnt by many of the companies, he said.

Ako Djaf, vice-president, contract logistics/SCM and land transport, Middle East and Africa, DB Schenker, noted, “As a consequence of e-commerce growth and advanced

technology, automation and innovation, we believe, will determine the future success in our industry.

The growing shortage of labour in matured logistics nations and in our region in many locations and explosion in demand of online retailers will automatically drive automation and innovation, according to Mr Djaf. However, re-skilling the labour force is needed to collaborate and maintain the new machines in the facilities, he added.

Talking about strategies, he noted that advanced warehouse management systems with AI features and interface capabilities are picking up rapidly. Enabling customers better material flow through visibility and traceability is increasing in terms of customers expectation, he added. Creating a value proposition and stable strategic partnerships remain vital for logistics firms, in his view.

Alain Kaddoum, general manager of Swisslog Middle East, said, “The traditional retailers in the market are expecting that 50 per cent of their transactions will be 30 per cent to 50 per cent on e-commerce for the next one year at least due to COVID-19 impact. People will get a habit of ordering online more than before.”

Mr Kaddoum said that retailers are moving to the e-tailer approach having a smaller footprint of a retail shop and delivering more on e-commerce. All the panellists have agreed that macroeconomic factors, tenant needs, last-mile delivery and rapid technology developments are all factors that are reshaping the demand and design for warehousing and logistic networks. As operators pivot to deal with the long-term ramifications of the pandemic, supply chain strategies will be overhauled and this will lead to a boost in warehousing demand, according to the industry experts. ■

How reliable and individual is your power supply?

Jürgen Pump, sales manager of Standard Aggregatebau Evers GmbH & Co. KG, one of Germany's leading generator set manufacturers, talks about reliable solutions for electrical power supply.

African Review (AR): Your company's name 'Standard Aggregatebau' implies that you are a series manufacturer of generator sets, like numerous other generator set packagers worldwide. What differentiates you from the competition?

Jürgen Pump (JP): Our company's name resumes from the early days of generator sets manufacture in 1961 when we were one of the first to assemble diesel-driven generator sets in Germany. At that time, there were no technical regulations in place for the assembly of generator sets, so we set our own high standards of consistent design and quality. There are many packagers of generator sets in nearly every country of the world, from small garage companies to multinational corporations. What most of these enterprises have in common is their focus on serial production with standardised generator sets and firmly defined options. We set ourselves apart by successfully focusing on the right project-

designed generator sets for applications with sophisticated requirements and individual manufacture.

AR: But isn't individual manufacturing much expensive?

JP: All too often apparent investment savings backfire and actual losses turn out to be much more costly than an adequate initial project design and execution. Many times it is in the news that an emergency generator did not work correctly in shopping malls, airports, data centres, and even hospitals – although the well-reputed engine and alternator brands were installed and often in redundancy. While lack of maintenance causes some incidents, others are simply due to improper design, system integration, or workmanship. Such failures can cause the

operator at best "only" monetary losses, but fatalities in the worst cases. This is particularly bad, as nearly all cases can be avoided by proper design and selecting suitable specialist firms with the execution of mission-critical projects instead of choosing just the cheapest offer from a dealer whose technical capability ends with presenting just datasheets. Although the business has become much more complex, the fundamental laws of business have not changed.

Still, the gap between ambition and reality is quite significant when it comes to complete systems in which several companies are involved. We support project owners, design engineers, and contractors likewise throughout the whole project and successfully handle every order individually to achieve the best price-performance-ratio for our customers for almost 60 years.

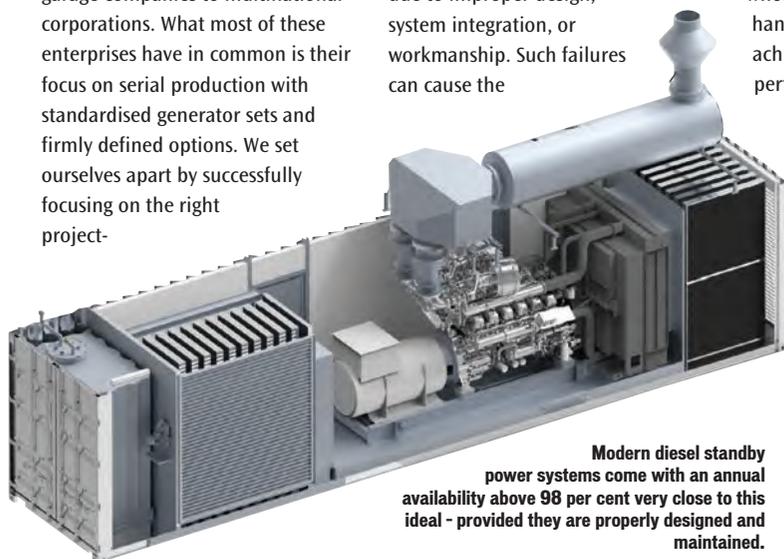
AR: Are diesel-driven generator sets still the measure for reliable backup power?

JP: Yes. However, no mechanical system can be expected to perform with 100 per cent reliability over time. Modern diesel standby power systems come with an annual availability above 98 per cent very close to this ideal – provided they are

properly designed and maintained. The vast majority of problems result from human error or neglect, both during system engineering and operation, while power system component failure is a relatively rare event.

AR: But 98 per cent availability does not sound very impressive or reliable?

JP: This figure applies to a standard code compliance generator set commercially available from many manufacturers and dealers. The availability is not only determined by failures but also planned downtimes for maintenance. For mission-critical installations, SAB, as a specialist firm, can increase the availability of up to 99.999 per cent by implementing redundancies into the system design. This starts with quite cheap but effective measures for most vulnerable components, like adding a redundant starting facility, and goes up to completely redundant power lines, which are fault-tolerant as they have no single points of failure. As each project is different in its requirements, off-the-shelf solutions do usually not achieve the desired results. Close coordination between all parties and suppliers during design, installation, and commissioning is vital for maximising reliability, and this challenging task should be left to experienced professionals like ourselves. ■



Modern diesel standby power systems come with an annual availability above 98 per cent very close to this ideal – provided they are properly designed and maintained.

Enhancing UPS energy efficiency

Alex Emms, operations director at Kohler Uninterruptible Power, discusses the various techniques available to optimise UPS operating efficiency under all conditions.

When double-conversion on-line UPSs first appeared in the 1970s, they used transformer-based designs. However, advances in power semiconductor technology have facilitated a general industry move towards transformerless solutions. This has brought several advantages, including some related to efficiency. Firstly, the topology is inherently more efficient. Even at optimal, near-full load conditions, transformer-based designs remain well below 95 per cent – and as the load reduces towards 25 per cent, efficiency approaches just over 85 per cent. By contrast, the PowerWAVE 9250DPA can achieve efficiencies up to 97 per cent with loads from 25 to 75 per cent of nominal capacity.

However, the benefits extend further; the considerable size and weight reductions achieved by

transformerless designs mean that complete UPS solutions can be implemented as small, rack-mounting modules rather than as large, monolithic units. The advantages of this can be explained by considering a PowerWAVE 9250DPA example.

This comprises the UPS supporting, for example, a 200kW load; it would use four of its 50kW modules – or five, to provide N+1 redundancy.

Then, if the load increases, incrementing the UPS's capacity by plugging in another 50 kW module (vertical scaling) is cost-effective, easy, and can be done without even interrupting power to the load.

Further capacity can be provided by horizontal scaling, i.e. adding more racks in parallel. Note that both benefits – redundant capacity and scalability – are achieved with minimal excess capacity, space and

cost, due to the modules' granularity.

By contrast, a monolithic system typically has to be significantly oversized for future-proofing. Additionally, N+1 redundancy must be implemented using two complete systems, so neither can ever be more than 50 per cent loaded even in the best case. These factors force the monolithic system to work with low loads, where efficiency drops away sharply.

Maintaining high efficiency

We have seen how modular topology improves UPS efficiency, but it's crucial to maintain these high-efficiency levels under low loads. One way to facilitate this is to use a smart module switching technique called Xtra VFI.

Xtra VFI is an intelligent feature that minimises loss and improves efficiency on double-conversion modular systems like the



Alex Emms from Kohler.

PowerWAVE 9250DPA. With this mode enabled, the UPS automatically adjusts the number of active modules to match changing load requirements.

Surplus modules are switched to standby but remain ready to transfer to active mode if the load increases or the mains fails. The active modules share the load equally.

The efficiency improvements are particularly significant when the load is less than 25 per cent of full capacity.

Power availability is protected, as the system allows for desired redundancy levels in its module-switching calculations. Xtra VFI operation is summarised in Figure 1.

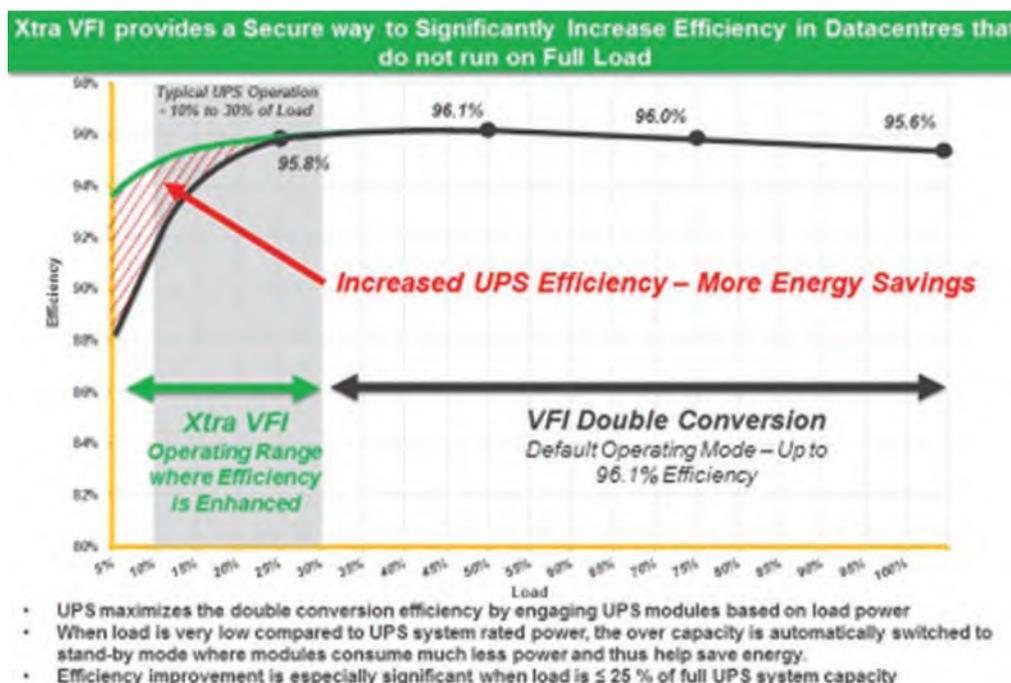


Image Credit: Kohler Power

Eco mode

In eco-mode, power flows directly from the utility mains supply to the load during normal operation, so bypassing the rectifier and inverter inefficiencies. If a mains problem is detected, the critical load is switched to the inverter output.

While eco-mode efficiency can reach 99 per cent or more, it exposes the load to any incoming mains problems during regular operation. Accordingly, users should weigh the benefits of increased UPS operating efficiency against the risk created by operating in eco-mode. ■

Figure 1: UPS Xtra VFI operating mode

– Source: KOHLER Power

Land of opportunity for canny investors

Africa's drive to renewables offers huge investment opportunity for ambitious, motivated international energy firms. Martin Clark reports on the outlook across the entire African continent.

The shift to clean energy is set to gain momentum in Africa in the coming years, driven, in part, by COVID-19. The African Union Commission and the International Renewable Energy Agency agreed in April to work more closely to advance renewables. The aim is to improve the ability of rural communities to deal with the crisis using renewable energy to power critical services such as medical equipment and water pumping. But this marks only the latest step in a long journey that has pushed renewables to the top of the agenda, continent-wide.

South Africa offers immense potential. Based on a government plan to add 2.6 GW of unprocured wind and solar capacity in 2022, the next round of projects could attract more than US\$2bn in investment, a Reuters analysis shows. Eskom's coal-fired power stations still produce more than 80 per cent of the nation's electricity but struggle to meet demand; renewables account for just 7 per cent of the local energy supply. In 2018, the government signed long-delayed contracts worth US\$4.7bn with independent power producers for 27 renewables projects. Elsewhere, Chinese investors have shown appetite for rolling out renewables infrastructure across southern Africa.

In Zambia, state-owned Zesco signed contracts worth US\$548m in May with Power China to develop three solar plants and add 600MW to the national grid. Zambia's power system is still heavily dependent on unpredictable hydropower. Zesco said in a statement that the additional power would boost access to electricity and enhance industrial development.



Developing African renewables is creating employment and investment opportunities.

Egypt has been a frontrunner in solar energy. At the end of 2019, the second phase of the US\$2.1bn Benban plant was completed near the southern city of Aswan. With a swathe of photovoltaic panels spreads over an area of desert so large it is visible from space, it is one of the world's largest solar parks. The plant provides 1.5 GW to the national grid and has brought down the price of solar energy while Cairo is phasing out electricity subsidies. The government aims to increase the energy mix from renewables to 20 per cent in 2022 and 42 per cent by 2035.

Morocco is attracting big investors. Last year, a consortium led by French EDF Renewables won a tender to build an 800MW solar plant in the Atlas Mountains. The UAE's Masdar will assist with the US\$782m scheme, known as Noor Midelt 1. It marks the first phase of a larger project as Morocco looks to increase renewables in the national

energy mix to 52 per cent by 2030.

Some of West Africa's less-developed states may benefit too. Senegal inaugurated the first large-scale wind farm in West Africa this year. The 158MW project was built by Lekela, a British company, and at full capacity will supply nearly a sixth of the nation's power. It does not resolve all of Senegal's energy troubles though with many rural areas still not electrified. The roll-out of more wind farms and solar power plants is expected to help with the goal of universal access.

Nigeria is looking to renewables to end its power shortages. Small-scale solar power plants have been popular during lockdown to keep the lights on in homes which traditionally may have looked to fuel-based generators. Almost half of all Nigerians do not have access to grid electricity, and those who do face regular power cuts.

Educational centres are turning to solar too. The government is

recruiting for the next phase of its Energising Education Programme, to roll out solar hybrid power at universities, with funding from the African Development Bank.

In eastern Africa, Tanzania's deputy energy minister Subira Mgalu told parliament in April that the country aims to have six times its current power generation capacity by 2025 through investment in thermal and renewable energy. Tanzania is looking to exploit offshore gas while being keen to diversify the energy mix to include solar, wind and hydro. About 70 per cent of its electricity already comes from hydro and geothermal, three times the global average. It hosts Africa's largest wind plant, the Lake Turkana Wind Power Project, a complex of 365 turbines, each with a capacity of 850kW. The site, connected to the grid via a 435km transmission line, represents 17 per cent of the country's capacity. ■

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

Cantoni Motor S.A.
Coelmo Spa

AIR CONDITIONING

SEFKO Trading Solutions
Aluminium Products
Jindal Aluminium Limited

Asphalt Plant

Marini S.p.A.
Parker Plant Ltd.

Attachments and Accessories

Bobcat
Magni Telescopic Handlers

Backhoe Loaders

Action Construction Equipment Ltd.
Bobcat
Caterpillar SARL

Batching Plant

Carmix - Metalgalante S.p.A.
Jessop & Associates (Pty) Ltd.
Marini S.p.A.

Block/Tile- Making Equipment

Jessop & Associates (Pty) Ltd.

Breakers

Bobcat
Fritsch GmbH Milling and Sizing
Jubaili Bros
Lovato Electric S.p.A.
Wacker Neuson (Pty) Ltd.

BUILDINGS

EEC Group
Jindal Aluminium Limited
Mytilineos SA
Zamil Steel Building Co. Egypt

CAD

WSCAD South Africa
Compaction Equipment
Wacker Neuson (Pty) Ltd.
Complete Solutions for Electrical Needs
Altaaqa Global Energy Services
Jubaili Bros
Lovato Electric S.p.A.
Mytilineos SA

Components and Accessories

Erlau Ag
Liugong Machinery South Africa (Pty) Ltd

COMPONENTS AND SPARE PARTS

Blumaq South Africa
Cat Lift Trucks
Erlau Ag
Maitek S.r.l.
SMT Africa
Wirtgen Group Branch of John Deere GmbH & co. KG

Concrete

Bobcat

CONCRETE EQUIPMENT

Bobcat
Kraft Tool Co.
Parker Plant Ltd.
Wacker Neuson (Pty) Ltd.

Concrete Equipment - Other

Carmix - Metalgalante S.p.A.
Jessop & Associates (Pty) Ltd.
RATEC GmbH

Concrete Pumps

RATEC GmbH

CONSTRUCTION VEHICLES

Aquamec Ltd.
Bell Equipment Co. SA (Pty) Ltd.
Caterpillar SARL
SMT Africa

Attachment & Accessories

Caterpillar SARL

Construction Vehicles- others

Caterpillar SARL

Dump Trucks & Haulers

Caterpillar SARL

Earthmoving Equipment

Caterpillar SARL

Engines, Components & Accessories

Caterpillar SARL

Site Dumpers

Caterpillar SARL

Tractors

Caterpillar SARL

CONSULTANCY SERVICES

RATEC GmbH
SEFKO Trading Solutions
WSCAD South Africa

CONVEYOR SYSTEMS

Cantoni Motor S.A.
Keestrack n.v
Parker Plant Ltd.

Cranes

Cantoni Motor S.A.
Condra Cranes and Hoists
Liebherr- Export AG

Crushing, Screening and Washing

Cantoni Motor S.A.
Fritsch GmbH Milling and Sizing
Keestrack n.v
Maitek S.r.l.
Parker Plant Ltd.
Rockster Austria International GmbH
Volvo Penta
Weir Minerals Africa (Pty) Ltd.
Wirtgen Group Branch of John Deere GmbH & co. KG

DEMOLITION EQUIPMENT

Bobcat
Rockster Austria International GmbH

Doors & Windows

Jindal Aluminium Limited

Dozers

Liugong Dressta Machinery Sp. Z O.O.

Drilling Machinery And Plant

Bauer Maschinen GmbH
Cantoni Motor S.A.

EARTHMOVING EQUIPMENT

Action Construction Equipment Ltd.
Bell Equipment Co. Sa (Pty) Ltd.

Blumaq South Africa

Bobcat

Caterpillar SARL

J.A Delmas S.A.S

Kanu Equipment

Liugong Dressta Machinery

Sp. Z O.O.

Mb S.P.A

Smt Africa

Attachment & Accessories

Caterpillar SARL

Backhoe Loaders

Caterpillar SARL

Dozers

Caterpillar SARL

Earthmoving Equipment - Other

Bedelco Sprl
Blumaq South Africa
Liebherr- Export Ag

Electric

Altaaqa Global Energy Services
Cantoni Motor S.A.
Himoinsa S.L
Irem S.P.A. A Socio Unico
Lovato Electric S.P.A.
Sefko Trading Solutions

Engines, Components And Accessories

Baudouin
Cantoni Motor S.A.
Himoinsa S.L
Jubaili Bros
Liugong Machinery South Africa (Pty) Ltd
Perkins Engines Company Limited
Volvo Penta

Equipment

HIMOINSA S.L
Snorkel

Excavators

Aquamec Ltd.
Caterpillar SARL
Wacker Neuson (Pty) Ltd.

