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MAY 2022

of BUSINESS and TECHNOLOGY

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"There are opportunities across the continent with many countries having huge mineral potential."  
Bady Baldé, deputy executive and Africa director at the Extractive Industries Transparency Initiative





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Cover picture: The North Concentrator of the Mogalakwena Platinum Mine in South Africa

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Cover inset: Bady Baldé, deputy executive and Africa director at the Extractive Industries Transparency Initiative (EITI)

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# Editor's Note

Welcome to our May issue. Inside, we share a snapshot of all the activity on the ground from Africa, a continent seeing strong growth amid a somewhat unsettled global economic backdrop.

We've got news, features and exclusive insight from right across the continent, and in all key industry sectors, from energy and mining to transport and construction.

There's a close look at some of the region's big economies, including Kenya (page 14), the focus of our country report this month, and Nigeria (page 30). Here, momentum is picking up on the strategically-significant Dangote refinery mega project. That includes the recent start-up of the Nigerian group's new fertiliser plant, also sited in the bustling Lekki Free Zone in Lagos State.

As our construction trends and market analysis report this month illustrates there is a huge amount of activity underway and in the planning in many other markets too (page 28). That includes a vibrant infrastructure sector, as Africa plays catch-up with the rest of the world. Airport development has come into sharp focus as air transport picks up once more in the wake of the Covid shutdowns (page 32).

With 2022 Investing in African Mining Indaba arriving in Cape Town we have interviews with some of the key executives speaking at the event, unique opinion pieces and an overview of some of the solutions and services that attendees will be looking to discuss (page 36).

As always, ATR will help you navigate a safe path through the challenges of doing business in Africa and alert you to the huge opportunities that exist.

**Martin Clark, Acting Editor**

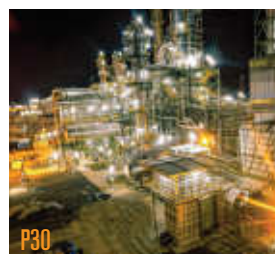
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Sivan Ya'ari, founder & CEO at Innovation: Africa discusses the pivotal role the sun plays in providing clean water for the continent; exhibitors at IFAT showcase their latest solutions and Tim Guest explores the water treatment facilities helping to relieve water stress.

## Mercedes-Benz Atego 1726 crowned ‘Medium Duty Truck of the Year’

Daimler Commercial Vehicles MENA FZE (DCV MENA) has confirmed the Mercedes-Benz Atego 1726 as the winner of ‘Medium-Duty Truck of the Year’ at an independent awards ceremony in Dubai.

Beating four competitors, the Atego 1726 drew the most number of industry votes.

“We are pleased to receive the award and would like to thank those who have voted for the Mercedes-Benz Atego 1726,” explained Olaf Petersen, general manager, Daimler Commercial Vehicles MENA FZE.

“The Atego, known for its versatility, can be customised from the factory to meet every customer’s needs, and is one of the pioneers in the medium duty truck sector in the region with its Mercedes Powershift 3 automated transmission.”

The Atego range of trucks comprises models with a gross vehicle weight (GVW) of up to 17.1t. Characterised by the motto ‘trucks you can trust’, the range integrates application-specific vehicle configurations for almost every commercial requirement.

The Atego 1726 model, which won the recent award, can be configured in a 4x2 or 4x4 axle configuration, with an S-Cab or L-Cab (the former of which is the only option with a 4x4 chassis), all of which is powered by a 256hp inline six engine.

Mercedes-Benz has earned the Euro V emission class rating for their vehicle, which plays into the efficiency and performance that ensures the costs per kilometre stay as low as possible.

“At Daimler Trucks we strive for the best product and service offering for our customers here in the region. We are a full range provider and the versatile medium duty Atego provides the right solutions to our customers for virtually every truck application,” Petersen explained.

DCV MENA represents Daimler Trucks and Buses across a network of more than 30 Mercedes-Benz and FUSO general distributors across Middle East and North Africa. The company is headquartered in the Jebel Ali Free Zone in Dubai, and stands as one of six regional centres worldwide. Daimler Truck AG at large represents the world’s biggest manufacturer of commercial vehicles globally.



Image Credit: Mercedes-Benz

The award was granted at a ceremony in Dubai on February 28, 2022.

## VANTAGE BACKS COMPASS FOR OFFICE ACQUISITION

Vantage Capital, the continent’s largest mezzanine fund manager, has confirmed that it has provided US\$10mn of mezzanine debt funding to Compass Capital, a leading Egyptian private equity firm, for the acquisition of six grade A office buildings in East Cairo.

The office buildings were acquired from Namaa for Development and Real Estate Investment, a private real estate developer and operator. Located in New Cairo’s central business district, the properties have a combined gross leasable area of 47,200 sq m.

Compass Capital’s existing real estate asset, the Walk of Cairo, is located in Sheikh Zayed City, and commenced operations in December 2020. The open-air mall provides entertainment and experiences along with retail outlets. The office building acquisition is set to facilitate the expansion and diversification of the company’s real estate portfolio.

Tarek Abdel-Rahman and Shamel Aboul Fadl, co-managing partners of the equity firm, explained, “There is currently no easy way for investors to gain exposure to a diversified portfolio of stable, yielding real estate assets in Egypt despite this being a major and fast-growing sector of the economy. Our vision is therefore to build such a real estate portfolio with a view to listing it on the Egyptian Stock Exchange. Through accessing public capital, further real estate acquisitions could be then made over time, enabling the portfolio to keep expanding and diversifying.”

David Kornik, partner at Vantage Capital, noted, “The real estate market in Egypt is buoyant and exhibiting robust growth, notwithstanding the onset of Covid. In particular, East and West Cairo have been expanding rapidly as residents move out of central Cairo to escape the congestion and improve their quality of life.”

## SWVL AND MOOVE PARTNER FOR EV BUS ROLLOUT

Swvl Inc., a global provider of tech-enabled mass transit solutions, and Moove, the world’s first mobility fintech, have announced a partnership to scale Moove’s revenue-based vehicle financing model across MENAP (Middle East, North Africa and Pakistan), as well as expand the vehicle classes on offer to include electric buses.

Beginning with an initial rollout of 500 buses, with a goal to scale up substantially, the partnership will enable mobility entrepreneurs on Swvl’s platform to access a range of brand-new buses.

Mostafa Kandil, Swvl founder and CEO, said, “Moove’s unique approach to democratising vehicle ownership by providing access to financing perfectly aligns with our mission at Swvl. Through this partnership, we are able to further our mission of empowering underserved communities with safe, efficient, and cost-effective mobility solutions and scale.”

## BRIEFS

### Maersk explore ways to accelerate green fuel production

A memorandum of understanding (MoU) was signed in a joint bid between the Egyptian Government and Maersk, to accelerate the supply of green fuels and the global



Image Credit: Alobe Stock

The partnership aims to accelerate the transition to net-zero shipping.

transformation to net-zero shipping. Maersk’s CEO for fleet & strategic brand, Henriette Hallberg Thygesen, said, “Egypt has excellent conditions for renewable energy production and ambitions to become a global leader in the green energy value chain.”

### Algerian-Chinese company joins phosphates project



Image Credit: ASMIDAL

The project will exploit phosphate across Algeria.

Algerian groups ASMIDAL (a subsidiary of SONATRACH) and MANAL, along with Wuhuan and Tian’an, have signed an agreement for the partnered creation of a joint company to start preliminary activities related to the development of an integrated phosphates project.

Upon completion, the company will produce around 5.4mn tons of fertiliser annually, and create approximately 6,000 direct jobs.



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## BB Cranes upgrades manufacturing capacity

BB Cranes, a Cape Town crane manufacturer, has upgraded its manufacturing capacity as part of a transition to becoming a wholly-owned subsidiary of the Condra group of companies.

Condra is a leading manufacturer of custom-designed overhead cranes, portal cranes, jib cranes, hoists and general crane components for countries throughout central and southern Africa, as well as for specific countries in North America, South America, Asia and eastern Europe.

Commenting on the new shareholding, BB Cranes director Barry Brink said that the additional resources of the Condra group would expand his factory's manufacturing and refurbishing capabilities, increasing capacity and improving productivity.

"We will be able to manufacture more cranes more quickly and efficiently than before, and we will be able to more energetically serve the Western Cape market," commented Brink. "Our focus will continue to be on the Western Cape Province. Our intention is to reach additional customers and to expand our base of over 400 successful installations."

Brink said that the first of the factory upgrades resulting from the changed shareholding, a girder jig, had already been installed and commissioned to enable quicker, more efficient manufacture of cambered girder box sections, reducing production time by some 75%.

The management team is to remain in place, and the expertise of founder Barry Brink will continue to be available to all customers whenever needed. Along with staff, BB Cranes' branding will continue unchanged and the company will operate independently within the Condra group.

BB Cranes was originally formed in 1992 to marry crane girders and electrification systems manufactured in Cape Town to technically complex hoists, crabs, end-carriages and other crane components supplied by Condra. Cranes made by BB have shown a steady increase in size over the years, from the 11 metre span overhead gantry cranes manufactured in the original Paarden Eiland factory, to the 25 and 26 metre spans of recent orders made at the current works in Rivergate Industrial Park. Though the majority of new deliveries have spans and capacities of around 20 metres and 50 tons, the company can deliver cranes with spans of any length, and capacities of up to 250 tons.



Image Credit: Condra

BB Cranes five ton portal crane for Everflo.

## TRONOX ANNOUNCES RENEWABLE ENERGY PROJECT IN SA

Tronox Holdings plc, one of the world's leading integrated manufacturers of titanium dioxide pigment, has recently announced that it has entered into a long-term power purchase agreement with the South African independent power producer, SOLA Group, to provide 200MW of solar power to Tronox's mines and smelters in the Republic of South Africa.

The company anticipates the project to be fully implemented by the fourth quarter of 2023. The announcement is only one example of numerous projects and investments being pursued by Tronox to meet its publicly announced goal to align with a global warming scenario below 2°C and achieve net-zero GHG emissions by 2050. "Tronox's renewable energy project with SOLA Group will reduce our global carbon emissions by approximately 13% compared to our 2019 baseline and has the full support of our Board of Directors and senior management," said Melissa Zona, Tronox Holdings plc's senior vice-president, external affairs and chief sustainability officer.

Switching from coal-based to renewable power is just one way the company is striving to implement innovative technologies and best practices at its operating sites to protect land, water, air and ecosystems.

Tronox is also investing in fundamental research and development to improve its feedstock upgrading and TiO<sub>2</sub> production technologies to reduce emissions as well as developing tangible projects to reduce the amount of solid waste generated and water consumed. Tronox strives to establish itself as a role model for ESG in the mining and chemical sector. Through continued investment in emission reduction projects, it is strengthening its commitment to sustainability in clear and tangible ways.

## FFS REFINERS PARTNERS WITH RUBIS ASPHALT FOR BITUMEN SUPPLY

FFS Refiners and Rubis Asphalt South Africa have signed a landmark partnership agreement to secure a better supply of Bitumen, a commonly used material in road construction and maintenance. The agreement has already seen the arrival of the first bulk bitumen import into land-based tanks. The first shipment which arrived at the Cape Town Harbour was met with a welcome celebration.

Prior to FFS Refiners setting up land-based tanks for direct offload, bitumen was offloaded from the shipping vessel via a mobile gantry into a truck tanker or bitutainer. FFS Refiners now provides Rubis with reliable and safe bitumen storage and handling under a 12-month agreement, which includes the rental of 4700 cu m of tank storage at FFS Refiners' facility in the Port of Cape Town.

Mark Simonsen, commercial manager at Rubis Asphalt, said, "South Africa has a world-class national road network, and our product helps ensure this infrastructure can be extended and maintained."

## ► BRIEFS

Image Credit: James Fisher Subtech



The transaction marks a milestone for Subtech SA, by becoming a black-owned and managed South African marine services company.

### Subtech South Africa completes B-BBEE transaction

Subtech South Africa, a subsidiary of James Fisher Subtech - the global specialist provider of innovative marine offshore and nearshore solutions, has completed a major Broad-Based Black Economic Empowerment (B-BBEE) transaction, transferring a 51% stake in the business to a South African black-owned consortium, Tacenda Consulting and Thembani Shipping Ltd.