Fabrication and Structures

EEC Group
Zamil Steel Building Co. Egypt

Loaders Others

Caterpillar SARL

Mini Excavators

Caterpillar SARL

Motor Graders

Caterpillar SARL

Scrapers

Caterpillar SARL

FINISHING

Kraft Tool Co.

Formwork

Ratec GmbH

Generator Sets

Aksa Power Generation
Altaaqa Global Energy Services

Clarke Energy

Coelmo Spa

Himoinsa S.L

Jmg Ltd.

Jubaili Bros

Lovato Electric S.p.A.

Mytilineos SA

Visa S.p.A.

GEOIMAGING

Sequent

Grinding Equipment

Cantoni Motor S.A.
Fritsch GmbH Milling And Sizing
Weir Minerals Africa (Pty) Ltd.

Hoists

Cantoni Motor S.A.
Condra Cranes And Hoists

Lift Trucks

Cat Lift Trucks

LIFTING EQUIPMENT

Action Construction Equipment Ltd.
Bell Equipment Co. Sa (Pty) Ltd.
Cantoni Motor S.A.
Condra Cranes And Hoists
Erlau Ag
Goscor Access Solutions (Pty) Ltd
Haulotte Group
Liebherr- Export Ag
Magni Telescopic Handlers
Snorkel
Volvo Penta

Lighting Masts/Towers

Aksa Power Generation
Eec Group
Goscor Access Solutions (Pty) Ltd
Himoinsa S.L
Jubaili Bros
Wacker Neuson (Pty) Ltd.

Loaders - Other

Bobcat
Wacker Neuson (Pty) Ltd.

Materials

Liugong Machinery South Africa (Pty) Ltd

Mechanical

Mytilineos SA

Mini-Excavators

Bobcat
Wacker Neuson (Pty) Ltd.

Mixing

Cantoni Motor S.A.
Fritsch GmbH Milling And Sizing

Mobile Mixing Plant

Bobcat
Carmix - Metalgalante S.p.A.
Marini S.p.A.

MOBILE POWER SUPPLY UNITS

Aksa Power Generation
Altaaqa Global Energy Services
Coelmo Spa
Jmg Ltd.
Mytilineos SA
Visa S.p.A.

MOTORS/DRIVERS/CONTROLS

Cantoni Motor S.A.
Other Materials Handling
Cat Lift Trucks
Condra Cranes And Hoists

OTHER SITE EQUIPMENT AND MATERIALS

Bobcat
Coelmo Spa
Piling
Aquamec Ltd.
Bauer Maschinen GmbH
Pipe And Cable Detecting Systems
Eec Group
Pneumatic
Bedelco Sprl

PUMPING EQUIPMENT

Aquamec Ltd.
Visa S.p.A.
Wacker Neuson (Pty) Ltd.
Weir Minerals Africa (Pty) Ltd.

Pumping Equipment - Other

CANTONI MOTOR S.A.
Maitek S.r.l.

Quarrying

Keestrack n.v
Liugong Dressta Machinery sp. Z O.O.
Magni Telescopic Handlers

RAW MATERIALS

Smt Africa
Recycling
Bobcat
Fritsch GmbH Milling And Sizing
Keestrack N.V
Maitek S.R.L.
Marini S.P.A.
Rockster Austria International GmbH

Rental Equipment

Altaaqa Global Energy Services
Bauer Maschinen GmbH
Cat Lift Trucks
Goscor Access Solutions (Pty) Ltd
J.A Delmas S.A.S
Visa S.p.A.
Weir Minerals Africa (Pty) Ltd.

ROAD BUILDING EQUIPMENT

Action Construction Equipment Ltd.
Caterpillar SARRL
Kraft Tool Co.
Wacker Neuson (Pty) Ltd.
Wirtgen Group Branch Of John Deere GmbH & Co. Kg

Compaction Equipment

Caterpillar SARRL

Pavers

Caterpillar SARRL

Road Building Equipment - Other

Bedelco Sprl
Bobcat
Caterpillar SARRL
Liugong Dressta Machinery Sp. Z O.O.

Rollers

Caterpillar SARRL
Wacker Neuson (Pty) Ltd.

Scaffolding

Wilhelm Layher GmbH & Co Kg

Services

J.A Delmas S.A.S
Sefko Trading Solutions
Wscad South Africa

Site Dumpers

Carmix - Metalgalante S.P.A.
Wacker Neuson (Pty) Ltd.

Skidsteer Loaders

Bobcat
Wacker Neuson (Pty) Ltd.

SOFTWARE

Seequent
Sefko Trading Solutions
Wscad South Africa

Software - Other

Seequent
Wscad South Africa

Steel

Eec Group
Zamil Steel Building Co. Egypt

Steel - Other

Erlau Ag
Zamil Steel Building Co. Egypt

Submersible

Wacker Neuson (Pty) Ltd.
Weir Minerals Africa (Pty) Ltd.

Telescopic Handlers

Bobcat
Goscor Access Solutions (Pty) Ltd
Magni Telescopic Handlers
Snorkel
Wacker Neuson (Pty) Ltd.

TOOLS

Cantoni Motor S.A.
Smt Africa

Tractors

Action Construction Equipment Ltd.

Trailers

Bedelco Sprl
Goldhofer
Aktiengesellschaft
Wacker Neuson (Pty) Ltd.

Trenching And Pipe Laying

Liugong Dressta Machinery Sp. Z O.O.

UNDERGROUND & MINING MACHINERY

Bell Equipment Co. Sa (Pty) Ltd.
Blumaq South Africa
Cantoni Motor S.A.
J.A Delmas S.A.S
Liebherr- Export Ag
Magni Telescopic Handlers

USED EQUIPMENT

Bauer Maschinen GmbH
Bell Equipment Co. SA (Pty) Ltd.
Caterpillar SARRL
Cat Lift Trucks
J.A Delmas S.A.S
Maitek S.r.l.
Snorkel
Visa S.p.A.

Rental Equipment

Caterpillar SARRL

WELDING EQUIPMENT

Coelmo Spa

Section Two: Suppliers

Action Construction Equipment Ltd.

4th Floor, Piracle
Suraj Kund
Faridabad
121009
India
Tel: +91 129 4550000
Fax: +91 129 4550022
Web: www.ace-cranes.com
E-mail: ajay.malik@ace-cranes.com; bhogal@ace-cranes.com

Featured among "India's 70 most Trusted Brands" by Power brands, ACE limited is one of the leading manufactures for material handling, Road construction, Earth moving and Agriculture Equipment. Offering equipment like Agriculture tractors, Harvesters, mobile/fixd tower cranes, Crawler cranes, Truck mounted cranes, Lorry loaders, Backhoe loaders/loaders, vibratory rollers, forklifts.

Aksa Power Generation

Ruzgarlıbahçe Mahallesi Ozalp
Çıkmazi No:10 Beykoz Istanbul
34805
Turkey
Tel: +90 216 681 00 00
Fax: +90 216 681 57 91
Web: www.aksa.com.tr
E-mail: aksa@aksa.com.tr

Aksa Generators manufactures gasoline, diesel, natural gaz and marine generating sets range between 1kVA to 3000 kVA as well as lighting towers and generator hardware in the

manufacturing facilities in Istanbul (Turkey 20.000 m2 of indoor space), Changzhou (China 120.000 m2 of indoor space) and Louisiana (USA, 10.000 m2 of indoor space); and has become a leader and pioneer within teh sector.

Aksa Generator exports more than %65 of its product and is among the top five global firms of the sector with 23 offices located in Asia, Europe, Africa and America.

Agents:

Algeria - EURL Aksa Generators Algerie
Ghana-Aksa Generators Ghana
South Africa-Aksa Power Generation SA(Pty) Ltd
United Arab Emirates- Aksa Power Generation FZE

Altaaqa Global Energy Services

Dubai World Central
Dubai
United Arab Emirates
Tel: +971 4 8808006
Fax: +971 4 8808007
Web: www.altaaqaaglobal.com
E-mail: info@altaaqaaglobal.com

Altaaqa Global Energy Services is a pioneering international energy services business providing cost-effective integrated power solutions, expert project consultancy and advisory services, and flexible contractual and project financing arrangements (including Build- Own- Operate- Transfer) to a diverse range of industry sectors, including mining, oil & gas, manufacturing, cement, utilities and process industries.

Aquamec Ltd.

PO Box 260
Säkylä, 27801, Finland
Tel: +358 10 4026400
Fax: +358 10 4026422
Web: www.watermaster.fi
E-mail: watermaster@watermaster.fi

Cleaner, safer and better functioning waters with fewer machines and costs - The Amphibious Multipurpose Watermaster handles the work of many conventional machines. Watermaster does suction dredging, backhoe dredging, raking & pile driving. Watermaster cleans, restores and develops rivers, canals, lakes, industrial ponds and other shallow waterbodies.

Baudouin

Technoparc du Bregadan
Cassis, 13260, France
Tel: +33 (0)4 88 68 85 00
Web: www.baudouin.com
E-mail: contact@baudouin.com

Based in France for 100 years, Baudouin has manufactured the highest quality engines for marine, power generation and variable speed applications. With marine in our DNA, and a range of diesel and gas power solutions spanning 18-4000 KVA, all Baudouin engines are durable, reliable and built with the robustness that is required of a marine engine. There are over 300 Authorized Baudouin Partners around the world, supporting our customers with service, genuine spare parts, application support and commissioning.

Bauer Maschinen GmbH

Bauer-Strasse 1
Schrobenhausen
86529
Germany
Tel: +49 825 2971888
Fax: +49 825 2971896
Web: www.bauer.de
E-mail: hermann.schrattenthaler@bauer.de
Supplier of equipment for piling and mining.

Agents:

South Africa - BAUER Technologies South Africa (Bauer)

BEDELCO SPRL

Rue de l'Environnement 22
Seraing
4100
Belgium
Tel: +32 4 3301860
Fax: +32 4 3301866
Web: www.bedelco.com
E-mail: info@bedelco.com

BEDELCO is a European tyre dealer, based in Belgium we deliver OTR and truck tyres in mines and careers all over the world with a large stock in Belgium, we can react quickly to customers demands. Customers satisfaction and timely deliveries are our main targets.

Experience the Progress.



www.liebherr.com
info.lex@liebherr.com
www.facebook.com/LiebherrConstruction

LIEBHERR

Bell Equipment Group Services (Pty) Ltd

Private Bag X20046
Empangeni, 3880, South Africa
Tel: +27 35 9079431
Web: www.bellequipment.com
E-mail: stephenj@bell.co.za

OEM manufacturer and distributor of heavy duty equipment for the Mining, Construction and Forestry industries.

BLUMAQ SOUTH AFRICA

Unit 8 Osborn Park,1
Barfoot Road, Estera, Germiston
Johannesburg, South Africa
Tel: +27 0119665092
Fax: +27 86 676 4460
Web: www.blumaq.com
E-mail: john.beukes@blumaq.com

Blumaq delivers replacement parts and maintenance products for Construction and Mining Equipment

Agents:

South Africa - BLUMAQ SOUTH AFRICA
Zambia - BLUMAQ ZAMBIA

Bobcat

PO Box 262688, JLT Platinum Tower
Cluster I, Level 18, Office 1802
Dubai, United Arab Emirates
Tel: +971509402136
Fax: +971 4 2767204
Web: www.bobcat.com
E-mail: gaby.rhayem@doosan.com

Bobcat manufactures the widest range of market leading compact equipment including Skid-Steer and Compact Tracked Loaders, Backhoe Loaders, Compact Excavators and Telescopic Handlers. The impressive selection of Bobcat attachments for use on these machines includes Wheel Saws, Trenchers, Planers, Hydraulic Breakers and Graders, saving time, effort and cost in carrying out an increasing range of applications throughout Africa.

CANTONI MOTOR S.A.



3 Maja 28th street
43-400 Cieszyn, Poland
Tel: +48 (33) 813 87 00
Fax: +48 (33) 813 87 01
Web: www.cantonigroup.com
E-mail: motor@cantonigroup.com

Cantoni Motor - one of the leading electric motor producers focusing on high quality European products and delivering customized solutions to customers globally. We offer full range of IEC asynchronous electric motors from 0,04 kW up to 6000 kW in standard and special executions as well as NEMA Premium motors.

Carmix - Metalgalante S.p.A.



Via A Volta 2, Noventa di Piave
Venezia, Veneto, 30020, Italy
Tel: +39 0421 65191
Fax: +39 0421 658838
Web: www.carmix.com
E-mail: info@carmix.com

Metalgalante is specialized on the manufacture of off-road self-loading mobile concrete mixers

with over 30 years of experience. Our mixers are ideal for all job-sites where medium or small quantities of concrete are continuously needed during the day such as: sewage systems, water, telephone and electricity lines constructions, side road and low cost housing. In all those situation where ready mix system is not available and in all job sites which are not accessible to transit mixers. With our system, there is no waiting, no expensive, cost and quality of concrete is assured because the client can control the production directly.

Agents:

Angola - CI & MA Comp. Ind.
Cameroon - Bernabe Cameroun
Congo Brazzaville - Bernabe Congo Alucongo
Cote Divoire - Bernabe Cote D'Ivoire
Ethiopia - Tri Machinery Trading & Rental PLC
Gabon - Bernabe Gabon Libreville
Ghana - HMD Forewin
Morocco - SRM (S.A. SOCIETE DE REALISATION MECANIQUE)
Mozambique - Sotema Lda.
Namibia - Carmix Namibia Hire & Sales
Senegal - Bernabe Senegal
South Africa - Carmix South Africa

Caterpillar SARL

76 Route de Frontenex
Geneva 6
12116
Switzerland
Tel: +41 22 8494444
Web: www.cat.com

Description: For more than 85 years, Caterpillar Inc. has been making sustainable progress possible and driving positive change on every continent. Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives. www.caterpillar.com.

Agents:

Algeria - Bergerat Monnoyeur (CATERPILLAR)
Angola - Barloworld Equipamentos Angola Lda. (Caterpillar SRL) - Barzem Enterprises Pvt. Ltd.
Botswana - Barloworld Equipment Botswana Pvt. Ltd. (Caterpillar SRL)
Burkina Faso - Burkina Equipements (Caterpillar SARL)
Cameroon - Tractrafic Equipement Cameroun
Cameroun - Tractrafic Equipement Cameroun (Caterpillar SRL)
Chad - Tractrafic Equipment (Chad)
Congo Brazzaville - Tractrafic Equipment Congo
Congo Brazzaville - Tractrafic Equipment Congo 1
Cote divoire - Manutention Africaine (Cote divoire) (CATERPILLAR 1)
Cote dlvoire - Manutention Africaine Cote divoire (CATERPILLAR 2)
Djibouti - Anciens Comptoirs Ries
Egypt - Mantrac Egypt (CATERPILLAR 1)
Egypt - Mantrac Egypt (CATERPILLAR 2)
Egypt - Mantrac Egypt (CATERPILLAR 3)
Eritrea - Eritrea Equipment PLC
Ethiopia - Ries Engineering S. Co. (Ethiopia - Cat SRL)
Gabon - Tractrafic Equipment Gabon (Caterpillar SRL)
Gambia - JA Delmas Export - Gambia (SARL)
Ghana - Mantrac Ghana Ltd. (CATERPILLAR 1)
Ghana - Mantrac Ghana Ltd. (CATERPILLAR 2)
Ghana - Mantrac Ghana Ltd. (CATERPILLAR 3)
Guinea Bissau - Bissau Equipamentos
Guinea - Manutention Guineenne
Guinee Equatoriale - Tractrafic Equipement (Guinee equ)
Kenya - Mantrac SAE
Kenya - Mantrac SAE
Kenya - Mantrac SAE
Lesotho - Barloworld (CATERPILLAR 1)
Liberia - Liberia Equipment Ltd.
Madagascar - Henri Fraise Fils & Co. (CATERPILLAR 1)

Malawi - Barloworld Equipment Malawi Ltd. (CATERPILLAR 2)
Mali - Manutention Africaine (Mali)
Mantrac Nigeria Ltd. (CATERPILLAR 2)
Mantrac Nigeria Ltd. (CATERPILLAR 4)
Mantrac SAE (CATERPILLAR 2)
Mantrac SAE (CATERPILLAR 5)
Mauritania - Societe Mauritanienne Des Tracteurs SARL
Mauritius - Ireland Blyth Ltd.
Mauritius - Tractrafic Equipment International
Morocco - Tractrafic Equipment Maroc
Namibia - Barloworld Namibia (Pty) Ltd.
Nigeria - Mantrac Nigeria Ltd. (CATERPILLAR 1)
Nigeria - Mantrac Nigeria Ltd. (CATERPILLAR 3)
Nigeria - Manutention Africaine (Niger) (CATERPILLAR)
Reunion - Societe Commerciale Industrielle de Matierils
Rwanda - Tractrafic Equipment Rwanda
Rwanda - Tractrafic Equipment RDC
Senegal - Societe Auxiliaire (Senegal) D Equipements (Saudequip)
Sierra Leone - Mantrac Sierra Leone Ltd. (CATERPILLAR)
South Africa - Barloworld Equipment (CATERPILLAR 1)
South Africa - Barloworld Equipment (CATERPILLAR 2)
South Africa - Barloworld (CATERPILLAR)
Sudan - Sudanese Tractor Company Limited (SUTRAC)
Swaziland - Barloworld Equipment Swaziland (Pty) Ltd.
Tanzania - Mantrac Egypt (CATERPILLAR 4)
Tanzania - Mantrac SAE (CATERPILLAR 1)
Tanzania - Mantrac SAE (CATERPILLAR 3)
Tanzania - Mantrac SAE (CATERPILLAR 4)
Togo - Togo Equipment
Tunisia - Parenin SA
Uganda - Mantrac Uganda Ltd. (CATERPILLAR)
Yemen - Tehama Trading
Zambia - Barloworld Equipment Zambia Ltd. (CATERPILLAR)

Cat Lift Trucks

Hefbrugweg 77
Almere
1332AC
Netherlands
Tel: +31 36 5494311
Fax: +31 36 5495697
Web: www.catlifttruck.com
E-mail: info@catlifttruck.com

Cat Lift Trucks, based in the Netherlands, is one of the factories on Cat forklift trucks and warehouse equipment. We are serving the EAME market with high quality products and a broad global dealer network.

Agents:

Algeria - Altractors SARL (Algeria - Cat Lift)
Cote Divoire - Matforce (F.G. Industries SAS) [Cote d'Ivoire - Cat Lift]
Egypt - Mantrac - (Egypt - Cat Lift 1)
Egypt - Mantrac (Egypt - Cat Lift)
Ethiopia - Ries Engineering S. Co. (Ethiopia - Cat Lift)
Ghana - Mantrac Ghana Ltd. (Ghana - Cat Lift)
Kenya - Mantrac Kenya Ltd. (Nairobi) [Kenya - Cat Lift]
Libya - Free Libya Tractors (Libya - Cat Lift 1)
Libya - Free Libya Tractors (Libya - Cat Lift 2)
Nigeria - Mantrac Nigeria Ltd. (Lagos) [Nigeria - Cat Lift]
Sierra Leone - Mantrac Sierra Leone Ltd. (Freetown) [Sierra Leone - Cat Lift]
South Sudan - Ezentus FZE Co. Ltd. (South Sudan - Cat Lift)
Tanzania - Mantrac Tanzania Ltd. (Dar Es Salaam) [Tanzania - Cat Lift]
Tunisia - Parenin SA (Tunisia - Cat Lift)
Uganda - Mantrac Uganda Ltd. (Kampala)
Uganda - Cat Lift
Zambia - Industrial Equipment Ltd (Zambia - Cat Lift)

Clarke Energy

Power House
Senator Point
South Boundary Road
Knowsley Industrial Park
Liverpool L33 7RR
United Kingdom
Tel: +44 (0)151 546 4446
Fax: +44 (0)151 546 4447
Web: www.clarke-energy.com

Clarke Energy is a multinational specialist in the engineering, installation and maintenance of gas and distributed power solutions. Our offerings ranges from the supply of an engine, through to the turn-key installation of a multi-engine power plant

Coelmo SpA

Via delle Industrie 278
Agglomerato Industriale ASI
80011
Italy
Tel: +39 081 8039731
Fax: +39 081 8039724
Web: www.coelmo.it
E-mail: sales@coelmo.it

Coelmo is one of the oldest European manufacturers of industrial and marine generators from 3 up to 4000 kVA. Based in Italy, with a large stock available to be shipped overnight to any destination in the world. Company profile products and modules are available online at www.coelmo.it.

Agents:

Togo - ADTF SARL

Cometto S.p.A.

Via Cuneo, 20
Borgo San Dalmazzo
12011
Italy
Tel: +39 0171 26 33 00
Fax: +39 0171 26 63 35
Web: www.cometto.com
E-mail: cometto@cometto.com

Since being acquired in 2017 by the Faymonville Group, Cometto is the specialist for the development and manufacture of heavy load modules and self-propelled modular vehicles for payloads up to 15,000 tonnes ... and beyond. The company also offers special heavy load transporters for industrial applications: Shipyard and steelwork transporters as well as conveyance systems.

Condra Cranes and Hoists



P.O.Box 752639
Gardenvue
Johannesburg
2047
South Africa
Tel: +27 11 776 6000
Fax: +27 86 669 2372
Web: www.condra.co.za
E-mail: sales@condra.co.za

Condra designs, manufactures, services and supports portal cranes, bridge cranes, cantilever cranes, hoists, end-carriages, single and double-girder overhead travelling cranes, and crane components.

Agents:

Botswana - Duneton (Pty) Ltd.
Zambia - EC Mining Ltd.

YOUR REFERENCE PARTNER IN WEST AFRICA*

>>> YOUR CAT® DEALER
TO SUPPORT YOU IN ALL YOUR PROJECTS:
MINING | CONSTRUCTION & INFRASTRUCTURES
ENERGY, MANUFACTURING & SERVICES.

+ 50 000 m²
Facilities

A network of
+ 2 000
people



WWW.JADELMAS.COM

2 Component
Rebuild Centers

+ 1 600
different models

1 Regional
Training Center

23 000

Cat Equipment
active fleet

କଟ୍ କଟ୍ କଟ୍ କଟ୍



LET'S DO THE WORK.™

© 2019 Caterpillar. All Rights Reserved. CAT, CATERPILLAR, LET'S DO THE WORK, their respective logos, «Caterpillar Yellow», the «Power Edge» trade dress as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.

JA Delmas



Conservation : road@jdelmas.com

DSP Prerov, spol. s.r.o

Kojetinska 2900/51
Prerov
750 02
Czech Republic
Tel: +420 581 706 877
Fax: +420 581 209 051
Web: www.dsprrerov.com
E-mail: dsp@dsprrerov.cz

DSP Prerov is a manufacturing- engineering company, established in 1998. The production of machines for raw material processing technologies as the jaw, cone, impact, roller crushers and vibrating screens. A wide range of products is focused on individual deliveries as well as on turnkey projects.

Agents:
Egypt - United Trading Co

EEC Group

19 Markaz El Maalomat street
Sheraton Residences
Heliopolis
Cairo
11361
Egypt
Tel: +20 2 2266 9002
Fax: +20 2 22679151
Web: www.ecegypt.com
E-mail: info@ecegypt.com

Engineering, Construction and steel fabrication sectors: Industrial and commercial, Power & Energy, Telecommunications

ERLAU AG

Erlau 16, Aalen
73431
Germany
Tel: +49 7361 5950
Fax: +49 7361 5953214
Web: www.erlau.com
E-mail: tpc@erlau.com

ERLAU Tyre Protection Chains are used in over 150 countries around the world.

Agents:
South Africa - TCS RUD (Pty) Ltd.

Faymonville Distribution

8, Duarefstrooss
Weiswampach
9990
Luxembourg
Tel: +352 26 9004155
Fax: +352 53 9004425
Web: www.faymonville.com
E-mail: info@faymonville.com

Fritsch GmbH Milling and Sizing

Industriestrasse 8
Idar - Oberstein
55743
Germany
Tel: +49 6784 700
Web: www.fritsch.de
E-mail: info@fritsch.de

Fritsch is an internationally respected manufacturer of application - oriented laboratory instruments:

- Sample preparation for size-reduction for all kinds of materials - dry or in suspension.
- Particle sizing by means of laser diffraction, dynamic image analysis and sieving.
- Sample dividing of dry and wet samples and controlled sample feeding

Agents:
South Africa - Labotec (Pty) Ltd.

Ghana Community Network Services Limited (GCNET)



The 5th Avenue Corporate Office
PO Box OS 756
Accra
Ghana
Tel: +233 0244 311 996
E-mail: corporatecommunications@gcnetghana.com

Goldhofer Aktiengesellschaft

Donaustrasse 95
Memmingen
87700
Germany
Tel: +49 8331150
Web: www.goldhofer.com
E-mail: info@goldhofer.com

Goldhofer is one of the world market leader for transport equipment in the field of general and heavy-duty road haulage and oversized cargo transportation. With a full and technologically mature range of products, Goldhofer meets an extremely wide variety of needs in almost every transport situation.

GOSCOR ACCESS SOLUTIONS (PTY) LTD

4, 2nd Street, Commercia
Midrand
1685
South Africa
Tel: 011 393 6437
Web:
www.goscoraccesssolutions.co.za
E-mail: accesssolutions@goscor.co.za

Equipped with a diverse fleet of +1000 machines that reach heights between 6-57m, Goscor Access Solutions offers a wide range of mobile elevating work platforms suited for multiple applications across various industries. Sales and rentals of MEWPs, Technical support, servicing and maintenance, Genuine parts, Specialist training, 24/7/365 servicing and support.

Hamm AG

Hammstraße 1
Tirschenreuth
95643
Germany
Tel: +49 9631 800
Fax: +49 9631 80111
Web: www.hamm.eu
E-mail: info@hamm.eu

HAMM AG is a member of the WIRTGEN Group, a group of companies operating on an international basis in the construction equipment industry. The WIRTGEN Group comprises the brands of WIRTGEN, VÖGELE, HAMM, KLEEMANN and BEININGHOVEN and has local production facilities as well in China, Brazil and India. HAMM AG is the leading manufacturer for rollers in soil and asphalt compaction.

HAULOTTE GROUP

Rue de la Peronnière
L'HORME
France
Tel: +33 (0) 4 77 29 24 24
Web: www.haulotte.com
E-mail: haulotte@haulotte.com

Haulotte is a global leader of people and material lifting equipment. As European leader, the group designs, manufactures and markets a

wide range of products focused on mobile elevating work platforms and telehandlers. Haulotte diversified offering covers :7 People Lifting Equipment product ranges 3 Telehandler ranges. Customized financing solutions to facilitate investments in these products Integrated Services to optimize equipment lifecycles and residual values for resale

HIMOINSA S.L

Ctra. Murcia-San Javier
Km. 23,6
San Javier/Murcia
30730
Spain
Tel: +34 968 191128
Fax: +34 968 191217
Web: www.himoinsa.com
E-mail: info@himoinsa.com

HIMOINSA is a global corporation that designs, manufacturers and distributes power generation equipment worldwide. The company adds incomparable application and engineering know-how, excellent design and service capabilities, delivering value beyond the equipment it produces. The product range that the brand offers includes diesel and gas generator sets, control panels and paralleling systems for standby, prime, peak and distributed power. It also develops hybrid power gensets for the telecom sectors and manufacturers lighting towers for the rental and construction markets.

Agents:
Angola - Himoinsa Angola
South Africa - HIMOINSA SOUTHERN AFRICA

IREM S.p.A. a socio unico

Via Abegg 75
Borgone (Torino)
10050
Italy
Tel: +39 011 9648211
Fax: +39 011 9648222
Web: www.irem.it
E-mail: svm@irem.it

IREM S.p.A. specialises in design and manufacture of electrodynamic voltage regulator and line conditioners (power up to 8000 kVA) for indoor and outdoor installation. In business since 1947, IREM is a medium size company exporting all over the world. Company certifications according to ISO9001, ISO14001, BS OHSAS 18001.

Agents:
Kenya - Specialised Power Systems Ltd.

J.A Delmas S.A.S



17 Rue Vauban
Bordeaux,
33075
France
Tel: +33 5 56 79 62 00
Web: www.jadelmas.com
E-mail: info@jadelmas.com

A Caterpillar dealer for 88 years, JA Delmas is present throughout its Network in 11 West African countries : Benin, Burkina Faso, Cote d'Ivoire, Gambia, Guinea, Guinea Bissau, Mali, Mauritania, Niger, Senegal & Togo, with over 2350 employees. We provide full-range solutions to our customers in the following fields: Construction & Infrastructures, Mining, Energy Manufacturing & Services.

Jessop & Associates (Pty) Ltd.



PO Box 265398
Three Rivers
1935
South Africa
Tel: +27 16 4212521
Tel: +27 16 4212539
Web: www.protile.co.za
E-mail: info@protile.co.za

Manufacture and install PROTILE® concrete roof tile machinery and equipment and complete mixing and batching plants.

Jindal Aluminium Limited

Jindal Nagar
Tumkur Road
Bangalore.
Karnataka
560073
India
Tel: +91 80 2371 5555,56,57,58,59
Fax: +91 80 2371 3333
Web: www.jindalaluminium.com
E-mail: hpathak@jindalaluminium.com

Jindal is India's Largest Aluminium Extruder with 120,000 MT Annual capacity. We have 11 Extrusion Press with in-house die manufacturing & billet casting facility. We also have state of art Aluminium Rolling Mill to produce Sheets (Plain & Checkered), Coils and Circles. Our products are being exported to 42 countries.

JMG Ltd.

25, Ologun Agbaje Street,
Victoria Island
Lagos
Nigeria
Tel: +234 7000112233
Web: www.jmglimited.com
E-mail: marketing@jmglimited.com

JMG is a diversified solution provider with a broad portfolio in power generation, electrical infrastructures, industrial and mobility equipment. With over 15 years of experience in Africa and strong partnerships with the world's leading brands, JMG combines global technologies and regional expertise to fulfill the development needs of the Nigerian market.

John Deere Power Systems

Unité d'Orléans-Saran
1 rue John Deere
Fleury Les Aubrais Cedex
45401
France
Tel: +33 2 38826119
Fax: +33 2 38846266
Web: www.johndeere.com
E-mail: jdengine@johndeere.com

Description: John Deere Power systems develops, manufactures and markets diesel engines for a large variety of generator sets, compressors, industrial and agricultural applications. John Deere is one of the very few engine manufacturers that doesn't make gensets, this makes us unbiased partners with gen-set OEMs, offering them a robust power generation line-up from 30 to 500 kVA.

Agents:
Angola- Jembas Assistencia Technica Lta.
Egypt- Orascom Trading Co. SAE
Morocco- Societe de Realisations Mecaniques
Nigeria- Stag Engineering (Nigeria) Ltd.
South Africa- PowerO2

Jubaili Bros

Jebel Ali Free Zone
 United Arab Emirates
 Tel: +971 4 8832023
 Fax: +971 4 8832053
 Web: www.jubailibros.com
 E-mail: jbdubai@jubailibros.com

Jubaili Bros with 40 years of experience, is a leading provider of power solutions in the Middle East, Africa & Asia. Jubaili Bros serves its customers by offering high quality diesel generating sets through 10 countries with 3 manufacturing plants and 29 branches & service centers that are dedicated to customer satisfaction.

Agents:

Ghana - Jubaili Bros (Ghana)
 Nigeria - Jubaili Bros (Engineering) Ltd.
 South Africa - Jubaili Bros SA Pty Ltd.
 Uganda - Jubaili Bros (Uganda)

Kanu Equipment SA

Aero Star Business Park
 219 Jet Park Road
 (Unit A2, Harvard Lane)
 Witfield, Jet Park
 Johannesburg, 1459, South Africa
 Tel: +27 11 652 0563
 Web: www.kanuequipment.co.za

Dealerships:

Botswana - Kanu Equipment Botswana
 Cameroon - Kanu Equipment Cameroon
 Congo DR - Kanu Equipment Congo DR
 Ivory Coast - Kanu Equipment Ivory Coast
 Ghana - Kanu Equipment Ghana
 Kenya - ESS Equipment Kenya

Liberia - Kanu Equipment Liberia
 Namibia - Kanu Equipment Namibia
 Sierra Leone - Kanu Equipment Sierra Leone
 Tanzania - Kanu Equipment Tanzania
 Uganda - Kanu Equipment Uganda
 Zimbabwe - Kanu Equipment Zimbabwe

Keestrack n.v

Taunusweg 2, Munsterbilzen
 B3740, Belgium
 Tel: +32 89 515851
 Fax: +32 89 515850
 Web: www.keestrack.com
 E-mail: info@keestrack.net

Keestrack designs and produces mobile screening and crushing equipment.

KOHLER-SDMO

270 rue de kerervern
 Guipavas
 29490, France
 Tel: +33 2 98414141
 Web: www.sdmo.com

Kraft Tool Co.

8325 Hedge Lane Terrace
 Shawnee, Kansas
 66227, USA
 Tel: +1 913 4224848
 Fax: +1 913 4221018
 Web: www.krafttool.com
 E-mail: sales@krafttool.com

Kraft Tool Co. ©, established in 1981, manufactures quality trowel trade tools for concrete, masonry, asphalt, drywall, plaster & tile professionals. As a trusted name in hand tools, Kraft Tool is proud of the "Hand Crafted"

workmanship attributed to every product. Maintaining quality, good service and innovative products are our goals.

Liebherr- Export AG

LIEBHERR

General-Guisan-Straße 14
 Nussbaumen, 5415, Switzerland
 Web: www.liebherr.com
 E-mail: info.lex@liebherr.com

The Liebherr Group comprises more than 140 companies in every continent of the world and employs a workforce of more than 48,000 people. In 2019, the Liebherr Group achieved a total consolidated turnover of more than 11.75 billion Euros. The Liebherr Group's Holding Company is Liebherr-International AG in Bulle, Switzerland, which is entirely owned by members of the Liebherr family.

Liugong Dressta Machinery sp. z o.o.

DRESSTA

ul. Kwiatkowskiego 1
 Stalowa Wola, 37-450, Poland
 Tel: +48 501 802 802
 Web: www.dressta.com
 E-mail: info@dressta.com

DRESSTA, headquartered in Stalowa Wola,

Poland, is a global manufacturer of full line of crawler dozers and pipe layers. DRESSTA is redefining crawler dozer productivity and durability with its customer focused approach to design and manufacturing.

LIUGONG MACHINERY SOUTH AFRICA (PTY) LTD

LIUGONG SOUTH AFRICA

82 POMONA ROAD
 KEMPTON PARK, South Africa
 Tel: +27 11 979 0971
 Web: www.liugong.co.za
 E-mail: lgsa@liugong.com

Liugong Machinery South Africa is the subsidiary of LiuGong with Parts Distribution Center in service for Sub Saharan African Dealer Network and Key Account Management in the region. LiuGong offers full line of General Construction, Mining, Road Construction, Lifting, Concrete and Compact Machines for all purposes.

Agents:
 South Africa - Burgers Equipment

Lovato Electric S.p.A.

Via Don E., Mazza 12, Gorle
 Bergamo, 24020, Italy
 Tel: +39 035 4282111
 Fax: +39 035 4282200
 Web: www.lovatoelectric.com
 E-mail: info@lovatoelectric.com

Electrical components for industrial automation and energy efficiency since 1922.



**TOGETHER WE
 DEFINE TOMORROW**

WE ARE LOOKING FOR DEALERS!

World's leading construction machinery manufacturer invites applications for dealership in WEST AFRICA REGION.

For further details:
 E-mail: wukm@liugong.com; liuql@liugong.com
 WhatsApp: +86 13659669258; +86 15107728028

LIUGONG

TOUGH WORLD. TOUGH EQUIPMENT.

Magni Telescopic Handlers

Via Magellano 22
Località Cavazona
Castelfranco Emilia
Modena
41013
Italy
Tel: +39 059 8031000
Web: www.magnith.com
E-mail: commerciale@magnith.com

Manufacturer of heavy and rotating telescopic handlers for mining, construction, industry and quarries.

Agents:
South Africa - MAGNI SA (PTY) LTD

Maitek S.r.l.

Via Vittorio Alfieri
No. 8 Portorio di san Costanzo (PU)
61039
Italy
Tel: +39 0721 959340
Fax: +39 0721 936623
Web: www.maiteksrl.com
E-mail: info@maiteksrl.com

Maitek manufactures aggregates crushing, screening and washing plants for quarry and mine, including water clarifying and sludge treatment plants, dust suppression systems. Turnkey projects from engineering to after-sale assistance and spare parts. Warehouse of new and second-hand machines in prompt delivery.

Marini S.p.A.

Via Roma
50 Alfonsine (RA)
Italy
Tel: +39 0544 88111
Fax: +39 0544 81341
Web: www.marini.fayat.com
E-mail: info@marini.fayat.com

MARINI is a worldwide leader in the manufacture of stationary and mobile batch asphalt plants (production up to 500 t/h).

MARINI plants produce low-energy asphalt using up to 100% of RAP. The result of the most modern technologies and 120 years of experience Made in Italy.

Agents:
Algeria - EURL METEC
Egypt - M.S.E., Modern Structures & Equipment
Kenya - Achelis Material Handling (Kenya) Ltd
Morocco - ETS L Berenger

MB S.p.A



Via Astico 30/A
36030 FARA VICENTINO (VI)
Italy
Tel: +39 0445 308148
Fax: +39 0445308179
Web: www.mbcruisher.com
E-mail: info@mbcrusher.com

MB Crusher transforms any heavy machine in a highly efficient material processing tool that recycles material that can be reintroduced in the next job or be sold for other applications. Crusher bucket, screening bucket, grapples, drum cutters and shafts screeners are an ever-expanding range of products strictly certified, whose use reduce costs, processing times and transportation of materials, while contributing to the environment.

MYTILINEOS SA



8 Artemidos Str.,
Maroussi
151 25 Athens
Greece
Tel: +302106877300
Fax: +302106877400
Web: www.mytilineos.gr
E-mail: info@mytilineos.gr

MYTILINEOS S.A. is a leading Greek industry active in Metallurgy, Power & Gas, Renewables and Storage Development and Sustainable Engineering Solutions. Established in Greece in 1990, the company is listed on the Athens Exchange, has a consolidated turnover of 2.3 billion and employs directly or indirectly more than 3,600 people in Greece and abroad. MYTILINEOS' main field of expertise and performance in Africa is in Sustainable Engineering Solutions for Mining & Industrial Infrastructure, Thermal Power Plants, Hybrid Energy Solutions, Off Grid Solutions, Environmental Solutions such as water, liquid and solid waste management and treatment.

Agents:
Ghana - MYTILINEOS S.A GHANA
Nigeria - METKA POWER WEST AFRICA

Parker Plant Ltd.