Image Credit: Western Cape Government



Mossel Bay Municipality has approximately 9000 households waiting for housing opportunities.

### New housing in Mossel Bay

The Mountain View Housing Project in Mossel Bay, which forms part of the Integrated Residential Development Programme (IRDP), where 1006 housing opportunities will be created for qualifying beneficiaries, continues to make significant progress. The construction of this US\$20.5mn budgeted project commenced in July 2019 and, to date, 737 units have been completed and 1006 sites have been serviced. The planning for the project also includes other amenities.



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## BESIX builds Abidjan infrastructure

BESIX Ivory Coast is participating in the development of the Abobo Town Hall roundabout in Abidjan on the initiative of PFO Africa.

The contract which was awarded to BESIX includes the civil works for the construction of a 560 metre long tunnel which will accommodate the A1 national road with three lanes in each direction.

The A1 national road tunnel is expected to significantly improve traffic flow in the Abobo area, a municipality of Abidjan with a population of more than one million. It is a key element in the accessibility of the Abidjan metropolitan area.



Image Credit: BESIX

The project is expected to be completed in 2023.

The Abobo Town Hall roundabout is the intersection of several important roads, including those linking the economical capital to the East and North-East of the country.

The tunnel, which will be 210 metres long and 560 metres with the access ramps, will be built using the ‘cut-and-cover’ method which consists of building a trench in the open air before being covered. This will require 130,000 cu m of trench to be excavated and 4,000 tonnes of reinforcement to be placed. In addition, 23,000 cu m of structural concrete will be poured.

Philippe Dessoy, general manager of business development at BESIX, commented, “The construction of the Abobo tunnel confirms our strong presence in Ivory Coast and the quality of our partnership with PFO Africa. Together, we have built one of the largest drinking water treatment plants in West Africa, in La Mé, and have begun work on the Exhibition Centre and the F Tower, which will be the tallest tower on the African continent.

“The Abobo site allows us to introduce one of BESIX’s other major areas of expertise, infrastructure, to Ivory Coast. And we are particularly proud to participate, under the aegis of PFO Africa, in the realisation of this first-class project for the benefit of Abidjan and the country.”

With work on the site already under way, the project is expected to be completed in 2023.

## GUINEAN NIMBA IRON ORE PROJECT MOVES CLOSER TO REALISATION

Ivanhoe Liberia and Société des Mines de Fer de Guinée (SMFG), the Liberian and Guinean subsidiary companies of High Power Exploration (HPX), have entered into a framework agreement with the Government of Liberia to establish a path for agreeing final terms for access to critical rail and port infrastructure. This represents the next step in de-risking the Guinean Nimba Iron Ore Project and moves it closer to realisation.

The project will provide significant social and economic benefits to both Guinea and Liberia once in production with the feasibility study (completed in 2021) showing a robust rate of return on a forecasted long-term benchmark iron ore price of US\$76 per tonne.

The development of the Nimba Iron Project is estimated to create 2,000 direct permanent jobs, of which approximately 1,500 would be in Guinea and 500 in Liberia.

## TRANSFORMING TOGO’S BROADBAND LANDSCAPE

The Government of Togo, CSquared and Google have announced a major digital initiative which will see the arrival of a subsea internet cable running from Portugal to South Africa.

As its first landing in Africa, ‘Equiano’ will have a direct impact on Internet connectivity in Togo and will enable high-speed and affordable Internet access for millions of Togolese.

CSquared, an open access wholesale broadband infrastructure company, has partnered with Société d’Infrastructures Numériques (SIN), to create CSquared Woezon, a joint venture with a minority public shareholding. It will be in charge of maintaining and operating Equiano as well as the existing e-Government and Communauté Electrique du Bénin (CEB) terrestrial optic fiber networks.

CSquared Woezon will provide open access to all national and regional operators on an objective, transparent and non-discriminatory commercial basis.

Madam Cina Lawson, Minister of Digital Economy and Digital Transformation for Togo commented, “As Togo continues to earn its place on the regional and international stage as a digital hub and a favourable ecosystem for innovation and investment, our collaboration with Google and CSquared in successfully landing Equiano further demonstrates Togo’s commitment to enhancing public and social services for all citizens so that they can benefit economically.”

Landre Kolade, CSquared group chief executive officer, added, “CSquared is honoured to be part of Togo’s Digital Strategy, a strategy focused on social inclusion and economic development that will transform the economy with accessible, safe and affordable broadband, across gender, and geography.”

## BRIEFS

### Eni commissions Nigerian water schemes

Eni, through its subsidiaries Nigerian Agip Exploration and Agip Energy & Natural Resources, and the Food and Agriculture Organisation of United Nations have commissioned 11 water schemes in Borno and Yobe States.

The integrated water schemes are comprised of boreholes, solar power systems, treatment facilities and fetching points and will provide water for domestic consumption and irrigation purposes.

Since 2018, Eni and FAO have implemented 22 water well projects under the framework of the Access to Water initiative.

### Increasing affordable housing in Senegal



The project will kick-off by supporting the development of 200 houses in the region of Dakar.

The International Finance Corporation (IFC) and Senegal’s Sovereign Wealth Fund (FONSIS), have signed a collaboration agreement to develop 20,000 homes in Senegal across the next 8-10 years. This will be achieved through a dedicated vehicle called Kajom Capital. The partnership seeks to address both the supply and demand side challenges in Senegal’s affordable housing market.



## Meridiam signs contract for Africa's first electric bus in Dakar



Image Credit: Meridiam

121 fully-electric buses will serve the streets of Dakar when the network launches next summer.

Meridiam has confirmed the signing of a concession contract for Dakar's bus rapid transit (BRT) project.

The project, which will see Meridiam partner with Keolis and Fonsis, is the first of its kind in Africa, and represents a total investment of more than US\$145mn.

Covering the operation and maintenance of the bus project, the contract spans 15 years and will include the entire clean network, which will be comprised of 100% electric buses. It is expected to be operational from summer 2023.

The transit project will create about 1,000 direct and local jobs, focusing on local women and young people. A third of this estimate will be drivers.