Canon Street
Leicester
LE4 6GH
United Kingdom
Tel: +44 116 2665999
Fax: +44 116 2610812
Web: www.parkerplant.com
E-mail: sales@parkerplant.com

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 Company Limited

Frank Perkins Way
Peterborough
Cambridgeshire
PE1 5FQ
United Kingdom
Tel: +44 1733 583000
Web: www.perkins.com
E-mail: info@perkins.com

A World-leading Supplier of off-highway diesel engines in the 4-2000kW market, Perkins has 85+ Years' experience of designing, building and servicing industrial power solutions. Working in collaboration with 800+ equipment manufacturers in the agricultural, construction and power generation markets, we tailor our engines to meet their needs and exceeding standards.

RATEC GmbH

Karlsruher Str. 32
Hockenheim
68766
Germany
Tel: +49 6205 940729
Fax: +49 6205 940730
Web: www.ratec.org
E-mail: info@ratec.org

Meet the better ideas for your precast concrete housing and building projects. RATEC is a well-known supplier of magnetic shuttering systems, magnet boxes, battery formwork systems and

concrete pumps. Furthermore, with Reymann Technik as partner it offers plant design and consultancy for new and existing precast concrete plants.

Rockster Austria International GmbH

Matzelsdorf 72
Neumarkt i.M.
4212
Austria
Tel: +43 720 701212
Fax: +43 720 701212 329
Web: www.rockster.at
E-mail: office@rockster.at

ROCKSTER is a specialist in the development and manufacturing of mobile crushers, screening machinery and stackers for profitable recycling of asphalt, concrete and other construction waste as well as the efficient processing of natural stone. With innovations such as patented Duplex System or the patented Double-Functional Return Belt, the company repeatedly demonstrates its approach towards progress & improvement.

Agents:
South Africa - Mfangano Solutions

Seequent



2nd floor, 18 Melrose Boulevard
Melrose Arch
Melrose North
Johannesburg
2196
South Africa
Tel: +27 11 759 4031
Web: www.seequent.com
E-mail: jnb.office@seequent.com

A World leader in geoscience software that enables decision making in the mining and exploration, civil, environmental, and energy sectors. Large scale projects use our solutions globally, including road and rail tunnel construction, groundwater detection and management, geothermal exploration, subsea infrastructure mapping, resource evaluation, and subterranean storage of spent nuclear fuel.

SEFKO Trading Solutions

Unit 12 Aldeia Nova Complex
1172 Lawson Ave
Waverley
Pretoria
0186
South Africa
Tel: +27792560913
Web: www.sefko.co.za
E-mail: info@sefko.co.za

Engineering consultancy with the flexibility and mobility to deliver excellent results in projects across Africa. Pride ourselves on consistently meeting the challenge of tough projects and compressed construction programs. Provide innovative and targeted solutions to ensure on-time delivery, quality results and cost-effective construction and operating costs.

SMT Africa



Avenue Arnaud Fraiteur 15-23
Brussels
1050
Belgium
Tel: +32 22 343300
Fax: +32 22 343301
Web: www.smt.network
E-mail: info.africa@smt.network

Established in 2010 in Belgium, SMT today provides a broad range of advanced products, services and solutions for the transport and infrastructure sectors across Europe and Africa. Reinforced by the operational agility of its dedicated sales and service network, SMT works in partnership with its customers, delivering value to improve their performance and support their growth. SMT is the exclusive distributor of Volvo Construction & Equipment, Volvo Trucks, Volvo Bus and Volvo Penta in several countries in North, Central and West Africa.

SMT Subsidiaries:-
SMT Algeria, SMT Benin, SMT Burkina Faso, SMT Cameroun, SMT Congo, SMT Cote d'Ivoire, SMT Gabon, SMT Ghana, SMT Liberia, SMT Mali, SMT Morocco, SMT Nigeria, SMT DRC, SMT Senegal, SMT Togo

Snorkel

Vigo Centre, Birtley Road
Washington
Tyne & Wear
NE38 9DA
United Kingdom
Tel: +44 845 1550057
Fax: +44 845 1557756
Web: www.snorkellifts.com
E-mail: sales.emea@snorkellifts.com

Snorkel is a leading global manufacturer of aerial work platforms. With a focus on simple and robust design, the Snorkel product line ranges from 3.0 meter push-around scissor lifts for low level access, to 66 meter telescopic boom lifts for the largest construction projects.

Visa S.p.A.



Via I° Maggio, 55
Fontanelle (TV)
31043
Italy
Tel: +39 0422 5091
Fax: +39 0422 509350
Web: www.visa.it
E-mail: visa@visa.it

Visa S.p.A. is one of the world's leading gensets suppliers, based in Italy, designing, developing and manufacturing diesel gensets, from 9 to 3000 kVA, in standard or tailor-made solutions for a large variety of applications. It provides also specific equipment for the construction sector (such as mobile site pumps for dewatering and sewage). It is present in over 90 countries through a global network to support in the successful completion of projects through an efficient engineering department, guaranteeing a highly operational flexibility and qualitative standards for which it has become a leader in the market for 60 years.

Volvo Construction Equipment

Eskestuna
63185
Sweden
Tel: +46 16 541 4203
Fax: +46 16 152989
Web: www.volvoce.com
E-mail: carin.ekstrom@volvo.com

Agents:

Egypt- Ghabbour Egypt
Morocco- Volvo Maroc SA
Sierra Leone- A. Yazbeck & Sons Ltd.
Angola- Auto-Maquinaría Lda. Auto Sueco (Angola) SARL
Algeria- SMT (Algeria)
Sudan- Albarajoub Engineering Co. Ltd.
Madagascar- Leal Equipements Compagnie LTEE (MADAGASCAR)
Mozambique- Babcock International (Mozambique)
South Africa- Babcock International (South Africa)
Ethiopia- Equatorial Business Group Pvt. Ltd. Co.
Zambia- Babcock International (Zambia)
Mauritius- Leal Equipements Compagnie LTEE (MAURITIUS)
Seychelles- Leal Equipements Compagnie LTEE (SEYCHELLES)
Tunisia- Nordic Machinery
Burundi- SMT (Burundi)
Burkina Faso- SMT (Burkina Faso)
Cameroon- SMT (CAMEROON)
Cote D'Ivoire- SMT (CÔTE D'IVOIRE)
Congo- SMT (Congo)
Gabon- SMT (GABON)
Ghana- SMT (GHANA)
Liberia- SMT (LIBERIA)
Congo DR SMT (Congo DR)
Nigeria- SMT (NIGERIA)
Rwanda- SMT (RWANDA)
Togo- SMT Benin (Togo)
Morocco- SMT Morocco
Kenya- NECST Motors Kenya Ltd
Tanzania- NECST Motors Tanzania Ltd

Volvo Penta

Region Emerging Markets & Asia Pacific
Gothenburg
40508
Sweden
Tel: +46 31 235460
Fax: +46 31 508187
Web: www.volvopenta.com
E-mail: info.volvopenta@volvo.com

Volvo Penta, with more than 4,000 dealers in over 130 countries, is a world-leading and global manufacturer of engines and complete power systems for both marine and industrial applications. The engine program comprises diesel and gasoline engines with power outputs between 10 and 900 hp. The Volvo Penta Industrial engine range covers: diesel engines for electrical power generation, 50 and 60 Hz and industrial diesel engines for different stationary and off-road applications. These engines have now been developed to meet future stringent exhaust emission levels. Volvo penta is part of the Volvo Group, one of the world's leading manufacturers of trucks, buses, construction material & equipment, drive systems for marine and industrial applications, aerospace components and services.

Agents:

Algeria - Altruck 1
Angola - Auto Sueco - Angola 1
Congo Brazzaville - SMT Congo 1
Congo Brazzaville - SMT Congo 2
Congo DR - SMT RD Congo 1
Congo DR - SMT RD Congo 2
Cote D'Ivoire - SMT - Ivory Coast
Egypt - Orascom Trading Co. SAE
Mauritius - Talbot Engineering 1
Morocco - SMT Morocco

Nigeria - Marine and Land Logistics Ltd.
Nigeria - SMT Nigeria 1
Nigeria - SMT Nigeria 2
Nigeria - SMT Nigeria 3
Seychelles - Adesho Marine
South Africa - Southern Power Products
Sudan - Al Barajoub Engineering
Tunisia - Bateamed 1
Zimbabwe - Avoca Marine
Zimbabwe - Avoca Power

Wacker Neuson (Pty) Ltd.

PO Box 2163
1031 Katrol Avenue
Robertville
Florida
South Africa
Tel: +27 11 6720847
Fax: +27 11 6720916
Web: www.wackerneuson.com
E-mail: Reception.za@wackerneuson.com

Weir Minerals Africa (Pty) Ltd.

31 Isando Road
Isando, Gauteng
1600
South Africa
Tel: +27 11 9292600
Fax: +27 11 9292960/2950
Web: www.minerals.weir
E-mail: sales-za@weirminerals.com

Weir Minerals Africa is a global supplier of excellent minerals solutions, including pumps, valves, hydrocyclones, wear-resistant linings, dewatering solutions, high pressure grinding rolls, centrifuges, screens, hoses and rubber products, crushers, feeders, screens, washers and material handling equipment. All products are backed by superior technical service.

Wilhelm Layher GmbH & Co KG

Ochsenbacher Strasse 56
Güglingen
74363
Germany
Tel: +49 71 35 70 0
Fax: +49 71 35 70 265
Web: www.layher.com
E-mail: info@layher.com

Wilhelm Layher GmbH & Co. KG, through its subsidiaries, manufactures and markets scaffolding systems. It offers modular scaffoldings, facade scaffoldings, event-systems for grandstands and stages, weather protection roofs, scaffolding claddings, rolling towers, and ladders. The company also provides scaffolding\protective systems, such as round scaffoldings, scaffolding decks, cassette roofs, lightweight cassette roofs, and scaffolding accessories. It offers its products through representatives worldwide. The company was founded in 1945 and is based in Güglingen, Germany. It has subsidiaries internationally.

Wirtgen Group Branch of John Deere GmbH & co. KG

Reinhard-Wirtgen-Str. 2
Windhagen
53578
Germany
Tel: +49 2645 1310
Fax: +49 2645 131392
Web: www.wirtgen-group.com
E-mail: info@wirtgen.de

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.

Agents:

Algeria - T.P.S. SARL Tractor Parts Services
Angola - Movicortes Angola - Equipamentos & Serviços, Lda
Benin - DEM Ghana (Benin)
Botswana - WIRTGEN South Africa (Pty) Ltd. (Botswana)
Burkina Faso - DEM Group SA
Burundi - Panafrican Equipment Ltd. (Burundi - Wirtgen)
Cameroon - Kanu Equipment Cameroun Sàrl
Cape Verde - Moviter Equipamentos Lda
Comoro Islands - UMCL Ltd.
Congo DR - DEM D.R. Congo
Cote D'Ivoire - DEM Côte d'Ivoire
Djibouti - Moenco
Egypt - ACE Arabian Company for Engineering
Ethiopia - Moenco (Ethiopia)
Ghana - DEM Ghana
Guinea - DEM Group SA (Guinea)
Kenya - Panafrican Equipment Kenya Ltd.
Lesotho - WIRTGEN South Africa (Pty) Ltd. (Lesotho)
Liberia - Kanu Equipment Libéria Ltd. (Liberia)
Libya - WIRTGEN Libya J. C.
Malawi - Machinery Spares and Trading Limited
Mali - DEM Senegal SARL (Mali)
Mauritania - DEM Mauritania
Mauritius - UMCL Ltd. (Mauritius)
Morocco - SMDM - Société Marocaine de Distribution de Matériel
Mozambique - Movicortes Mosambique, Lda
Nigeria - Mining & Construction Equipment Ltd.
Nigeria - SCA TRAC (Wirtgen)
Senegal - DEM Senegal SARL (Senegal)
Seychelles - UMCL Ltd. (Seychelles)
Sierra Leone - Kanu Equipment Sierra Leone Ltd.
South Africa - WIRTGEN South Africa (Pty) Ltd.
South Sudan - Machine Afrik Co. Ltd.
Sudan - Machine Afrik Co. Ltd.
Swaziland - WIRTGEN South Africa (Pty) Ltd. (Swaziland)
Togo - DEM Ghana (Togo)
Tunisia - SOTRADIES
Zimbabwe - Machinery Exchange (pvt) Ltd

WSCAD South Africa

Unit 12 Aldeia Nova Complex
1172 Lawson Ave
Waverley
Pretoria
0186
South Africa
Tel: +27792560913
Web: www.wscad.com
E-mail: info@sefko.co.za

One common Electrical CAD platform: No matter if you are designing piping & instrumentation diagrams, fluid power or electrical schematics, cabinet engineering, building automation or electrical installation - WSCAD SUITE is the right tool for you

Zamil Steel Building Co. Egypt

5th Industrial Zone
6th of October City
Giza
Egypt
Tel: +20 2 38283333
Fax: +20 2 38283399 / 97
Web: www.zamilsteel.com
E-mail: egypt.marketing@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

47 Galaxy Avenue
Linbro Business Park
Johannesburg
South Africa
Tel: +27 11 7236000
Fax: +27 11 7236001
Web: www.zestweg.com
E-mail: info@zestweg.com

Zest WEG, 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 40 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 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 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:

Ghana- Zest Electric Ghana Ltd.

Section Three: Agents & Subsidiaries in Africa

Algeria

Attractors SARL (Algeria - Cat Lift)

Lot n° 4
Route des Dunes
Cheraga
Tel: +213 21 821625
Fax: +213 661 545181
E-mail: abdenaf@gmail.com

Altruck 1

ZI, voie C n° 212 Rouiba
Alger
Tel: +213 21813871
Web: www.made-in-algeria.com/vitrin
E-mail: altan.yagan@groupehasnaoui.com

Bergerat

Monnoyeur(CATERPILLAR SRL)

Zone Industrielle Lot No. 121
Route de dar Beida
Oued Smar
Alger
16270
Tel: +213 21 513210
Web: www.bm-a.com
E-mail: contact.cat@bm-a.com

EURL Aksa Generateurs Algerie

Zone Industrielle Oued Smar
Lot N 55, Harrach
CP 16270
Alger
Algerie
Tel: +213 555 01 27 01
Fax: +213 23 92 06 59
Web: www.aksa-dz.com
E-mail: contact@aksa-dz.com

EURL METEC

07 Route De Dar El Beida
BP74-CP 16061
Sidi Mouss
Alger
Tel: +213 661 454839
E-mail: eurlmetec@gmail.com

SMT (Algeria)

Tel: +213 56 0078851
E-mail: info@smt-algeria.com

T.P.S. SARL Tractor Parts Services

Haouche Rane Laroussi Hamoud
Lot N°01
Khraicia – Alger
Tel: +213 23 534634
Fax: +213 23 534956
Web: www.tps-algerie.com
E-mail: tps-algeria@tps-algericom

Angola

Auto Sueco - Angola 1

Emp. Cmdt. Gika Edf.
Garden Towers Torre B 10°
Andar
Alvalade
Luanda
Tel: +244 94 5758485
Web: www.nors.com/pt
E-mail: sede@autosueco.co.ao

Barlworld Equipamentos Angola Lda. (Caterpillar SRL)

Estrada do Golf S/N
Sector Talatona - Luanda Sul
Luanda
Tel: +244 22 2460220
E-mail: info@barlworld-angola.com

CI & MA Comp. Ind.

Rua Monsenhor
Mendes Das Neves 3014
Luanda
2737
Tel: +244 22 2290886/923425538
Fax: +244 22 2290789
E-mail: contabilidade@grupomopic.com

Himoinsa Angola

Modulo 13 - Kikuxi Park
Viana/Luanda
Tel: +244 936 255891
Web: www.himoinsa.com
E-mail: angola@himoinsa.com

Jembas Assistencia Technica Lta.

PO Box 10013
Largo do Soweto 88
Luanda
Tel: +244 222 637000
Fax: +244 222 637038
Web: www.jembas.com
E-mail: etienne.brechet@jembas.com

Movicortes Angola – Equipamentos & Serviços, Lda

Parque Movicortes
Pólo Industrial de Viana
Viana
Viana – Luanda
Tel: +244 222 014892
Fax: +244 222 014872
Web: www.moviter.pt
E-mail: moviter@movicortes.es

Benin

DEM Ghana (Benin)

23 Annan Sebreebe Street
South Industrial Area
Accra
Ghana
Tel: +233 302 934406
Web: www.ghana.dem-group.com
E-mail: pde@dem-group.com

Botswana

Barlworld Equipment Botswana Pvt. Ltd. (Caterpillar SRL)

PO Box 1616
Gaborone South-East
Tel: +267 3951781

Duneton (Pty) Ltd.

Plot 73948, Unit 2
Morula Industrial Park
Phakal
Gaborone
Tel: +267 3973951
Web: www.duneton.co.bw
E-mail: Steven@duneton.co.bw

Kanu Equipment Botswana

Plot 68284
Phakalane
Gaborone
Tel: 267 (0) 395 2291
Web: www.kanuequipment.co.bw

WIRTGEN South Africa (Pty) Ltd. (Botswana)

52 Maple Street
Pomona
Kempton Park 1619
South Africa
Tel: +27 11 4521838
Fax: +27 11 4524886
Web: www.wirtgen-group.com/southafr
E-mail: sales.southafrica@wirtgen-group.com

Burkina Faso

Burkina Equipements (Caterpillar SARM)

3238, Route De Fada
Km6 Secteur 28
Dassasgho
Ouagadougou Kadiogo Province
Tel: +226 50 364766
Web: www.burkinaequipements.com
E-mail: info@burkinaequipements.com

DEM Group SA

Rue du Bassin Collecteur, 10
1130 Bruxelles
Belgium
Tel: +32 2 2082637
Web: www.dem-group.com
E-mail: tni@dem-group.com

SMT (Burkina Faso)

Tel: +226 66 770101
E-mail: info@smt-bf.com

Burundi

Panafrican Equipment Ltd. (Burundi - Wirtgen)

PO Box 44927
Uhuru Highway
00100 Nairobi
Kenya
Tel: +254 732 151000
Web: www.panafricangroup.com
E-mail: info.ke@panafricangroup.com

Cameroon

Bernabe Cameroun

Tel: +237 3342 9020
Fax: +237 9876 5518
E-mail: nicolas.dlb@bernabeafrique.com

Kanu Equipment Cameroon

Boulevard de l'Aviation
Quartier de l'Aéroport
Douala
Tel: +237 691 936 065
Web: www.kanuequipment.com
E-mail: cameroun@kanuequipment.com

SMT (CAMEROON)

Tel: +237 33 372746
E-mail: info@smt-cameroun.com

Tractraffic Equipment Cameroun

Rue Du Cinema Etoile
Garoua Nord
Tel: +237 217556
Web: www.tractraffic.com
E-mail: sho.cameroun@camnet.cm

Tractraffic Equipement Cameroun (Caterpillar SRL)

Aéroport - Rue 8029
Yaounde Centre
Tel: +237 304681
Web: www.tractraffic.com

Cape Verde

Moviter Equipamentos Lda

Parque Movicortes
Azoia, Leiria
Portugal
2404-006
Tel: +351 244 850240
Fax: +351 244 850241
Web: www.moviter.pt
E-mail: moviter@movicortes.pt

Chad

Tractraffic Equipment (Chad)

Bd De La Corniche
N'djamena
Tel: +235 514171

Comoro Islands

UMCL Ltd.

354 Royal Road
Bonne Terre, Vacoas
Mauritius
Tel: +230 426 7785
Fax: +230 426 7885
Web: www.umcl.mu
E-mail: fred@umcl.mu

Congo Brazzaville

Bernabe Congo Alucongo

Tel: +242 2 22940412
Fax: +242 5 7666663
E-mail: romain.changarnier@bernabeafrique.com

SMT (Congo)

Tel: +242 06 5082713
E-mail: info@smt-congo.com

SMT Congo 1

113 rue Denis Ngomo
Pointe Noire
Tel: +242 5 7549538
Web: www.smt-congo.com
E-mail: info@smt@congo.com

SMT Congo 2

Avenue Bayardelle
Brazzaville
Tel: +242 5 7549538
Web: www.smt-congo.com
E-mail: info@smt-congo.com

Tractraffic Equipment Congo

Avenue Edith Bongo
Ondimba Z.I. Mpila
Brazzaville Federal Dist
Tel: +242 6 9799330
E-mail: secretariat-bzv@sho-congo.com

Tractraffic Equipment Congo 1

Bd. President Marien Nguoubi
Pointe-Noire Kouilou
Tel: +242 940958

Congo DR

DEM D.R. Congo

Avenue des Poids
Lourds au N°33 BIS/
Commune de la Gombe
Kinshasa
Tel: +243 970 041745
Web: drc.dem-group.com/
E-mail: gfa@dem-group.com

Kanu Equipment DRC

17 Avenue Munguzi
Z.I/ Commune de Kampemba
Lubumbashi, Katanga
Tel: +243 823 799 051
Web: www.kanuequipment.com
E-mail: drc@kanuequipment.com

SMT RD Congo 1

Avenue du Militant, Kinshasa
Tel: +243 820666964
Web: www.smt-rdc.com
E-mail: info@smt-rdc.com

SMT RD Congo 2

Route de Likasi
Lubumbashi
Tel: +243 815656565
Web: www.smt-rdc.com
E-mail: info@smt-rdc.com

Tractrafric Equipment RDC

2798 Boulevard Du 30
Juin Kinshasa Kn
Tel: +243 98 166244

Cote D'Ivoire**Bernabe Cote D'Ivoire**

Bvd de Marseille km 4
01 BP 1867
Abidjan 101
Tel: +225 21 351150
Fax: +225 21 354884
E-mail:
fadl.khalil@bernabeafrique.com

DEM Côte d'Ivoire

Autoroute du nord
PK29 Abidjan
Tel: +225 23007901
Web: www.dem-group.com/
E-mail: rha@dem-group.com

Kanu Equipment Ivory Coast

Yopougon Zone Industrielle 30
BP 115
Abidjan
Tel: 225 23 46 36 40
Web: www.kanuequipment.ci
E-mail:
ivorycoast@kanuequipment.com

Manutention Africaine (Cote D'Ivoire) (CATERPILLAR 1)

Zone Industrielle
Batiment 138
04 BP 945
San Pedro Bas-Sassandra
Tel: +225 34 711565
Web: www.manutafci.com
E-mail: info@manutafci.com

Manutention Africaine Cote D'Ivoire (CATERPILLAR 2)

Route De Dabou
Yopougon
Abidjan, Lagunes
01
Tel: +225 23 535580
Web: www.manutafci.com
E-mail: info@manutafci.com

Matforce (F.G. Industries SAS) [Cote d'Ivoire - Cat Lift]

Rue de la Pointe aux Fumeurs
Zone industrielle de Vride
Abidjan, 01 BO 1844
Ivory Coast
Tel: +225 21758890
Fax: +225 21275196
E-mail: j.raffoul@matforce.ci

SMT - Ivory Coast

Boulevard de Vhidi
Abidjan
Tel: +225 21 751610
Web: www.smt-group.com
E-mail: info@smt-ci.com

SMT - Ivory Coast

Boulevard de Vhidi
Abidjan
Tel: +225 21 751610
Web: www.smt-group.com
E-mail: info@smt-ci.com

Djibouti**Anciens Comptoirs Ries**

Zone Industrielle De Boulaos
Tel: +253 352656
E-mail: acr3@intnet.dj

Moenco

Woreda 17
Kebele 23
Addis Ababa
Ethiopia
Tel: +251 11 6613968
Fax: +251 11 6611766
Web: www.moencoethiopia.com
E-mail: marketing@moenco.com.et

Egypt**ACE Arabian Company for Engineering**

4, Amr. Street, New Maadi
65 New Maadi, Cairo
Tel: +20 2 5188814
Fax: +20 2 7025703
Web: www.egypt-ace.com
E-mail: sales@egypt-ace.com

M.S.E. Modern Structures & Equipment

PO Box 133
4 Ahmed Nessim
St. El-Orman
Giza
Tel: +202 3749 5498
Fax: +202 3748 4329
E-mail: zeyadhabib@yahoo.co.uk

Mantrac - (Egypt - Cat Lift 1)

PO Box 1054
Km. 28 Alexandria
Cairo Desert Road
Amreya
Alexandria
21111
Tel: +20 3 4481043
Fax: +20 3 4481042
Web: www.mantracegypt.com

Mantrac (Egypt - Cat Lift)

PO Box 182
30 Lebanon St. Mohandessin
El Gezira, Cairo
Tel: +20 2 33039640
Fax: +20 2 33039648
Web: www.mantracegypt.com
E-mail: thakim@mantrac.com.eg

Mantrac Egypt (Caterpillar SARM 1)

Elnasr St. Eldhar Hurghada
Al Bahr Al Ahma
11511
Tel: +20 65 3541571
Web: www.mantracegypt.com
E-mail: info@mantrac.com.eg

Mantrac Egypt (Caterpillar SARM 2)

2 Abdel Latif Eldosouky St
Off Talkha St.
Mansoura Dk
35516
Tel: +20 50 2529512
Web: www.mantracegypt.com
E-mail: info@mantrac.com.eg

Mantrac Egypt (Caterpillar SARM 3)

PO Box 1054
Alexandria
21111
Tel: +20 3 4541000
Web: www.mantracegypt.com
E-mail: info@mantrac.com.eg

Mantrac Egypt (Caterpillar SARM 4)

30 Lebanon St El Mohandessen
Giza Gz
12411
Tel: +20 2 33004000
Web: www.mantracegypt.com
E-mail: info@mantrac.com.eg

Orascom Trading Co. SAE

2005A Corniche El Nil
Cairo
11221
Tel: +20 2 2461 1111
Web: www.orascom.com
E-mail: marianm@orascom.com

United Trading Co

2 El- Obour building
Salah Salem
Heliopolis
Cario
Tel: +202 240 10 895
Fax: +202 240 10 946
E-mail:
sales@unitedtradingegypt.com

Eritrea**Eritrea Equipment PLC**

PO Box 1040
Tegadelti St. No 111-113
Asmara Ert
Tel: +291 1 184548

Ethiopia**Moenco (Ethiopia)**

Woreda 17
Kebele 23
Addis Ababa
Tel: +251 11 6613968
Fax: +251 11 6611766
Web: www.moencoethiopia.com
E-mail: marketing@moenco.com.et

Ries Engineering S. Co. (Ethiopia - Cat Lift)

PO Box 1116
Debrezeit Road
Addis Ababa
Tel: +251 11 4421133
Fax: +251 11 4420667
Web: www.riesethiopia.com
E-mail: resco.eng@ethionet.et

Ries Engineering S. Co. (Ethiopia - Caterpillar SARM)

PO Box 1116
Addis Ababa
Tel: +251 11 4421133
Fax: +251 11 4420667
Web: www.riesethiopia.com
E-mail: resco.gmo@ethionet.et

Tri Machinery Trading & Rental PLC

Sub City Bole Kebele 08/09
Wolde and his Families
Building Office No. 102
Addis Ababa
Tel: +251 11 8298383/92 4152283
Web: www.triethiopia.com

Gabon**Bernabe Gabon Libreville**

Tel: +241 1 1761023
E-mail:
florian.verge@bernabeafrique.com

SMT (GABON)

Tel: +241 07 515008
E-mail: info@smt-gabon.com

Tractrafric Equipment Gabon (Caterpillar SRL)

Z.I. D'oloumi
Libreville Estuaire
Tel: +241 760140
E-mail: sho12@calva.com

Gambia**JA Delmas Export - Gambia (SARM)**

Tel: +33 556 796200

Ghana**Aksa Generators Ghana**

11 Trinity Avenue, East Legon
Greater Accra
Ghana
Web: www.generatorsghana.com
E-mail: sales@aksaghana.com

DEM Ghana

23 Annan Sebreebe Street
South Industrial Area
Accra
Tel: +233 302 934406
Web: www.ghana.dem-group.com
E-mail: pde@dem-group.com

HMD Forewin

Tel: +233 302 978 899 / 507777177
Web: www.hmd-africa.com
E-mail: george.apostolopoulos@hmd-africa.com

Jubaili Bros (Ghana)

Accra
Tel: +233 30 2817700
Fax: +233 30 2817700
Web: www.JubailiBros.com
E-mail: jbgghana@jubailibros.com

Kanu Equipment Ghana

House no. 38/ 24
George Walker Bush Highway
Dzorwulu
Accra
Tel: +233 544 336 060
Web: www.kanuequipment.com
E-mail:
ghana@kanuequipment.com

Mantrac Ghana Ltd. (Caterpillar SARM 3)

Harper Road
Kumasi Ashanti
Tel: +233 32 2023161
Web: www.mantracghana.com
E-mail: info@mantracghana.com

Mantrac Ghana Ltd. (Ghana - Cat Lift)

PO Box 5207
Ring Road West
Accra-North
Tel: +233 302 213720
Fax: +233 302 221950
Web: www.mantracghana.com

Mantrac Ghana Ltd. (Caterpillar SARM 1)

Ring Road West
North Industrial Area
Accra North Greater Accra
Tel: +233 30 2213720
Web: www.mantracghana.com
E-mail: info@mantracghana.com

Mantrac Ghana Ltd. (Caterpillar SARM 2)

Tarkwa-Esiam Road
Tarkwa Wp
Tel: +233 31 2320706
Web: www.mantracghana.com

MYTILINEOS S.A GHANA

4th Floor No.2 Rangoon Lane
Cantonments City
Accra
Tel: +233 302 772587
Web: www.mytilineos.gr
E-mail:
Mawuli.Asempa@metka.com

SMT (GHANA)

Tel: +233 30 283351-58
E-mail: info@smt-ghana.com

Zest Electric Ghana Ltd.

15 Third Close Street
Airport Residential Area
Legon
Accra
Tel: +233 302 766490
Fax: +233 302 766493
E-mail: ghana@zestweg.com

Guinea**DEM Group SA (Guinea)**

Rue du Bassin Collecteur, 10
1130 Bruxelles
Belgium
Tel: +32 2 2082637
Web: www.dem-group.com
E-mail: tni@dem-group.com

Manutention Guineenne

Carrefour Miniere Belle Vue
Route De Hamdallaye
Commune De Diwinn
Conakry
Tel: +224 63 303030
Web: www.manuguinee.com
E-mail: info@manuguinee.com

Guinea Bissau

Bissau Equipamentos
Rua Eng Quinhones
Bissau
1000
Tel: +245 5538344
Web: www.delmasexport.com
E-mail: info@delmasexport.com

Guinee Equatoriale

Tractrafic Equipement (Guinee equ)

Kenya

Achelis Material Handling (Kenya) Ltd

Akili House,
Off Mombasa Road
Industrial Area
Nairobi
00100
30378
Tel: +254 020 6532777
E-mail: John.ndolo@achelis-group.com

ESS Equipment Kenya

Unit 7, Savannah Business Park
Opposite JK Int'l Airport
Mombasa Road
Nairobi
Tel: +254 740 034 673
E-mail: info@essequipmentkenya.com

Mantrac Kenya Ltd. (Nairobi)

[Kenya - Cat Lift]
PO Box 30067
Witu Road, Mansour Complex
Nairobi
Tel: +254 20 4995000
Fax: +254 20 557594
Web: www.mantrackkenya.com
E-mail: info@mantrackkenya.com

Mantrac SAE

15 Dar-Es-Salam Road
Mombasa Coast
80100
Tel: +254 41 2223442
Web: www.mantrackkenya.com
E-mail: info@mantrackkenya.com

Mantrac SAE

46 Obote Road
Kisumu Nyanza
40100
Tel: +254 57 2023284
Web: www.mantrackkenya.com
E-mail: info@mantrackkenya.com

Mantrac SAE (CAT SRL Kenya 1)

Mansour Complex
Witu Road Off Lusaka Road
Nairobi, 00100
Tel: +254 41 2223442
Web: www.mantrackkenya.com
E-mail: info@mantrackkenya.com

Panafrican Equipment Kenya Ltd.

Mombasa Road / 1.4km South of
Likoni Road
PO Box 44927
00100
Nairobi
Tel: +254 732 151000
Web: www.panafricangroup.com
E-mail: info.ke@panafricangroup.com

Specialised Power Systems Ltd.

PO Box 18435
Nairobi
00500
Tel: +254 20 2077219
Fax: +254 20 3532986
Web: www.spsafrica.com
E-mail: info@spsafrica.com

Lesotho

Barloworld(LESOTHO)

Tel: +27 11 8980450
WIRTGEN South Africa (Pty) Ltd. (Lesotho)
52 Maple Street
Pomona, Kempton Park 1619
South Africa
Tel: +27 11 4521838
Fax: +27 11 4524886
Web: www.wirtgen-group.com/southafr
E-mail: sales.southafrica@wirtgen-group.com

Liberia

Kanu Equipment Libéria

PO Box 1858
Sinkor Old Road
Oldest Congo Town
Monrovia, 1000
Tel: +231 770 733 595
Web: www.kanuequipment.com
E-mail: liberia@kanuequipment.com

Liberia Equipment Ltd. (Cat SRL)

Duala Market
Bushrod Island
Monrovia
Montserrado
Tel: +231 7 7793369
E-mail: info@liberiaequip.com

SMT (LIBERIA)

Tel: +231 888071000
E-mail: info@smt-liberia.com

Libya

Free Libya Tractors (Libya - Cat Lift 1)

Bouatni Airport Road 10 Km
Benghazi
Tel: +218 91 6590402/61 4726813
E-mail: malek.benaissa@fltractors.com contact@fltractors

Free Libya Tractors (Libya - Cat Lift 2)

Alsahya Behind oil Institute
Tripoli
Tel: +218 91 6590402/021 4839954
Fax: +218 21 4839954
Web: www.fltractors.com
E-mail: malek.benaissa@fltractors.com info@fltractors.com

WIRTGEN Libya J. C.

PO Box 72423
Zanzour
Tripoli
Tel: +218 919 541195
Fax: +218 217 243979
Web: www.wirtgen-group.com/libya
E-mail: sales.libya@wirtgen-group.com

Madagascar

Henri Fraise Fils & Co.(CATERPILLAR 1)

PO Box 28
Ankorondrano
Antananarivo
101
Tel: +261 20 2222721
E-mail: henri.fraise@wanadoo.mg

UMCL Ltd.

354 Royal Road , Bonne Terre
Vacoas, Mauritius
Tel: +230 4267785
E-mail: fred@umcl.mu

Malawi

Barloworld Equipment Malawi Ltd.(CATERPILLAR 2)

Ali Hassan Mwinyi Road, Chichiri
Blantyre 3 Southern
Tel: +265 1 870666
Web: www.bec.co.za
E-mail: amgwadira@barloworld-ma

Barloworld(CATERPILLAR SRL 1 malawi)

PO Box 30643
Blantyre, 3
Tel: +265 1 870666
Web: www.bec.co.za
E-mail: amgwadira@barloworld-ma

Machinery Spares and Trading Limited

Private Bag 5122, Limbe
Tel: +265 1 844500
Fax: +265 1 844764
E-mail: mstsales@fargomw.com

Mali

DEM Senegal SARM (Mali)

Km 5, commune de
Dakar, Senegal
Tel: +221 33 8595000
Fax: +221 33 8322707
Web: www.dem-group.com/network/sene
E-mail: bso@dem-group.com

Manutention Africaine (Mali)

Zone Industrielle Sotuba
Rue 957, Porte 260 Commune II
Bamako Capital Dist
Tel: +223 2212549
Web: www.manutafmali.com
E-mail: info@manutafmali.com

Mauritania

DEM Mauritania

Ilot MD K0052
Tevrath Zeina
Nouakchott R.I.
Tel: +222 45 243211
Web: www.dem-group.com/network/maur
E-mail: mauritania@dem-group.com

Societe Mauritanienne Des Tracteurs SARM

ILOT 12 Las Palmas
Nouakchott
Tel: +222 5259501
Web: www.mauritrac.com
E-mail: info@mauritrac.com

Mauritius

Ireland Blyth Ltd.

BP 662 Bell Village
Pailles Port Louis
Tel: +230 2060444
Web: www.scomat.com
E-mail: scomat@scomat.com

Talbot Engineering 1

Marine Road, Albion Docks
Tel: +230 57293416
E-mail: alain.talbot@talbot.mu

Tractrafic Equipment International (mauritius)

9th Floor Raffles Tower 19
Cybercity Ebene Pw
Tel: +33 1 49064400

UMCL Ltd. (Mauritius)

354 Royal Road, Bonne Terre,
Vacoas
Tel: +230 426 7785
Fax: +230 426 7885
Web: www.umcl.mu
E-mail: fred@umcl.mu

Morocco

ETS I Berenger

Parc Industriel, Lot No. 55
Casablanca
Tel: +212 522 592101
Fax: +212 522 592107
E-mail: berenger@berenger.com

SMDM – Société Marocaine de Distribution de Matériel

Av. Hassan II
28 810 Mohammedia
Tel: +212 523 318800
Fax: +212 523 326396
Web: www.smdm.ma
E-mail: contact@smdm.ma

SMT Morocco

Autoroute Casablanca
Rabat Km 13,6
Casablanca
Tel: +212 52 2764800
Web: www.smt-group.com
E-mail: info.maroc@smt-group.com

Societe de Realisations Mecaniques

Route d'el Jadida
Km 14, RP 1
Casablanca
20232
Tel: +212 522 633700
Fax: +212 522 636839
Web: www.groupe-premium.com
E-mail: mohammed.derouich@premium.net

SRM (S.A. SOCIETE DE REALISATION MECANIQUE)

Route Del Jadida, Rn 1, Km 14
Ouled Azouz, Province De Nouac
Lissasfa
Casablanca
Tel: 00212 5 22633700
Fax: 00212 5 22603340
Web: www.groupe-premium.com
E-mail: mehdi.zemrani@premium.net.ma

Tractrafic Equipment Maroc

Route Desserte des Usines
KM 11 6 Autoroute Casa-Rabat
Ain Sebba Grd
Casablanca, 20250
Tel: +212 2 2763000
E-mail: tamcasa@magrebn.net.ma

Mozambique

Barloworld(CATERPILLAR SRL Mozambique)

Parcela 728C Av Da Namaacha
11,144 Esquero Estrada N2
Matola Maputo, 1114
Tel: +258 21 720343

Movicortes Mosambique, Lda

EN4, ne470, Maputo
Matola
Tel: +258 842 008965
Web: www.movicortesmocambique.com
E-mail: luis.berdao@movicortes.pt

Sotema Lda.