Playing into the the global strategy to

modernise Dakar's urban mobility and transport network by 2025, the project has strong environmental benefits, offering a solution adapted to the challenge of climate change, while also serving as an effective alternative to the existing bus network.

While serving the 3.8mn-strong population of Dakar (and the expected 40% growth over the next decade) and reducing road congestion (which is expected to double in the next 20 years), the solution will avoid the emission of more than 59,000 tonnes of CO<sub>2</sub> annually.

121 fully-electric buses will be entirely powered by renewable energy (via batteries), and run every day on 18.3 km of dedicated bus lines. 300,000 residents are expected to use the clean mode of transport everyday, as it spans 14 municipalities and 23 stations.

## TICT ORDERS TWO MOBILE CRANES

Tincan Island Container Terminal Limited (TICT) has ordered two eco-efficient Konecranes Gottwald ESP.8 Mobile Harbor Cranes for its operation in Lagos, Nigeria.

Set for delivery in June 2022, it marks a continental first for a Generation 6 crane.

"The cranes will provide improved handling capacity to meet the demands of the steadily growing business. We look forward to the additional features the Generation 6 will bring, such as the possibility of electric operation in the future," says Etienne Rocher, managing director of TICT.

The cranes on order, Konecranes Gottwald ESP.8 Mobile Harbor Cranes, operate with a working radius of 54 metres and capacity of 150t. The successor to the Generation 5 cranes already on-site, they offer stronger lift capacity curves and customised propping base.

"This order shows the strength of our long-term partnership with TICT. With a total of twelve Konecranes Gottwald Mobile Harbor Cranes in



Image Credit: Konecranes

The Konecranes Gottwald ESP.8 Mobile Harbor Cranes will arrive in June 2022.

their fleet, as well as RTGs and reach stackers from Konecranes, TICT will have the terminal capacity and flexibility to handle containers from almost any kind of vessel," says Andreas Czwilina, regional sales manager for Konecranes Port Solutions.

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## KenGen completes construction of Olkaria I Unit 6 Geothermal Power Plant

The Kenya Electricity Generating Company (KenGen) has completed the construction of the long-awaited 83MW Olkaria I, Additional Unit (AU) 6 Geothermal Power Plant.

This milestone follows a successful delivery of full steam to the power plant, setting in motion technical processes to commercial operation which is expected by June 2022.

Geothermal will predictably displace other more expensive sources of energy and represents progress on the environmental front as it is a renewable source of power.

KenGen managing director and CEO, Rebecca Miano, lauded the milestone as a big step forward in the country's progress toward 100% utilisation of renewable energy by the year 2030, which she also said will ensure a reliable supply of clean electricity to drive Kenya's economic development.

Miano commented, "The construction of Olkaria I Unit 6 is aligned to the company's long-term strategy and Kenya's Least Cost Power Development Plan (LCPDP) focused on sustainable supply of renewable energy in support of the Government's Big Four Agenda."

Expected to inject 83.3MW into the national grid, the plant is currently undergoing reliability tests to confirm its output. This is the final process signalling completion of construction period.

The initial steam admission, which is an integral part of verifying the performance of the turbine, was conducted by the turbine manufacturer, Fuji Electric Global, in conjunction with the project contractor, Marubeni Corporation.

The tests come nearly nine months since the commencement of works to install the steam turbine at the new power plant. The turbine is now the largest single unit of turbine ever installed in any of KenGen's geothermal power stations. This was also the first time a Fuji turbine was being installed not only in Kenya but in Africa.

Today, geothermal accounts for up to 39% of KenGen's total installed generation capacity. With the additional 83MW, geothermal is expected to grow from the current 713MW to 796MW, pushing up the share of KenGen's geothermal installed capacity to about 42%.



Image Credit: KenGen

Construction of Olkaria I, Additional Unit 6 Geothermal Power Plant commenced in December 2018.

## TANZANIA'S FIRST CARRIER NEUTRAL TIER III DATA CENTRE

The Raxio Group (Raxio), a data centre developer and operator, is investing and establishing 'Raxio Tanzania', the first carrier neutral, Tier III data centre in the country.

Tanzania is one of the biggest consumer markets in the region. It is one of sub-Saharan Africa's fastest-growing economies, boasting average GDP growth of approximately 6% in the period 2001-2021, and projected to grow 5.8% in 2022. With three subsea cables already landed in the country and another set to land in 2023, Tanzania will be an increasingly important connectivity hub for the region.

Raxio Tanzania will serve as a key enabler of international IP transit for the country's six landlocked neighbors and play a key role in supporting the continued digital and economic growth of the country and region.

The facility is set to be commissioned in 2023 and will be the sixth data centre in Raxio's portfolio of facilities in Africa. Raxio currently operates a 1.5MW facility in Uganda, and has facilities under construction in Ethiopia, Mozambique, the DRC and Ivory Coast. The facility is being developed in collaboration with international and local contractors. Once commissioned, Raxio Tanzania will deliver much-needed colocation capacity to local, regional and international enterprises, cross connection services with local and international carriers and a series of value-added services.

Raxio Tanzania will be fully equipped with industry-leading technology solutions that not only ensure full redundancy and maximised uptime, but also optimise power consumption and energy efficiency.

Robert Mullins, CEO of Raxio Group, said, "Our decision to build Tanzania's first Tier III carrier neutral facility highlights our commitment to our strategy to deliver the vital digital infrastructure needed on the African continent."

## EVOLUTION REINFORCES RELATIONSHIP WITH LOCAL COMMUNITIES

Evolution Energy Minerals has reported that the first round of its stakeholder engagement with local communities in connection with preparation of an updated relocation action plan has been completed. This is one element of a range of social activities being undertaken by the company that are important to the development of the Chilalo Graphite project in Tanzania.

Evolution managing director, Phil Hoskins, commented, "After eight years of exploration and development, we are focused on getting to a production decision, and maintaining and enhancing our social licence to operate in the Chilalo Project area is an essential part of that.

"As we progress towards a construction decision in the second half of the year, we recognise that further strengthening our relationships with the local communities will be a fundamental factor in our success in Tanzania."