Av De Mozambique
N 4524/4438, Maputo
Tel: +258 21 470398
Fax: +258 21 471017
E-mail: sotema@sotema.co.mz

Namibia

Barloworld Namibia (Pty) Ltd. (cat SRL)

166 Mandume Ndemufayo Rd
Southern Industrial Area
Windhoek
Tel: +264 61 2804600

Carmix Namibia Hire & Sales

PO Box 9305
C/o Harvey & Hosea Kutako
Drive, Windhoek Noord
Windhoek, 9000
Tel: +264 81 1401198

Kanu Equipment Namibia

Andimba Toivo
Ya Toivo Street 31
Windhoek
Tel: 264 612 65 182
Web: www.kanuequipment.com
E-mail:
namibia@kanuequipment.com

Niger**Manutention Africaine
(Niger)(CATERPILLAR)**

2 Avenue
De la Chambre de Commerce
Niamey
Tel: +227 733610
Web: www.manutafniger.com
E-mail: info@manutafniger.com

Nigeria**Jubaili Bros (Engineering) Ltd.**

Jubaili Buiding, Plot 2
Ikosi Road
Oregon
Ikeja, Lagos State
Tel: +234 81 40111111
Web: www.JubailiBros.com
E-mail: jb.ikeja@jubailibros.com

**Mantrac Nigeria Ltd.
(CATERPILLAR 1)**

2 Billingsway
Off Secretariat Road
Oregon Industrial Estate
Ikeja
Lagos
PMB 21480
Tel: +234 80 23201013
Web: www.mantracnigeria.com
E-mail:
anwoko@mantracnigeria.com

**Mantrac Nigeria Ltd.
(CATERPILLAR 2)**

Km 20 Kaduna North Road
Kaduna
800001
Tel: +234 62 889168
Web: www.mantracnigeria.com
E-mail: info@mantracnigeria.com

**Mantrac Nigeria Ltd.
(CATERPILLAR 3)**

41/43 Tafawa Balewa Road
Kano Kn
700001
Tel: +234 64 927345
Web: www.mantracnigeria.com
E-mail: info@mantracnigeria.com

**Mantrac Nigeria Ltd. (Lagos)
[Nigeria - Cat Lift]**

PMB 21480
2, Billingsway
Oregon Industrial Estate
Oreg
Ikeja, Lagos
Tel: +234 1 2716300
Fax: +234 1 2716300/Ext 50196
Web: www.mantracnigeria.com
E-mail: info@mantracnigeria.com

**Mantrac Nigeria
Ltd.(CATERPILLAR 4)**

30 Onitsha Road
Trans-Amadi Industrial Layout
Port Harcourt Ri
500001
Tel: +234 84 238853
Web: www.mantracnigeria.com
E-mail: info@mantracnigeria.com

Marine and Land Logistics Ltd.

12D Osborne Road
Foreshore Estate II
Osborne
Ikoyi
Lagos
Tel: +234 8023219004
Web: www.marineandland.com
E-mail: info@marineandland.com

METKA POWER WEST AFRICA

KARIMU KOTUN 23 LAGOS
Tel: +234 8022230863
Web: www.mytilineos.gr
E-mail: Peter.Ogbejele@metka.com

**Mining & Construction Equipment
Ltd.**

5th Floor Mulliner Towers
39 Alfred Rewane Road
(formerly Kingsway Road)
Ikoyi
Lagos
Tel: +234 80 66940111
Fax: +234 1 264578
Web: www.mcequipment.info
E-mail: ceo@mcequipment.info

SCOA TRAC (Wirtgen)

157, Isolo Oshodi Express Way
Isolo Industrial Area
Mushin
Lagos
Tel: +234 1 2802072
Fax: +234 1 4521683
Web: www.scoapl.com
E-mail: scoatrac@scoapl.com

SMT Nigeria 1

322 A Ikorodu Road
Lagos
Tel: +234 802 3747678
Web: www.smt-nigeria.com
E-mail: info@smt-nigeria.com

SMT Nigeria 2

Plot 412 Opposite Julius Berge
IDU Industrial Estate
Abuja
Tel: +234 8023747678
Web: www.smt-nigeria.com
E-mail: info@smt-nigeria.com

SMT Nigeria 3

200 Airport
Airforce Road
Eliozu
Port Harcourt
Tel: +234 8023747678
Web: www.smt-nigeria.com
E-mail: info@smt-nigeria.com

Stag Engineering (Nigeria) Ltd.

Plot 5
Benson Anoruf Street
Victoria Island
Lagos
Tel: +234 1 4522917
Fax: +234 1 4523391
E-mail: info@stagengineering.com

Reunion**Societe Commerciale Industrielle
de Materiels**

3 Rue Charles Darwin
Zac 2000
Le Port
97420

Rwanda**Tractraffic Equipment Rwanda**

District Kicukiro
Kigali Ville De
Tel: +33 1 49064400

Senegal**Bernabe Senegal**

Tel: +221 33 8490101
E-mail:
Ndene.diouf@bernabeafrique.com

DEM Senegal SARRL (Senegal)

Km 5
Boulevard du Centenaire de la
Commune de Dakar
Dakar
Tel: +221 33 8595000
Fax: +221 33 8322707
Web: www.dem-
group.com/network/sene
E-mail: bso@dem-group.com

**Societe Auxiliaire (Senegal) D
Equipements (Saudequip)**

Km 5 Boulevard Du Centenaire
De La Commune De Dakar
Tel: +221 33 8320683
Web: www.saudequip.com
E-mail: info@saudequip.com

Seychelles**Adesho Marine**

Latinier Road
Tel: +248 224216
E-mail: adesho@seychelles.se

UMCL Ltd. (Seychelles)

354 Royal Road
Bonne Terre
Vacoas
Mauritius
Tel: +230 426 7785
Fax: +230 426 7885
Web: www.umcl.mu
E-mail: fred@umcl.mu

Sierra Leone**Kanu Equipment Sierra Leone**

58 Cape Road
Aberdeen
Freetown
Sierra Leone
Tel: +232 990 01802
Web: www.kanuequipment.com
E-mail:
sierraleone@kanuequipment.com

**Mantrac Sierra Leone Ltd.
(CATERPILLAR)**

PO Box127
6-8 Blackhall Road
Freetown Western
Tel: +232 22 223317
Web: www.mantracsierraleone.com
E-mail:
info@mantracsierraleone.com

South Africa**Aksa Power Generation SA(Pty) Ltd**

109 Roan Crescent
Corporate Pa
1685, Midrand
Johannesburg
PO Box 36381
Menlo Park
0102
Tel: +27 60 7746488
Fax: +27 86 5367198
Web: www.aksa.co.za/
E-mail: info@aksa.co.za

**Barloworld
Equipment(CATERPILLAR 1)**

PO Box 781291
Sandton
2146
Tel: +27 11 3014000
Web: www.barloworld-
equipment.com

**Barloworld Equipment
(CATERPILLAR 2)**

CNR Quinn & Villiers Streets
Kimberley
8300
Tel: +27 53 8329300
Web: www.barloworld-
equipment.com

**BAUER Technologies South Africa
(Bauer)**

Unit 2015
519 Nupen crescent
Midrand 1685
1686
Tel: +27 11 8053307
Fax: +27 11 8053313
Web: www.bauersa.co.za
E-mail: Birgit.leone@bauer.de

BLUMAQ SOUTH AFRICA

Unit 8 Osborn Park
1 Barfoot Road
Estera,
Germisto
Tel: +27 0119665092
Fax: +27 86 676 4460
Web: www.blumaq.com
E-mail: john.beukes@blumaq.com

Burgers Equipment

80 Pomona Road
Kempton Park
Tel: +27 11 979 3636
Web: www.liugong.com

Carmix South Africa

Tel: +27 11 6084929
Web: www.carmixsa.co.za
E-mail: bruce@carmixsa.co.za,
sales@carmix.co.za

Concord Cranes

4 2nd Street
Midrand, 1682
Tel: +27 11 805 8071

HIMOINSA SOUTHERN AFRICA

Unit 3,
Umthombo Park
12 Dane Road
Glen
Austin
Midrand, 1685
Tel: +27 (0) 11 038 4910
Web: www.himoinsa.com
E-mail: lbell@himoinsa.com

Jubaili Bros SA Pty Ltd.

Boksburg
Tel: +27 11 1004878
Web: www.JubailiBros.com
E-mail: Jb.sa@jubailibros.com

Labotec (Pty) Ltd.

Labotec Park
21 Bavaria Ave
Randjespark
Midrand Halfway House
1685
Tel: +27 11 3155434
Fax: +27 11 3155882/7/9
Web: www.labotec.co.za/
E-mail: lyleh@labotec.co.za

MAGNI SA (PTY) LTD

Dakota Business Park,
15 Dakota Crescent
Germiston 1401
Gauteng
Tel: +27 (0)11 864 0031
Web: www.Magnith.com
E-mail: deryck@magnith.co.za

Mfangano Solutions

No 19 Sixth Street
Wynberg
Johannesburg
2090
Tel: +27 11 4402072
Web: www.mfangano.co.za
E-mail: james@mfangano.co.za

PowerO2

30 – 38 Jacoba St,
Alberton North
Gauteng
1449
Tel: +27 10 216-2600
Fax: +27 10 216-2601
Web: www.powero2.co.za
E-mail: RenierP@powero2.co.za

Southern Power Products

76 Marine Drive
Cape Town
Tel: +27 21 5110653
Web: www.southernpower.co.za
E-mail: roy@southernpower.co.za

TCS RUD (Pty) Ltd.

PO Box 590
Fochville
2515
Web: www.tcs-rud.com
E-mail: marketingtcsrud@lantic.net

Uni-Span Formwork & Scaffolding

4 Setter Rd
Glen Austin AH
Midrand
1685
Tel: +27 (0)11 462 8965
E-mail: sales@uni-span.co.za

WIRTGEN South Africa (Pty) Ltd.

52 Maple Street
Pomona
Kempton Park 1619
Tel: +27 11 4521838
Fax: +27 11 4524886
Web: www.wirtgen-group.com/southafr
E-mail: sales.southafrica@wirtgen-group.com

South Sudan

Ezentus FZE Co. Ltd. (South Sudan - Cat Lift)

Plot 1 Industrial Juba North
Terekaka Rd
Juba
Sudan
Tel: +211 920001818/912344450
Web: www.ezentus.com
E-mail: eltayeb.osman@ezentus.com

Machine Afrik Co. Ltd.

Ministries Road
P.O. Box: 572
Juba
Tel: +211 956 444470
Web: www.machineafrik.com
E-mail: info@machineafrik.com

Sudan

Al Barajoub Engineering

PO Box 11961
Karthom
Tel: +249 183 778413
Web: www.albarajoub.com
E-mail: info@albarajoub.com

Machine Afrik Co. Ltd.

351 Madani Street
Al-Ma'mora
Khartoum
Sudan
Tel: +249 9 234 000 40
E-mail: info@machineafrik.com

Sudanese Tractor Company Limited (SUTRAC)

Wadi Medani Road,
kilo 8 Khartoum
Tel: +249 18 321 6333
Web: www.sutraco.com

Swaziland

Barloworld Equipment Swaziland (Pty) Ltd.

PO Box 120
Manzini
200
Tel: +268 5187049

WIRTGEN South Africa (Pty) Ltd. (Swaziland)

52 Maple Street
Pomona
Kempton Park 1619
South Africa
Tel: +27 11 4521838
Fax: +27 11 4524886
Web: www.wirtgen-group.com/southafr
E-mail: sales.southafrica@wirtgen-group.com

Tanzania

Kanu Equipment Tanzania

Plot No. 92
Kipawa Industrial Area
Nyerere
Dar es Salaam
Tel: +255 759 624 125
Web: www.kanuequipment.com
E-mail: tanzania@kanuequipment.com

Mantrac SAE (CATERPILLAR 4)

Plot No 60 & 61
Nyakato Road
Mwanza
Tel: +255 28 2572205
Web: www.mantractanzania.com
E-mail: info@mantractanzania.com

Mantrac SAE (CATERPILLAR 1)

Plot 4A, Nyerere Road
Dar Es Salaam
Tel: +255 22 2860161/2
Web: www.mantractanzania.com
E-mail: info@mantractanzania.com

Mantrac SAE (CATERPILLAR 2 tan)

Gofu Area Plot #11 Bolton
Tanga
Tel: +255 27 2642987
Web: www.mantractanzania.com
E-mail: info@mantractanzania.com

Mantrac SAE (CATERPILLAR 3)

Boma Rd Plot #5
Moshi Kilimanjaro
Tel: +255 27 2751711
Web: www.mantractanzania.com
E-mail: info@mantractanzania.com

Mantrac SAE (CATERPILLAR 5)

Century Plaza Plot No 2A
Block O Mafiat Mwanjelwa
Mbeya
Tel: +255 28 2500992
Web: www.mantractanzania.com
E-mail: info@mantractanzania.com

Mantrac Tanzania Ltd. (Dar Es Salaam) [Tanzania - Cat Lift]

PO Box 9262
Nyerere Road
Plot no 4A
Dar es Salaam
Tel: +255 22 2860161/2
Fax: +255 22 2864284
Web: www.mantractanzania.com
E-mail: info@mantractanzania.com

Togo

ADTF SARL

128BD Jean Paul 2°
BP 30720
Lomo
Tel: +228 325 6005
E-mail: dsitou@caramail.com

DEM Ghana (Togo)

23 Annan Sebreebe Street
South Industrial Area
Accra
Ghana
Tel: +233 302 934406
Web: ghana.dem-group.com
E-mail: pde@dem-group.com

SMT Benin (Togo)

Tel: +228 99 999215

Togo Equipment

Boite Postal 13300
Lome Maritime
Tel: +228 2270312
Web: www.togoequipements.com
E-mail: info@togoequipements.com

Tunisia

Bateaued 1

De L Energie
Tunisia
Tel: +216 71 840807
Web: www.bateaued.com
E-mail: bateaued@planet.tn

Parentin SA

Boite Postale 44
Cite Ezzouhour Tunis
2052
Tel: +216 71 592300
Web: www.parentin.com.tn
E-mail: parentin@parentin.com.tn

Parentin SA (Tunisia - Cat Lift)

Route de Mornaguia KM 5.5
Sedjoui 2052
Tunis
Tel: +216 93 656513
Fax: +216 71 591900
Web: www.parentin.com.tn
E-mail: karim.smati@parentin.com.tn

SOTRADIES

Rue No. 86 11
ZI La Charguia
1080 Tunis Cedex
Tel: +216 71 771188
Fax: +216 71 798966
Web: www.sotradies.com.tn
E-mail: slim.bairam@utic.com.tn

Uganda

Jubaili Bros (Uganda)

Kampala
Tel: +256 778338477
Web: www.jubailibros.com
E-mail: jb.uganda@jubailibros.com

Mantrac Uganda Ltd. (Kampala) [Uganda - Cat Lift]

PO Box 7126
Plot 17/41
7th Street Industrial Area
Kampala
Tel: +256 414 304000
Fax: +256 414 235425
Web: www.mantracuganda.com
E-mail: info@mantracuganda.com

Mantrac Uganda Ltd. (CATERPILLAR)

Plot 17/41
7th Street Industrial Area
Kampala Central
Tel: +256 41 4304000
Web: www.mantracuganda.com

United Arab Emirates

Aksa Power Generation FZE

Po Box 18167 Warehouse No.RA08
Jebeli Ali Free Zone, Dubai
Tel: +971 4 8809140
Fax: +971 4 8809141
Web: www.aksauae.com
E-mail: sales@aksa.ae

Yemen

Tehama Trading

PO Box 5370
Maalla Adan
Tel: +967 2 241736

Zambia

Barloworld Equipment Zambia Ltd. (CATERPILLAR)

PO Box 20810
Kitwe Copperbelt
10101
Tel: +260 2 211311
E-mail: barkit@zamnet.zm

BLUMAQ ZAMBIA

Plot 4976
Kitwe/Ndola Road
KITWE
Web: www.blumaq.com
E-mail: roy.pictor@blumaq.com

EC Mining Ltd.

Plot 5293/5394
Tanganyika Road
Off Mutentemuko Road
Heavy Industrial Area
Tel: +260 965 210 642
Fax: +260 212 210645
Web: www.ecmining.com
E-mail: andrew@ecmining.com

Industrial Equipment Ltd (Zambia - Cat Lift)

Plot 1312
Mulilakwenda Rd.
PO Box 20189
Kitwe
Tel: +260 21 212216014
Fax: +260 21 2217035
E-mail: iel@zamnet.zm

Zimbabwe

Avoca Marine

Andora Harbour
Kariba
Tel: + 263 612501
E-mail: avocamarine@gmail.com

Avoca Power

18 Marin Drive
Harare
Tel: +263 4 447220
E-mail: avocapower@gmail.com

Barzem Enterprises Pvt. Ltd.

PO Box 1192
Bulawayo Matabeleland N
Tel: +263 967781

Kanu Equipment Zimbabwe

185 Mutare Road
Msasa, Harare
2 Steelworks Road East
Steeld
Tel: 263 (242) 448 990-2/ 493
Web: www.kanuequipment.co.zw
E-mail: zimbabwe@kanuequipment.com

Machinery Exchange (pvt) Ltd

5 Martin Drive
Msasa
Harare
Tel: +263 (024) 2447180-2
E-mail: antony@machinery-exchange.com

Ghana's Asanko mine is benefiting from Seequent's innovations.

Asanko mine: Collaboration worth its weight in gold

Using Seequent Central to improve the organisation of data, ideas and geoscience models for stakeholders across multiple countries has helped achieve record hauls for a gold mine in Ghana's Asankrangwa Belt gold region.

Ghana's Asanko Gold Mine is a significant source of gold and employment. In 2019, it hit records for production – more than 250,000 gold ounces – and employed 2,400 people, 99 per cent of whom are Ghanaians. The flagship joint venture, between Galiano Gold and Gold Fields, with a 10 per cent stake held by the government of Ghana, is thought to have 4.8 million ounces of reserves.

While the Asankrangwa Belt, where it is based, is one of Ghana's most prospective gold regions, it's one of its most underexplored. Delivering these levels of production so quickly – Asanko only began pouring gold in 2016 – involved a collaborative, global effort. One of the most important steps in moving smoothly from exploration to production is to build accurate 3D computer models of the reserves and their geology to direct the drilling locations. The pressure is always on to discover new resources to replace those depleted by mining, so they need to manage geoscience data accurately, precisely and rapidly. But traditional modelling has a particular weakness. The data is often gathered and held in a

number of locations, so teams may be working with an incomplete picture or old versions. It's not unknown for data to be passed on with no record of who's seen it, or what version they are working on as it drifts out of date. This causes models to be redrawn too often and frequently unnecessarily, at best, delaying production and, at worst, sending it in the wrong direction.

To avoid this, Asanko turned to geoscience solutions provider Seequent, who has been partnering with the mining industry since 2004. In January 2019, its Central software was introduced across the project to bring together all the geoscience data, creating a 'single source of truth' that could be accessed by a global team. All stakeholders were able to check in with operations and collaborate, confident that they always used the latest data.

"I'd estimate we probably cut the amount of time we spent modelling by half," said Benjamin Osei Tutu, senior exploration geologist for Asanko. "Using Central, we were able to add value and de-risk our projects from the outset. People from different parts of the world were able to look at the same

project in real time, and when the model updated, everyone could comment and refine. It not only improved our decision making but simplified workflow and cut work time significantly."

Stakeholders could be involved earlier enabling the best ideas to be incorporated at the right time: "Before Central you'd produce the model and give your outputs to the next team. They'd come back with changes – sometimes entirely different ideas – that would cause delays while those new ideas were taken on board."

Clashing versions of the model were eradicated. A detailed audit trail of the data was established, making it easier to create final reports and aid peer review.

Paula Ogilvie, Galiano Gold's senior resource specialist, believes the use of Central helped the modelling team reach a best-fit, refined, consensus model quickly: "The Central Platform allowed us to test a range of different structural and mineralisation scenarios, each of which had critical implications for the resource estimate, pit design and ultimately the economic feasibility for each deposit."

Being able to work on models remotely meant geologists did not have to be in Ghana, saving time and overcoming visa constraints.

Seequent's Senior Project Geologist, Africa, Andre Hanekom said: "We are now working with Galiano Gold on new ways to capitalise on their use of remote analysis, for example by using Central for borehole planning. This adds real value, enabling remote sites to provide much more efficient feedback and receive instant help in making time-critical decisions."

Galiano Gold's SVP technical services, Mike Begg, said that Seequent Central enables them to hold an entire project in a centralised space, but the benefits go beyond easier collaboration: "This is not just better security, data integrity and housekeeping, but it improves overall decision making and our confidence in it."

Central has enabled Asanko Gold to achieve these goals – Version control; Auditable updates; Use of annotations; Locking of models during updating; Permission-based access; Collaboration between stakeholders globally; and centralised storage of projects. ■

Driving the mining sector across Africa

New technologies are shaping the vehicles and equipment that are performing the heavy lifting in Africa's mining industry. Martin Clark reports on the latest innovations.

Africa's mining industry is integral to the region's economy from Zambia's prolific Copperbelt to the gold mines of Ghana. Behind it all, are the people and the machines that make it happen. Flagship industry names such as Volvo, Caterpillar, Daimler, MAN and Scania, among numerous others, have long supplied the continent's big mines with everything from excavators, wheel loaders and haulers, through to road freight and transport services.

And, despite the volatile start to 2020, most major players were enjoying healthy business in the previous year, reflecting strong underlying demand and positive investor sentiment. Volvo Construction Equipment, for instance, a familiar name at many of Africa's big mines, saw its global sales rise 5 per cent during 2019.

While the COVID-19 crisis has disrupted the global economy and demand outlook, it might, intriguingly, drive interest in new areas, such as autonomous vehicles. This is a topic of interest to mining firms, which have pioneered in this niche around the globe for a number of years. As well as a general trend towards automation, it reflects working restrictions on human employees and mine operatives for safety reasons during the ongoing health crisis.

Volvo's new TA15 autonomous electric hauler was recognised with an award for its high-design quality. The battery-electric load carrier, with a 15-tonne hauling capacity, is designed to disrupt off-road hauling, and marks the latest output from the Volvo Autonomous Solutions' division, which has only been operational since the start of 2020.

Whether coronavirus could be the spark for an autonomous revolution



Caterpillar hit a haulage milestone in April this year.

Image Credit: Caterpillar

remains to be seen but it has certainly got manufacturers contemplating the future. Observers will have watched keenly how business continued at normal levels at Resolute Mining's Syama gold mine in Mali, a fully operational, purpose-built autonomous mine, it is perhaps a taste of things to come.

In a similar vein, Caterpillar announced in June that it had invested in US' robot and autonomy technology firm Marble Robot. The goal is to deepen its autonomous mining expertise and expand solutions for the quarry, industrial and waste industries. The company likewise continues to upgrade its mining fleet, unveiling the new Cat 966 GC wheel loader, Cat 326 next

generation excavator and Cat 6060 hydraulic mining shovel.

In April this year, Caterpillar hit a major milestone in autonomous haulage by achieving 2bn tonnes hauled using Cat MineStar Command. Caterpillar has doubled the amount hauled in the 16 months since reaching 1bn tonnes hauled in November 2018.

Household name truck firms are improving services for the mining industry, benefiting from increased investment in Africa's road transport infrastructure. Mercedes-Benz and MAN trucks play vital roles in moving goods and equipment, while Scania's vehicles can be tailored to satisfy the capacity and off-road demands of the mining industry.

The disruption caused by the pandemic has not stopped work on Africa's mines, nor on upcoming projects, which reflect the breadth of opportunity for contractors, suppliers and vehicle makers. These range from South Africa's Waterberg platinum mine to the Tender gold project in the Democratic Republic of Congo, while AngloGold Ashanti's projects pipeline includes the redeveloped Obuasi mine in Ghana.

Again, the industry will be watching closely to see how quickly these developments move forward and to what extent they embrace any COVID-era adjustments to working practices. The expert mining vehicle manufacturers will be ready whatever the challenge. ■

NEW TD-25M



**HEAVY PUSHING.
NO SWEAT.**



42 TONS OF PURE PERFORMANCE



WITH AN ALL-NEW FIRST CLASS CAB



SEE MORE, DO MORE WITH 33% MORE VISIBILITY



HIGH CAPACITY BLADES DESIGNED TO PUSH THE LIMITS



ENGINEERED FOR MINES, FORESTRY, LANDFILL & CONSTRUCTION

FIND OUT MORE: Email INFO@DRESSTA.COM or visit WWW.DRESSTA.COM



DRESSTA
ENGINEERED FOR YOUR BUSINESS

Promising outlook for West African mining

As West Africa's mining industry emerges from the COVID-19 crisis, operators across the extractive sectors are looking to operate sustainably as well as profitably. Georgia Lewis reports.

Before COVID-19 disrupted every industry in the world, projections for the West African mining sector were looking promising. A report by SP Global from February this year found that in 2019, West Africa was responsible for nearly half (48 per cent) of Africa's total gold production, and projected that this would increase to 50% by next year. With 41 per cent of Africa's contained gold reserves in Ghana, Burkina Faso, Mali, Guinea, Mauritania, Côte d'Ivoire, Senegal, Sierra Leone, Liberia, Niger and Nigeria, the prospects for the gold sector remain strong. Sixty per cent of the region's gold exploration budgets for greenfield and development projects come from Ghana, Burkina Faso and Côte d'Ivoire. The report also found that in the underground ore sector, 206 per cent growth was projected between 2017 and 2021, and 115 per cent growth in the open pit ore sector over the same period.

Neighbouring Mali and Senegal continue to host busy mining operations throughout 2020, with big long-term ambitions.

Cora Gold released a report in May this year, which was upbeat about its gold prospects in Mali and Senegal, specifically in the Yanfolila Gold Belt of south Mali and the Kedougou-Kenieba Inlier gold belt which straddles west Mali and east Senegal, where exploration continues apace.

Senegal's Baobab phosphate project, meanwhile, located about 140km from Dakar, the capital, is fully owned by Baobab Mining and Chemicals Corporation (BMCC), an 80 per cent-owned subsidiary of Avenir. Construction began in 2016 and production commenced in the same year. In 2017, BMCC started looking into increasing the existing



There are still strong prospects for phosphate mine development in West Africa.

Image Credit: Adobe Stock

Gadde Bissik ore beneficiation plant capacity to 1Mtpa in 2017 as part of an ambitious expansion project. A feasibility study on the project was completed in March last year and FID is expected this year. Contractors involved in the study included Mineral Resource Associates, Mintek, Outotec, FLSmidth & Co, Eriez Manufacturing, and MPR Geological Consultants. Overall production from the mine is expected to be 13.2Mt of phosphate rock concentrate, with an expected mine life of 13.4 years.

As well as the significant offshore hydrocarbons discovery, which has the potential to transform the economies of Senegal and Mauritania, calcium phosphate in the Senegal-Mauritania-Guinea basin has a long history, with the

Taïba deposit in Senegal has been in production since 1960 by the Compagnie Sénégalaise des Phosphates de Taïba (CSPT). Additionally, the N'Diendouri-Ouali Diala (Matam) deposit has been producing some phosphate as well since 2008. However, the other two areas in the basin, Bofal-Loubboïra in Mauritania and Saliquinhé-Farim in Guinea-Bissau, were explored three decades ago, but never put into production because of their distant location or unfavourable geological conditions. Now these two areas (Bofal-Loubboïra and N'Diendouri-Ouali Diala to the east and Taïba-Tobène and Saliquinhé-Farim to the west) are set for a revival with mining companies again interested in their potential. The western deposits are especially

appealing to enterprising operators because of their complex geology which has led to a complete leaching of all calcite and enrichment in phosphate or, in other words, a natural pre-enrichment of ore.

Ghana, a long-term mining powerhouse, has been forced to adapt in recent years, not only to become more sustainable against a backdrop of climate change, but in terms of adopting new technology, becoming a more inclusive employer and now operating in a world where coronavirus is an ongoing presence.

However, companies such as Cardinal Resources, have released optimistic reports this year. In Q1 of this year, Cardinal Resources reported that it received term sheets



Ghana has a long history of mining. This is a gold mining operation in 2008.

Image Credit: The ETI/Wikimedia Commons

from bankers and financiers in regard to project financing for its Namdini gold project in January, and Minerals Commission of Ghana approval for the resettlement action plan for Namdini in March, as well as approval for the expansion of its current mining licence from 19km² to 63km² for a renewable term of 15 years, commencing in 2020, for this project. In regard to COVID-19, the company announced it was following World Health Organization advice, in cooperation with Australian and Canadian governments, to change its exploration and development programmes to focus on employee safety and wellbeing. All international travel was suspended and on the ground, only essential personnel were at work. The target for commencing production at Namdini is H1 2023.

Golden Star Resources is similarly upbeat about its post-lockdown prospects in Ghana. There have been no COVID-19 cases across its workforce and operations have continued throughout the pandemic. In Q1 2020, gold production totalled 50,000 ounces, compared with 53,300 ounces for Q1 last year. The final gold sale and shipment for Q1 2020 was delayed because of COVID-19-related changes to flight schedules, but the transaction was completed at the start of April. Q1 2020 cashflow from operations was US\$13.4mn before working capital changes.

Andrew Wray, CEO of Golden Star, commented, "At any time, the number one priority for us as a company is the overall health, safety and wellbeing of our employees and host communities. The COVID-19 pandemic has brought this sharply into focus and it has been enormously gratifying to see the level of dedication and collaboration between our employees, our host communities and the Government of Ghana in focussing on this

priority and at the same time enabling mining operations to continue as an important contributor to the local and national economies."

He went on to say that even with the "unprecedented nature of the pandemic", operations delivered a performance that was in line with expectations, especially with "impressive volume growth" at the company's Wassa operations.

"Our focus remains on accelerating development and definition drilling to deliver improved operational flexibility and consistency. We also expect an improvement in the grade profile as we go through the year, and this is already being demonstrated in the current quarter," Mr Wray said.

At the company's Prestea and Alimak operations, Mr Wray said Goldstar is investing in new mining methods. At Alimak in particular, there has been a lack of flexibility in the stoping area, but ore drives are in development, along with the setting up of infrastructure, such as ventilation and a maintenance workshop.

"Some of the new fleet for this area has already arrived at site, while other equipment is likely to see a small delay given the current dislocation in global logistics," Mr Wray added.

Supply chains for the main consumables, such as cyanide, lime, grinding media, fuel and lubricants, have not been adversely affected by the pandemic and are regularly monitored. Alternative suppliers have been identified for vital supply chains, additional medical supplies have been secured and, where lead times have increased, this has been factored into the company's planning. When commercial flights were reduced in the wake of the pandemic, alternative logistics arrangements were made so that doré could still be transported to refining facilities in South Africa. ■



THESE CRANES HAVE BEEN ENGINEERED TO ENDURE

WORLDWIDE

Condra cranes and hoists are without equal in their quality, performance, reliability and overall lifetime cost. The endurance of all Condra products has been proven around the globe in highly corrosive and abrasive environments, and under wide extremes of temperature, humidity and altitude. Technical support and service are guaranteed worldwide.


condra[®]
Cranes & Hoists

11 Indianapolis Boulevard, Raceway Industrial Park,
Gosforth Park Ext 4, Germiston, Gauteng.
P O Box 752639, Gardenview, 2047, South Africa
Tel: +27 11 776-6000 | Fax: +27 86 669 2372
e-mail: sales@condra.co.za | www.condra.co.za



portal cranes | bridge cranes
cantilever cranes | hoists
end-carriages | single &
double-girder overhead travelling
cranes | crane components

CONDRA V-042019

Goldstone extends resource drilling and updates DEP of Homase South Pit

AIM-listed GoldStone has planned an additional infill RC drilling programme with the objective to increase the mineable resource at depth at the Homase South Pit, which is expected to commence shortly.

The Homase South Pit is the first of the three openpits planned to be brought into production as detailed in a definitive economic plan (DEP) published in June 2019.

The Homase South Pit extends 1500 metres southwards from the historic Homase Main Pit, from which AngloGold Ashanti produced 52 500 oz gold at an average grade of 2.5 g/t gold in 2002/3.

The proposed programme will seek to further define and extend the mineable resource down-dip at the Homase South Pit to a vertical depth of approximately 60 metres. As defined in the DEP, the Homase South Pit is currently targeting the oxide resource to a vertical depth of 30 metres.

Additionally, the company is considering an additional drilling programme within the Homase Trend, extending northwards, by approximately 2,000 metres from the historic Homase Main Pit, encompassing the proposed Homase Central and North Pits, being the other two open pits defined in the DEP.

The board has updated the financial model utilised for the DEP to bring it in line with the current gold price of approximately US\$1,800/oz (versus US\$1,300/oz used in the initial DEP) and to capture a reduced initial CAPEX of US\$3mn (versus US\$6.9mn in the DEP).

While the lease initially only relates to the Homase South Pit, the DEP has been approved by the relevant authorities in Ghana in its entirety and the lease can therefore be renewed and/or extended to include additional pits along the Homase Trend as the company's production plans advance.

The company continues to work closely with the Ghanaian Minerals Commission and the Environmental Protection Authority to finalise the environmental permit.

On receipt of the relevant permits, the company will be in a position to immediately commence mining operations at the Homase South Pit, utilising contract mining, and construct the heap leach plant, with the target of achieving our first gold pour in Q4 2020.



Image Credit: Adobe Stock

The Homase South Pit is currently targeting the oxide resource to a vertical depth of 30 metres.

LONCOR EXPANDS JV RELATIONSHIP WITH BARRICK IN DRC

Loncor has announced that its 76.29 per cent owned subsidiary, Adumbi Mining, has entered into a joint venture agreement with Barrick Gold for two exploitation permits held by Adumbi Mining covering ground contiguous to the Company's Imva area within the Ngayu gold belt in the northeast of the Democratic Republic of the Congo.

The purpose of the New Barrick JV is to conduct exploration on the JV Permit properties to evaluate possible development and mining of such properties.

The Ngayu gold belt lies approximately 220km from the Kibali gold mine, operated by Barrick. Kibali produced record gold production of 814,000 ounces of gold in 2019, at "all-in sustaining costs" of US\$693/oz.

The terms of the New Barrick JV are similar to Loncor's ongoing joint venture agreement with Barrick which covers over 1,894 km² of ground in the Ngayu gold belt including, among other properties, certain properties in the Imva area.

Under the New Barrick JV, Barrick will manage and fund all exploration of the JV Permit properties until the completion of a pre-feasibility study. Once the joint venture committee has determined to move ahead with a full feasibility study, a special purpose vehicle (SPV) would be created to hold the specific discovery areas.

Subject to the DRC's free carried interest requirements, Barrick would retain 65 per cent of the SPV with Adumbi Mining holding the balance of 35 per cent. Adumbi Mining would be required, from that point forward, to fund its pro-rata share of the SPV in order to maintain its 35 per cent interest or be diluted.

Arnold Kondrat, CEO of Loncor, commented, "This New Barrick JV further consolidates the control of the Ngayu gold belt by Loncor and Barrick as partners."

LANDELA TO BUY FOUR STATE-OWNED GOLD MINES

Landela Mining Venture, a privately held mining in start-up majority owned by a Zimbabwean businessman Kudakwashe Tagwirei, has reached agreements to take over and revive four idle state-owned gold mines and is in talks to buy more assets from a privately owned bullion producer, according to a news report.

David Brown, chief executive of Landela, told Reuters that Landela's takeover of gold mines run by state-owned Zimbabwe Mining Development Corporation (ZMDC) would be funded through debt and equity.

The four mines have a capacity to produce at least 85,000 ounces a year, according to ZMDC.

Gold is the single biggest forex earner in Zimbabwe and controlling its production gives Landela greater access to dollars, which are in short supply in the country.

Landela last month restarted operations at the 21,000 ounces a year Shamva mine after buying it from Metallon Corporation, owned by South African businessman Mzi Khumalo, according to Brown.

Landela plans a bigger open pit mine at Shamva and is in talks to purchase Metallon's three other gold mines, he added.

► BRIEFS



Image Credit: Astec

Astec is developing a new customer proximity offer.

Astec signs deal with Aramine

Astec Industries, through its regional office Astec Industries Africa Middle East and Aramine signed a distribution contract at the beginning of June 2020, appointing the French company Aramine as the official dealer of Astec Material Solutions products in several strategic countries in West Africa and the Maghreb. In addition to its recognised expertise and technical service, Aramine relies on its subsidiaries and partners in the region to strengthen the presence of Astec.



Image Credit: Adobe Stock

Altona Energy is also currently reviewing a number of other rare earth projects in Africa.

Altona appoints consultants

Altona Energy, a mining exploration company with a new strategic focus on rare earth element mining projects in Africa, has appointed two highly experienced consultants as it progresses its African rare earths strategy. The appointments have been made to assist the company progress the proposed acquisition of Akatswiri Rare Earth, as announced on 2 June 2020 and in consideration of further possible investments in similar rare earth element (REE) projects in Africa.

South Africa's mining industry at a crossroads

As South Africa seeks to rebuild multiple economic sectors affected by COVID-19, the mining industry is set to go through a period of change to ensure its long-term future. Georgia Lewis reports.



Galane Gold is among the South African mining operators with a positive outlook.

Image Credits: Adobe Stock

The South African mining industry is seeking to emerge from the COVID-19 pandemic stronger than before, while meeting a range of industry challenges.

In early July, the Gauteng High Court handed down a decision ordering the Minerals Council of South Africa (MCSA) to join parties representing communities, trade unions and BEE entrepreneurs in its judicial review of the 2018 Mining Charter proceedings. This decision was welcomed by the Department of Mineral Resources and Energy.

In a statement, the department said: "Decisions cannot be taken to the exclusion of workers, mining communities, BEE entrepreneurs. These parties were central to the drafting of the Mining Charter, thus the order affirms their inclusion at all material times."

However, the MCSA said in its own post-judgement statement that it "had taken the view that these groups did not have a legal right to

be joined", adding "this is not to say that the industry does not recognise their role as stakeholders."

"In fact, the Minerals Council engages regularly with many of those named in various forums," the statement went on to say, concluding that it will give effect to the court order but "regrettably, this development does mean that the finalisation of the status of the contested elements of the 2018 Mining Charter will be delayed."

A report by McKinsey from April this year flagged up mining as a

sector that has been challenged by COVID-19. The report concluded that South Africa is "facing a likely economic contraction" where, if the pandemic is contained, GDP growth could decline from 0.8 per cent to -2.1 per cent, with an estimated 40 percent of that "stemming from supply-chain import disruptions, which will impact manufacturing, metals and mining in particular".

Despite the negative projections, some mining operators in South Africa are remaining upbeat. Galane Gold released a statement about its Galaxy operations reporting a 60 per

cent increase in resources, "to give a new total of 970,904 ounces of measured and indicated mineral resources, and 1,409,764 ounces of inferred mineral resources."

Galane Gold CEO, Nick Brodie commented, "We believe that our new independent technical report confirms that we have a 'generational' asset with the potential for further expansion in resource, throughput, and mine life with minimal capital requirement and robust ongoing economics."

Anglo American, meanwhile, released its first report for 2020 which stated that the initial COVID-19 lockdown had a "limited effect" on Q1 production. A converter plant outage had a greater impact, but the company said in a statement that repairs to the damage, caused by a water leak, "is not expected to have any impact on full year refined production guidance, which remains at between 3.1-3.6 mn PGM ounces." ■

“ We have a ‘generational’ asset with the potential for further expansion with minimal capital requirement and robust ongoing economics.”