## ► BRIEFS

### Affordable passenger ferries for Lake Victoria

Image Credit: InfraCo Africa



The new vessels will operate on additional routes in Kenya and new routes in Tanzania and Uganda.

InfraCo Africa has committed US\$3.8mn to Globology Ltd to support the expansion of the company's Waterbus passenger transport operations on Lake Victoria.

The investment will support the construction of five fifth-generation ferries over the next 24-36 months and will enable the company to upgrade its existing boatyard located in Kisumu, Kenya. Shell Foundation has also provided US\$800,000 to pilot retrofitting of a solar boost system to two of its vessels.

### Cooking fuel utility for Rwanda

Image Credit: Rwanda Development Board



The Government will provide the enabling policy environment.

The Government of Rwanda has announced an agreement with KOKO Networks to develop a renewable fuel utility.

KOKO has developed a proprietary climate-tech platform for the low-cost delivery of bioethanol cooking fuel, which has been proven at scale in Kenya. The company has partnered with Dalberg to establish KOKO Rwanda, in order to develop a nation-wide network that will enable convenient clean fuel access for all Rwandans.



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## Upcoming Events Calendar 2022

### MAY

9-12

#### INVESTING IN AFRICAN MINING INDABA

Cape Town, South Africa  
<https://miningindaba.com/Home>

10-12

#### SECUREX WEST AFRICA

Lagos, Nigeria  
<https://www.securexwestafrica.com/>

12-14

#### BUILDEXPRO AFRICA 2022

Nairobi, Kenya  
<https://www.expogr.com/buildexpokenya/>

17-19

#### SUSTAINABLE ENERGY FOR ALL

Kigali, Rwanda  
<https://www.seforall.org/forum>

19-21

#### 7TH SOLAR EXPO KENYA

Nairobi, Kenya  
<https://www.expogr.com/solarafrica/>

30-3 June

#### IFAT

Munich, Germany  
<https://ifat.de/en/>

### JUNE

1-3

#### WAMPEx

Accra, Ghana  
<https://www.wampexwestafrica.com/>

2-3

#### MMEC

Maputo, Mozambique  
<https://mozambiqueoilmining.com/>

7-9

#### ENLIT AFRICA

Cape Town, South Africa  
<https://www.enlit-africa.com/>

21-23

#### HILLHEAD

Buxton, UK  
<https://www.hillhead.com/>

21-23

#### POWER & WATER NIGERIA

Lagos, Nigeria  
<https://pnwnigeria.com/>

21-24

#### AFRICA ENERGY FORUM

Brussels, Belgium  
<https://www.africa-energy-forum.com/>

### JULY

4-7

#### NOG

Abuja, Nigeria  
<https://www.nogevent.com/>

5-7

#### 6TH NIGERIA BUILD EXPRO

Lagos, Nigeria  
[www.nigeriabuildexpo.net](http://www.nigeriabuildexpo.net)

12-14

#### HYDROVISION INTERNATIONAL

Colorado, the USA  
<https://www.hydroevent.com/event-information/about-hydrovision>

## Buildexpo Africa 2022 to be held in Nairobi

The international trade fair for building, interior decoration, furniture, lighting, mining and water technologies Buildexpo Kenya will be held from 12-14 May at KICC, Nairobi, Kenya.

The show specifically attracts traders and importers from other African countries. The 23rd edition of the event is set to highlight the widest range of the latest technology in building material, mining machines, construction machinery and heavy equipment.

Exhibitors from more than 40 countries who are the finest in infrastructure development will be present in East Africa's largest building and construction fair.

According to the World Bank, infrastructure is the key to Africa's economic turnaround and will play an even greater role in the continent's continued development. Kenya in particular is making giant strides in infrastructure and urbanisation, with demarcated economic zones, commercial and residential buildings, and resorts for tourists. The country's infrastructure and construction industry value was expected to double between 2019 and 2020. There has already been a spike in the demand for building material and machinery.



Image Credit: Adobe Stock

The event will cover building, interior decoration, furniture, lighting, mining and water technologies.

The event will cover aluminum profiles, building materials, carpets, construction equipment, doors, drainage systems, dump trucks, excavators, fire extinguishers, fittings, floor coverings, furniture, gloves, helmets, pipes, plumbing, prefabricated building parts, road construction, sewage systems, steel sections, water tanks, windows, and others.

Some of the exhibitors include Riza Global

LLC, Profholod, Maxmech Equipments Pvt Ltd, India, Tunisia Building Partners, Talinda East Africa, Apex Steel Limited, Itarco Middle East Fze, Vehicle And Equipment Leasing Limited (Vaell), Shakti Mining Equipments Pvt Ltd, Lixil Africa, Maji Milele Ltd, Kirin Pipes Co Ltd, KOTRA (Korea Trade-Investment Promotion Agency), Mayr-Melnhof Holz Holding AG, Mayr-Melnhof Holz Holding AG etc.



“Standard Bank’s purpose is as follows: Africa is our home; we drive her growth. But we will only see the continent come into her own when we draw on the diverse talents and capabilities of people across society. As Standard Bank, we are throwing our weight behind various initiatives that are empowering, celebrating and advancing women across the continent with the vision of unlocking economic growth and prosperity for African communities.”



Image Credit: Standard Bank

**LUNGISA FUZILE**  
Standard Bank chief executive

“Equitable access to drinking water, sanitation and hygiene is not only the foundation of health and development for children and communities. Water is life, water is development, water is peace... As climate change puts additional pressure on resources, we need climate risk-sensitive and resilient water, sanitation and hygiene services for children and their communities. And we need it now.”

**MARIE-PIERRE POIRIER**  
UNICEF regional director for West and Central Africa

“We are thrilled to embark on this journey with Nigeria that will see us spread out to other regions of Africa in no time. It is only the beginning of what is yet to come as we will continue to put our tentacles in Africa through major campaigns in several African cities, meet-ups, and partnerships.”

**ALLEN WEI**  
CEO of LBank on the hosting of a blockchain event for its premium users in Nigeria

“Our green hydrogen project in Mauritania has the potential to establish the country as one of the cheapest producers of green hydrogen. Our ambition is to help the nation become one of the world’s main producers and exporters of green hydrogen.”

**BENOIT GARRIVIER**  
Chariot Transitional Power CEO on the MoU signed with the Port of Rotterdam

“Our new identity reinforces our role in working to advance Africa’s instrumental role as a global growth engine. Through impact investing in infrastructure, we are committed to helping the continent position itself for greater success in a world of growing crisis and complexity.”



Image Credit: AFC

**SAMAILA ZUBAIRU**  
President and CEO of the Africa Finance Corporation (AFC) as it rebrands with ‘Instrumental Infrastructure. Instrumental Africa.’ as its strapline

“There is a lot that Africa can draw from the UAE’s remarkable success. What the UAE has done, using its resources, its drive and determination to develop the country into what it is today is highly impressive. We are keen to see the UAE become an even more valued and significant investment partner in Africa.”

**AKINWUMI ADESINA**  
President of the African Development Bank Group

“These exceptional times have shown the urgency to invest in secure and affordable digital infrastructure, digital skills, digital identity, data management and build on Africa’s innovation potential and entrepreneurship. The African Union welcomes the enhanced partnership with the European Union that is based on respect, transparency, equal opportunity, a win-win approach and agreed tangible outcomes accelerate the digital transformation of our continent.”

**AMANI ABOU-ZEID**  
AU commissioner for infrastructure and energy

“Our programmes help Africa’s businesses and teams to grow, thrive, and contribute to the regional economy. We are confident this increased focus on francophone Africa will lead to job creation, exponential improvement in livelihoods, and ultimately support Africa’s most ambitious companies and people to thrive.”

**REBECCA HARRISON**  
CEO and co-founder of the African Management Institute (AMI) on the launch of a new series of francophone learning programmes to support small enterprises and businesses

# A strong foundation for a promising future

East Africa's largest economy has showed remarkable resiliency across the last two years and with encouraging regional trade opportunities and thriving sectors such as its fintech landscape, the groundwork is set for a prosperous future.

**W**ith Covid-19 damaging most economies across the world, Kenya has emerged from the pandemic's shadow unusually unscathed. According to the World Bank, in 2021 the country's GDP is expected to grow by 5% (one of the faster recoveries in sub-Saharan Africa) and overall economic performance is expected to be a robust 4.9% in 2022-23 (which is similar to pre-pandemic pace).

"Kenya's economy has shown considerable resilience to the enormous shock of the pandemic, and this year is expected to post one of the stronger growth rebounds in the region thanks to diversified sources of growth and sound economic policies and management," said Keith Hansen, World Bank country director for Kenya.

Despite the country's dogged fiscal performance, there remains a large gap between the rich and poor segments of the population with two-thirds of the Kenyan population living in poverty and approximately 70% of families chronically vulnerable due to poor nutrition, food insecurity and preventable diseases (according to USAID).

Hansen continued that throughout the pandemic poverty has increased and the buffers and coping mechanisms of households, firms and public finances have depleted.

To level the playing fields, the World Bank has suggested that

encouraging competition and lowering barriers to firm creation and growth especially in sectors that have high job-creation potential is key. It also noted the importance of cross-cutting reforms to enable a stable business environment and improving access to physical digital infrastructure to benefit firms across all sectors, as well as strengthening debt management to free up credit for the private sector while supporting private investment.

## Trading prospects

Identifying areas to lift more of the Kenyan population out of poverty, USAID has noted that increasing trade with East African countries and globally will allow firms to take greater advantage of international opportunities and facilitate job creation, capacity building, private sector support, better market access and increased food security.

In this setting, the country is bolstered by regional initiatives which have taken promising strides towards increasing regional integration and trade in recent years. Frequently in the headlines, the African Continental Free trade Area (AfCFTA) is an exceptional example which was only commenced at the beginning of 2021.

According to a report by the Economic Commission for Africa (ECA), AfCFTA has the potential to increase the value of intra-African trade by between 15-25% (approximately US\$50bn-70bn) with



Trade is set to benefit from the AfCFTA and the DRC's admission to the EAC.

the industrial sector specifically the greatest boost (industrial product trade could increase by about 25%-30%).

Last year, Kenya finalised its AfCFTA National Implementation Strategy, a blueprint to enable the country to exploit the opportunities provided by the agreement. At the time, Anthony Mvevange, research and learning director of TradeMark East Africa, an aid-for-trade organisation which is working to reduce barriers to trade across Africa, commented that, if well-implemented, the strategy would "transform Kenya's economy into an export-led one with a thriving domestic market as well as buttress the country's position as an ICT hub and regional trade gateway."

More locally, the East African Community (EAC) is another intergovernmental organisation with the potential to enhance Kenya's trade prospects. The proposed EAC Capacity Building Project appears set to strengthen the bloc's capacity for effective integration even further and will support interventions to improve market access for goods, services and movement of people within the EAC. It seeks to address the challenges of a weak regional economic community capacity to

plan and coordinate regional programmes and tackle persistent barriers to the efficient movement of goods and services across borders. One focus will be tackling persistent non-tariff barriers to trade and introduce one-stop border posts (OSBP) at targeted positions or provide existing facilities with equipment and soft interventions to improve efficiency.

The EAC remains the most integrated region in Africa and yet it is well below regional blocs outside of the continent. Programmes such as the Capacity Building Project are being implemented to redress this and overcome the challenges holding it back (such as poor laws and regulatory framework; inadequate trade complementarities; persistent non-tariff barriers (NTBs); and cumbersome border processes and procedures). Advancing the EAC regional integration agenda could raise the volume of intra-regional trade from the current levels to more than 50% over the next five years and boost competitiveness to reap the benefits of free trade within AfCFTA as well.

The EAC has also just acquired a new member as, nearly three years after making its application, the



Democratic Republic of Congo (DRC) has officially joined the community. The acceptance adds another 90 million people into the bloc, giving them the ability to buy and sell more easily into East African members (and visa versa). With several major economic transport corridors, better access to the DRC will provide Kenyan corporates/SMEs/entrepreneurs greater access not only to the country but central and southern Africa. To encourage Kenyan investors and businesses to take advantage of this opportunity, both governments, at the end of 2021, organised the Kenya-DRC Trade Mission with more than 253 Kenyan representatives arriving in Kinshasa for a 15-day event. This was organised to bring together Kenyan and DRC business stakeholders to unlock the potential of trade, tourism and investment opportunities between the DRC and Kenya.