NICK BRODIE, CEO, GALANE GOLD

EPIROC PRESENTS MOBILE UNDERGROUND CORE DRILLING RIG

Epiroc is launching the second-generation underground core drilling rig with a mobile carrier. It utilises the drilling capacity of the Diamec Smart 6 and mobility and sturdiness of the Boomer S2 rig carrier. It is purpose-built for demanding underground operations with an extremely stable yet flexible boom. The drilling capacity of the Diamec Smart 6M equals that of the Diamec Smart 6, meaning that the deep hole version is rated for 1080 m hole depth. For drilling vertically up the number is 575 m.

"We have three different rotation unit options for the Diamec Smart 6M, from A to H size. The strongest one offers as much as 2390Nm of rotation torque which gives our customers the ability to achieve their required depth even in difficult rock conditions," said Ebrahim Nikafroozi, global product manager for underground core drilling rigs at Epiroc.



Image Credit: Komatsu

ZT44 blasthole drill from Komatsu

The new rig features a Rod Handling System (RHS) for increased operator safety and productivity. It has the capacity to handle drill rods and inner tubes. The Rod Handling System is fully synchronised with the drill rig through the Rig Control System (RCS) and is operated from the control panel.

The Rig Control System offers a number of useful features including automatic functions. It is fully compatible with Exploration Manager for advanced data collection and analysis.

The cabin of the Diamec Smart 6M is safe and comfortable with its FOPS/ROPS certification and air condition.

The control panel can be moved in and out of the cabin which allows for the operator to stay in the cabin while drilling.

The options offered for the new Diamec Smart 6M are developed to meet customers' demands on the global market. These are; Tier 3 and Tier 4 Final/Stage V engine, rear-view camera, LED spotlights, and fire suppression system.

SANDVIK'S ELECTRIC DRILL RIG WITNESSES DEMAND

Southern African mines are set to witness the transition from diesel-driven to battery-powered drill jumbos, with the introduction of the world's first highly-automated underground electric drill rig by Sandvik Mining & Rock Technology.

According to Saltiel Pule, Sandvik Mining & Rock Technology's business line manager for underground drilling in southern Africa, the Sandvik DD422iE rig has already seen enthusiastic take-up in mining countries with strict anti-pollution regulations. The innovation has been in development for the past three years. "The key benefits of the battery concept in underground drill rigs are zero emissions and much less heat, making for safer and healthier working conditions," Pule says. "There are many other advantages to this technology, however, including increased drilling productivity, reduced operating costs and better energy efficiency."

The Sandvik DD422iE's electric driveline, with an electric motor mechanically connected to axles for high torque and high efficiency, allows the rig to tram independently between working areas.

"The rig only needs to be connected to mains power during the actual drilling, at which point the electric motor is connected onto hydraulic pumps," he says.

Improved drilling power of up to 20 per cent is achieved by an active power compensation system which draws reserve power from batteries during peak loads. Battery charging is done during those phases of the drilling cycle when power intake is low, such as during boom movements. The unit uses sodium nickel chloride (SoNick) technology - regarded as safe battery system for underground conditions.

KOMATSU LAUNCHES ZT44 BLASTHOLE DRILL FOR MINING-DUTY APPLICATIONS



Epiroc's underground core drilling rig Diamec Smart 6M

Image Credit: Epiroc

Komatsu's new ZT44 blasthole drill is a down-the-hole surface drill rig specifically designed for mining-duty applications. This track drill is a versatile machine, used for pre-split, production, auxiliary and any other application the end user demands. The ZT44 can offer higher reliability and production due to its purpose-built structures and dual-setting compressor, adaptable to varying hardness conditions.

Additionally, the blasthole drill provides flexibility and smaller footprint to excel in the quarry, aggregate or construction environments.

Equipped with a dual-pressure air compressor enabling high- or low-pressure drilling, the machine can efficiently adjust to changing drilling conditions to still achieve optimal performance

Paired with a power unit, the ZT44 is ready for a variety of work locations, including challenging elevations where production often

drops off. A tough chassis and accompanying structures mean you will not need to worry about shortened component life from longer work windows, while the smaller footprint of the machine means it still provides the flexibility of drilling in locations that can't be accessed by larger rigs. Better pulling capacity allows the ZT44 to move around unstable ground and tackle steeper grades than other OEMs.

A wireless remote pendant supports a safer environment for routine maintenance. The operator can remotely position the rig and position the boom or mast efficiently to change out consumables.

An external catwalk and handrails provide accessibility around the machine for routine maintenance and an internal walkway through the canopy provides access to internal componentry, such as the engine and compressor.

Economical haulage for the mining industry

When looking for a cost-effective haulage solution for mining, South African manufacturer, Bell Equipment, pushes boundaries. Its crossover concept, the B60E 4x4, balances off-road performance, productivity and fuel economy.

The B60E 4x4 is effective over a wide range of conditions and terrain.



Image Credit: Bell Equipment

Designed to provide a crossover to both rigid dump trucks (RDTs) and traditional ADTs, the 60-tonne B60E has a single rear axle instead of the more typical double axle whilst retaining the traditional ADT characteristics of all-wheel drive, and articulation steering with an oscillation joint.

According to Bell Equipment product manager: ADTs, Nick Kyriacos, this gives the B60E far better capabilities in challenging conditions compared to RDTs. "The oscillation joint keeps all the wheels in contact with the ground allowing for consistent all-wheel drive performance. If an RDT fleet owner is looking for more flexibility or is forced to stop production due to unfavourable conditions, then the B60E is a great solution for them. The truck has operated side-by-side with rigid dump trucks on several sites where it has proven its capabilities. Additionally,

customers running a mixed RDT and B60E fleet are able to standardise on one loading tool while retaining a high level of flexibility when deploying their equipment."

In comparison to traditional ADTs, Mr Kyriacos explained that there are customers who do not need the level of off-road ability that their 3-axle ADT counterparts provide. "In these cases, the B60E offers a level of productivity never seen before. There is negligible tyre scuffing on the 4x4 ADTs, which is a major wear point for the middle and rear axles of 3-axle trucks.

"Some of our leading customers have experienced the B60E achieving more than double the tyre life of their 6x6 counterparts in the same application. The B60E's tyre life also exceeded that of similar sized rigid dump trucks in the same application by 60 per cent due to a combination of its all-wheel drive

configuration and all wheels maintaining even contact with the ground along the entire haul cycle," continued Mr Kyriacos. "We've sold a number of B60s to ADT customers in various parts of the world who are running them very successfully and enjoying the increased productivity and tyre life they offer."

Far larger than a conventional ADT bin, the B60E's flat-bottomed 35m³ body resembles a rigid-truck bin in its dimensions and geometry, which makes it fully compatible with existing loading equipment in mines and quarries and assures an ideal 2:1-heap of coarse blasted material. The shape additionally allows the loading tool to easily place bucket loads evenly within the bin for efficient loading that is not possible in comparable ADTs in this size class.

The truck has proven its versatility on work sites moving rock, ore, and sand over extended

distances, easily managing short, steep gradients, tight turning circles and poor underfoot conditions during inclement weather.

"The average fuel consumption of all B60Es ever sold is less than 24 litres per hour," said Mr Kyriacos. "Carrying a 55 000kg payload per cycle at that fuel economy coupled with the extended tyre life, the B60E achieves the Bell design philosophy by continuing to deliver lowest cost per tonne solutions."

In addition to cost efficiencies related to economies of scale and a highly economical drivetrain, the B60E is loaded with safety features incorporated as standard including Hill Assist, Safe Tip, downhill braking control and automatic traction control. Other standard features include auto-greasing systems, rear-view camera, onboard diagnostics, and Bell Fleetm@tic[®] telematics with full production data reporting. ■

CEDARAPIDS UNVEILS PORTABLE CRC320 CONE CRUSHER WITH LARGE FEED SIZE

Cedarapids has introduced the new CRC320 plant featuring the TG320 300hp bushing cone crusher with a large feed opening. This economical portable plant can run smoothly with the optional patent pending “canted” jack system. Easily transported on the road or on-site, the all electric plant makes the TG Series cones portable to fit a variety of layouts and applications.

The TG320 is a 300hp bushing cone with large feed size that can be easily set up to perform and deliver cost per tonne cubicle product by selecting the optimum crushing cavity and eccentric throw to suit the application requirements. The 300hp (225kw) 1800 rpm motor and crusher are mounted on a rubber isolated frame, common between modular, portable and static platforms.

The CRC320 combines the TG320 cone crusher

and a 15hp, 42-inch wide discharge conveyor on a portable all electric chassis.

The plant has a variety of jack options available from simple crank landing to unique patent pending “canted” run-on jacks that stabilise the movement of the crusher. The chassis also includes a 48-inch (1219 mm) long lockable side-mounted storage box.

Safety and ease of maintenance are forefront in the design of the CRC320 plant. Emergency stop buttons are located on both sides of the frame. Service platforms with elevated observation deck, guard rails and access ladder as well as a convenient sloped stair / ladder provide safe access around the plant for inspection and maintenance.



CRC320 cone crusher plant from Cedarapids

Image Credit: Cedarapids

The CCM automatic switchgear panel gives easy one touch control for single plant or multi plant operation without the expense and complexity of a central control. The plug and play design allows you to work with any combination or number of plants, without the need for custom programming.

SANDVIK'S NEW MODULAR HANGING SCREEN OFFERS VERSATILITY AND CROSS-COMPATIBILITY

Sandvik Mining and Rock Technology, Mobile Crushers and Screens, has introduced new ‘modular’ hanging screen for Sandvik’s latest range of mobile 2-series crushers.

Sandvik’s new double deck modular hanging screen enables customers to produce two screened products and recirculate any oversize back into the crusher.

Some of the unique benefits of this new modular hanging screen include its ability to be adapted quickly for operation in open or closed circuit configurations.

It features a patent pending adjustment system that allows the screen to be quickly reconfigured to produce one single-sized finished product, or two finished products, depending upon the customer’s demands, whereby the screen is hydraulically repositioned to create a single deck hanging screen using the top deck as a breaker deck without the need for a screen mesh removal.

The oversize conveyor may be hydraulically rotated for material stockpiling (90°) of up to three products on the ground, or removal (180°). The tail section can be raised hydraulically to give improved ground clearance for transport when loading or unloading.

The complete modular hanging screen can be installed or removed from the plant in less than 30 minutes without the need for any lifting equipment on site. The patent-pending hanging screen option can deliver multi-functionality as a 1, 2 or 3-way split screener.

Metso presents Lokotrack LT4MX mobile cone crusher

Metso has rolled out special edition Lokotrack LT4MX mobile crushing plant equipped with an MX4 crusher, offering better performance for demanding aggregates production applications.

“The Lokotrack LT4MX with Multi-Action technology cone crusher represents market-leading mobile crushing technology. The key benefits of this combination are high capacity combined with energy efficiency,” said Kimmo Anttila, vice-president, Lokotrack Solutions, Metso.

The LT4MX is designed for increased safety and reduced environmental impact, with attention to reduced carbon dioxide emissions and dust and noise suppression. Dust suppression is handled with high-pressure water spraying. The LT4MX offers more energy efficiency with direct v-belt drive. The engine is powered by CAT and its emissions meet Stage V regulations.

The LT4MX comes with leading safety features, such as large platforms and access to service locations, as well as emergency wires so that service can be completed safely. Other extra features include a vibrating feeder, the optional side conveyor for fines separation and the large hopper, which provides continuous feed to the crusher and acts as a surge bin.

Nordberg HP900 cone crusher

Metso has introduced the new Nordberg HP900 Series cone crusher for the aggregate and mining markets. The HP900, which an upgrade to the HP800 cone crusher that has more than 175 installations, is built to bring increased performance and reduced CAPEX.

The HP900 is an upgrade to the well-known HP800 cone crusher that has more than 175 installations. Approximately 80 per cent of the parts are compatible between the two technologies. The HP900 comes with improved kinematics, raised pivot point and power increase which leads to a 15 per cent capacity increase. A new lubrication system is included to help support the new performance level. The crusher is equipped with Metso’s IC70C automation system to ensure optimum operating parameters enabling the full potential. The IC70C is designed to be easy and simple to use. All information can be tracked using a single screen and features help and trouble-shooting options.



Lokotrack LT120 mobile jaw crusher, LT4MX coupled with the latest and biggest Lokotrack ST4.10 mobile screen.

Image Credit: Metso

The dangers of combustible dust

Any workplace that generates dust is potentially at risk of a combustible dust explosion, which could have catastrophic consequences. Louise Waters reports on the hazards and how businesses can protect employees.

Many industrial facilities handle combustible particulate material which pose fire and explosion hazards. An explosion can happen when dust is disturbed and released into the air in a contained area where there is an ignition source, such as a welding spark or static electricity. This can cause catastrophic loss of life, injuries, and destruction of property.

There are many kinds of products or materials from which combustible dust explosions could occur if they are processed in powdered form. According to the USA's OSHA, types of dusts include, but are not limited to, metal dust, such as aluminum and magnesium; wood dust; plastic or rubber dust; biosolids; coal dust; organic dust, such as flour, sugar, paper, soap, and dusts from certain textiles. Dusts are created by processes such as abrasive blasting, cutting, grinding, crushing, mixing, sifting, polishing

or screening dry materials.

Essentially, any workplace that generates dust is potentially at risk. Managing combustible dust hazards is critical to ensure the safety of the plant, personnel and operations. A risk analysis, or dust hazard analysis, should be undertaken to identify and address such hazards, and various measures can be taken to mitigate the risks.

According to OSHA, initial preventative steps are to contain combustible dust to areas that are properly designed and located, with ignition sources either eliminated or controlled. Equipment or spaces such as ducts, dust collectors, vessels, and processing equipment that contain combustible dust should be designed in a manner to prevent leaks to minimise the escape of dust into work areas. Any dust that settles on workplace surfaces should be removed through a routinely implemented housekeeping programme. Areas or

equipment potentially subject to explosions, including the dust collection system, should be designed to relieve pressure in a safe manner, or be provided with proper suppression, explosion prevention systems, or an oxygen-deficient atmosphere.

Speaking in a podcast on <https://dustsafetyscience.com/dust-safety-science-podcast/>, Chris Giusto, director of Industrial projects at Hallam-ICS, highlighted the lack of awareness around the dangers of combustible dust, and identified five common mistakes companies make when addressing combustible dust hazards. These are:

1. Failure to appreciate the gravity of the hazard: not realising the potential of substances identified as a 'weak' explosion hazard to cause significant explosions, along with a lack of awareness with regards to secondary explosions and the risks associated with poor housekeeping in facilities.

2. Tolerating poor dust collection system performance; a dust collection system that performs properly prevents fugitive dust accumulations and decreases the risk for secondary explosions.

3. Not recognising electrical hazards; heat from electrical devices and sparks are common ignition sources for explosions.

4. Non-compliant explosion venting; installation by an expert is essential.

5. Vented dust collectors with no isolation; isolation prevents an explosion from travelling upstream or downstream from the vent-protected vessel so that it does not get into other equipment. In the 2014 Kunshan Explosion in China, a metal production company which polished various aluminium-alloy parts, experienced a dust collector explosion, but without an isolation system in place, it propagated back into the main building. 146 people were killed, and many others injured. ■

Advertiser's Index

Cantoni Motor	17	Liebherr Export AG	35
Clarke Energy Ltd	60	Liugong Dressta Machinery sp. z o.o.	49
Condra Cranes and Hoists	51	LiuGong Machinery South Africa (Pty) Ltd.	41
DAL Group Company Ltd	5	MB S.p.A.	9
GCNET (Ghana Community Network Services Ltd)21		Metalgalante S.p.A.	11
JA Delmas S.A.S.	37	Mytilineos S.A.	18
Jessop & Associates (Pty) Ltd	15	Seequent Ltd	59
Komatsu	2		

IoT access could transform the mining sector

Research by Inmarsat found that 85 per cent of organisations struggle to access reliable connectivity for IoT projects across their mining sites, which is holding back many from taking advantage of the latest technology.



Image Credit: Adobe Stock

Data optimisation is vital for leveraging IoT technology at mining operations.

Organisations across the mining industry are struggling to take full advantage of Internet of Things (IoT)-enabled applications due to a lack of reliable connectivity. This is according to a global study by Inmarsat, the world leader in global, mobile satellite communications, which found that only 15 per cent of mining organisations consistently have access to reliable connectivity for their IoT-enabled projects.

These results emerged from the 2020 edition of Inmarsat’s research into IoT trends, *The Rise of IoT in Mining*. The report found that 45 per cent of respondents struggled to access connectivity across mine sites, hindering their ability to gather data. A further 40 per cent indicated they could access connectivity but it was often unreliable causing issues with data collection. Just 15 per cent reported they could access reliable connectivity wherever their data

producers were.

Although the mining sector has increased its adoption of IoT in recent years with 65 per cent of respondents fully deploying a project, 33 per cent have still only trialled or are trialling a project and 2 per cent not having trialled or deployed, it is apparent that connectivity is impeding miners’ abilities to harness the IoT benefits.

Of the 130 respondents that have fully deployed IoT-enabled projects across their mine sites, 78 per cent were able to access connectivity, with 24 per cent of the 130 able to

access reliable connectivity. By contrast, of the 70 respondents yet to fully deploy IoT, only 11 per cent were able to access connectivity, and this 11 per cent was only able to access unreliable connectivity.

Joe Carr, director of Mining, Inmarsat, said: “Inmarsat’s highly reliable L-band BGAN connectivity is helping organisations across all stages of their IoT journey to get the reliable connectivity needed, to ensure they can generate, analyse and action the necessary data and improve the way they operate. Although our research has indicated

that the global mining sector is undergoing an upswing in IoT adoption, reliable network connectivity is still clearly a sticking point that Inmarsat can help alleviate. To gain value from IoT-enabled projects, the right data must be where it needs to be at the right time, otherwise insights and return on investment cannot be delivered.

“The research points to a clear correlation between connectivity and those respondents who have fully deployed IoT projects. From our work in the industry, we see that poor connectivity can hamper getting a project fully deployed from a proof of concept into mainstream business operations. However, we also see from the research that for many who have fully deployed IoT projects connectivity continues to be a challenge. Inmarsat’s connectivity and capability can help the sector transform quickly through IoT.” ■

“To gain value from IoT projects, the right data must be where it needs to be at the right time, or insights and return on investment cannot be delivered.”

JOE CARR, DIRECTOR OF MINING, INMARSAT



Seequent is a world leader in geoscience software that enables decision making in the mining and exploration, civil, environmental, and energy sectors.

Large scale projects use our solutions globally, including road and rail tunnel construction, groundwater detection and management, geothermal exploration, subsea infrastructure mapping, resource evaluation, and subterranean storage of spent nuclear fuel.

To see how our software can support your project in Africa, visit [Seequent.com](https://www.seequent.com)

FROM COMPLEXITY TO CLARITY

Solve complex problems, manage risk and make better decisions across the lifecycle of projects.

[seequent.com](https://www.seequent.com)



Protect your energy supply and your business

Reliable power supplies are essential for profitable business. Natural gas is an abundant clean-burning low-carbon fuel. Jenbacher gas engines are renowned for reliable performance. This performance is supported by our network of local service engineers.

For more information on the benefits of gas-fuelled captive power plants go to clarke-energy.com or contact your local sales dept on the numbers below.

- + 9 – 18 months repayment of capital switching from diesel to natural gas
- + For electricity, heating and cooling loads
- + Engineer, procure and construct services available
- + Supported by a network of local service engineers