### A fintech haven

One of greatest indicators of Kenya's rapid growth over the last 20 years and status as one of Africa's 'lion economies' (according to business commentators) is the country's success in the fintech environment which has not only put the country at the forefront of the international community but has manifested into a welcome source of commerce and job creation within the country. As demonstrated in the fintech in Kenya report composed by TheCityUK and PwC, through a 'test-

and-learn' approach, Kenya adapted legal and regulatory framework to emerging technological and market developments. This led to the phased enactment of a dedicated payments and digital lending regulatory framework and adoption of regulatory sandboxes. Most notably the country's efforts in the growth of fintech can be seen through its forward-thinking financial inclusion strategies and incentivising schemes.

The introduction and extraordinary success of M-PESA demonstrates the favourable environment the country has created. The mobile phone-based money transfer service helped to catalyse financial development and inclusion and is estimated to have lifted around 2% of Kenyans out of poverty.

Nowadays a steady stream of news flow across local and international media channels highlighting how the country has become a unique breeding ground for fintechs:

- MarketForce, a retail B2B and end-to-end distribution platform founded in Kenya, has raised US\$40mn in a Series A funding for its expansion across Africa and its merchant inventory financing. After growing beyond Kenya and Nigeria, MarketForce has now launched in Uganda, Tanzania and Rwanda and is looking at additional markets in East and West Africa.
- Fintech startup M-KOPA,

“ Kenya’s economy has shown considerable resilience to the enormous shock of the pandemic.”

KEITH HANSEN, WORLD BANK COUNTRY DIRECTOR FOR KENYA

headquartered in Nairobi, has raised US\$75mn in a growth equity round to expand its financial services platform for the underbanked into additional countries beyond Kenya, Uganda, Nigeria and Ghana. M-KOPA offers connected financing and digital financial services to underbanked consumers and, as of this year, has provided US\$600mn in financing to an estimated two million people.

- In its most recent fintech cohort, Catalyst Fund, a startup accelerator focused on inclusive tech solutions for underserved communities, has selected four companies from the African continent and, of these, three are Kenya-based – AquaRech, TopUp Mama and Tulix. The companies will receive support to understand emerging opportunities and deepen the reach and affordability of their solutions.
- As a fintech hotbed, Kenya now stands apart not just from the African continent but as a rising star internationally – rubbing shoulders with established mar-

kets such as in the US and Europe.

However, this is no time for complacency as while the country has performed admirably in this space, there is always room for growth and this is a market that develops rapidly. TheCityUK and PwC report stated, “Gaps and challenges still exist that impact the gains made so far. Therefore, a proactive approach towards fintech policy and regulation is needed.”

It continued to recommended steps which would build on the country's existing framework and enhance the operating environment for firms in the country. These included the establishment of a dedicated fintech office one-stop shop, the creation of a consolidated single fintech sandbox, strengthening collaborations and capacity building within regulatory agencies in the short-term; developing a dedicated fintech policy, lobbying regulatory amendments and supervisor technology, introducing tax incentives and cross-border collaboration in the medium-term; and implementing well-coordinated regulatory framework, capital policy interventions and mutual recognition and passporting in the long-term.

The opportunities for fintech growth are seemingly limitless and, with the potential to bring in substantial capital and raise people out of poverty, this presents a rare opportunity that must be nurtured rather than taken for granted. The progression of this remarkable market and the opportunities offered by regional trade initiatives present two pillars which could help ensure that Kenya's extraordinary resilience across the pandemic is maintained and advanced in the years to come. ■



MarketForce is a Nairobi-headquartered B2B platform for retail distribution of consumer goods and digital financial services in Africa.

Image Credit: MarketForce

# Treading a fine line

Strong competition, new technology advances and environmental pressures are heating up the African tyres market.

Competition has intensified in recent decades with the arrival of Chinese and other Asian tyre producers.



Image Credit: Adobe Stock

Africa's rugged terrain means plenty of challenges for manufacturers producing tyres for the agricultural and industrial machinery that underpin key sectors such as farming, mining and construction.

These and other industries are integral to the long-term development of Africa's economy.

Other key tyre markets include passenger cars, motorcycles and off-the-road (OTR) vehicles, as well as truck, bus and trailer tyres.

Tyre makers work closely with leading vehicle and equipment brands, such as Cat, JCB and Hitachi, among many others, to produce the best and most robust vehicles for the job.

Traditionally a market dominated by European manufacturers, competition has intensified in

recent decades with the arrival of Chinese and other Asian tyre producers, who are now well established.

All are facing up to the mounting challenges posed by climate concerns, with greater emphasis on sustainability and energy-efficient production.

New technology is also another area in which competitors seek to gain an edge in what remains a growing and evolving market.

Notable players serving this important niche include the likes of

India's BKT Tires, a leading manufacturer in the off-highway tyre market, specialising in the production of tyres for agricultural, industrial and OTR vehicles.

It said recently in a February 2022 investor presentation that it continued to see "strong demand" for its products across all geographies.

While Europe remains the group's largest single market right now, there is clearly huge scope for growth all across Africa.

And in terms of sector sales, the

agricultural market is dominant, another area ripe for longer term development in Africa.

## A competitive market

Other major players serving this important area include the likes of Michelin, whose presence in Africa dates back to the 1940s.

In Central Africa, it has the Société Moderne du Pneumatique Camerounais (SMPC) agency in Douala, Cameroon, and Michelin Tyre Services (MTS) in Lagos, Nigeria, established in 1958 and 1961 respectively.

In southern Africa, there is the Michelin Tyre Company South Africa agency in Johannesburg, founded in 1943 but trading officially from 1998.

The global brand also has representatives in other African

“Tyre technology continues to evolve, providing a multitude of additional benefits for end users.”



markets, as well as partners importing and distributing on its behalf, offering products and services across its entire portfolio, from bicycle tyres right up to large mining vehicle tyres.

Another well-known global brand is Firestone, which, like other companies, is prioritising initiatives in areas such as technology and sustainability to stay ahead of the pack.

Its vast rubber farming operations in Liberia are integral to the West African nation's economy.

Firestone's farm covers around 119,000 acres, and is said to be the single biggest contiguous rubber plantation on Earth.

As part of an ongoing commitment to the nation's rubber sector, the company recently helped to create new, purpose-built premises in the Todee District of lower Margibi County to be the



**Tyre makers work closely with leading vehicle and equipment brands.**

home of the Rubber Planters Association of Liberia (RPAL).

Since the establishment of the RPAL in 1966, its leadership has been operating out of rented facilities.

Firestone Liberia has a long history of supporting the country's

rubber sector, a crucial pillar of the Liberian economy, commented the company's general manager Don Darden.

"The success of the Liberian rubber industry is also our success," he said.

Tyre technology continues to

evolve as well, providing a multitude of additional benefits for end users, from greater durability to better operating performance.

Firestone's parent company, Bridgestone, recently announced that it was now offering IntelliTire, its real-time tyre monitoring solution, to construction and quarry customers for 49" or smaller applications.

It uses stem-mounted flow-through external sensors, in addition to internal sensors, to provide critical real-time data such as inflation pressure and temperature to continually monitor the health of each tyre throughout its lifecycle.

Transmitting sensor details through a cloud-based system, IntelliTire uses advanced and predictive algorithms to analyse data and issue alerts and customised reports to fleet operators. ■

Image Credit: Adobe Stock

## BKT PORTMAX RANGE: RELIABLE TYRES FOR PORT OPERATIONS

Resistance, maximum traction on dry and wet surfaces, and high durability over time are all essential characteristics for tires intended for port operations. Each machine operating in these environments also has very specific characteristics, and tires must be meticulously designed. Fortunately BKT offers a range of solutions with special features for each application and challenge.

### PORTMAX PM 90 for reach stackers

PORTMAX PM 90 is designed for reach stackers and equipped with multilayer steel belts which guarantee exceptional stability in the handling of high loads. The All Steel structure offers maximum strength to the casing and an adequate distribution of loads on the ground. The special anti-static compound ensures high heat resistance and a prolonged life cycle, thanks to the ability to withstand impacts, cuts and wear and tear.

PORTMAX PM 90 also features a reduced rolling resistance that helps significantly reduce fuel consumption.

### PORTMAX PM 93 PLUS for straddle carriers, bridge and RTG cranes

Particularly resistant and with a high load capacity, PORTMAX PM 93 PLUS is the perfect radial tire for intermodal transport for straddle carriers.

This solution guarantees the operator a more comfortable ride, without slippage, reducing fuel consumption. Thanks to its strength and robustness, it is able to operate even in the most difficult situations, handling the heaviest loads and maintaining good stability.

### PORTMAX PT 93 for terminal tractors

PORTMAX PT 93 has been developed for terminal tractors and is perfect for operations in ports and interports. The tread, designed with a special



**PORTMAX PM 90 is equipped with multilayer steel belts.**

Image Credit: BKT

anti-static compound, offers particular resistance to wear and tear even in the most demanding situations, minimising the frequency of replacement and the related vehicle downtime. Excellent stability, driving comfort and prolonged durability are the technical characteristics which make PORTMAX PT 93 an excellent solution for intermodal transport.

For more information, visit: <https://www.bkt-tires.com/>

# Built for Africa, in Africa

Mike Whitfield, chairman of Nissan Africa South and managing director Nissan Egypt at Nissan Motor Corporation, discusses the company's African development after opening an assembly plant in Ghana.

**African Review: Could you provide some details on the development of the new assembly plant?**

**Mike Whitfield:** Nissan entered into a partnership with one of two long time partners Japan Motors, one of its two designated national sales companies in the country, to assemble the Nissan Navara.

The process began with the signing of a memorandum of understanding (MoU) with the Government of Ghana in 2018. In 2020 it was announced that Japan Motors would become Nissan's official assembler for the all-new Navara in West Africa, after which building and preparation of the manufacturing assembly facility began.

Over a period of 18 months, Japan Motors invested US\$9mn in building a state-of-the-art assembly plant in Tema outside Accra. Today it is the most advanced automotive assembly plant in West Africa – a 5,000 sq m factory on a 22,407 sq m site, complete with two assembly lines and a testing line as well as a 3,100 sq m outdoor test track and unique water test bay. The plant's total potential production capacity per shift is 11,595 vehicles, but initially the target will be to assemble 1,800 per shift.

The entire process of commissioning has been overseen by Nissan Africa, with Japan Motors sending an initial group of 12 engineers to Nissan South Africa in Pretoria for an intensive seven-week course on Nissan's global production standards, followed by continuous training in Ghana overseen by teams of different Nissan engineers.

**AR: How will the delivery of this plant affect the local region?**

**MW:** The benefit of the plant to Ghana is incalculable, because it is key to the reindustrialisation and diversification of the country's economy. If we look at South Africa as an example, the automotive manufacturing industry today employs 470,000 people and three times more in the value chain. It contributed 7.1% to the GDP in 2019 and earned US\$14.3bn through exports. But that was done over 60 years.

Here, Japan Motors began by employing 12 people. That became 37 by the time it commissioned the plant (30 of them are



Mike Whitfield with the President of Ghana and other executives at the opening ceremony of the new plant.

university graduates). If the plant reaches full capacity, Japan Motors believes it could more than triple the number of brand new, highly technical, jobs if the plant is to reach full capacity. As the market develops, it would be wonderful if Japan Motors (and other OEMs) could develop beyond assembling to actual manufacturing.

The bigger picture involves using the African Continental Free Trade Agreement (AfCFTA) to begin producing vehicles across Africa in what the World Bank believes could increase the combined GDP of the continent by US\$450bn by 2035 if it is effectively implemented, lifting 100 million people out of poverty. The automotive plan for Africa involves creating regional manufacturing hubs to begin trading regionally before expanding, and the investment in this plant looks to help Ghana tap into that potential.

**AR: What prompted Nissan's African expansion strategy?**

**MW:** Nissan's expansion into Africa is underpinned by Nissan NEXT strategy which identified Africa as the next automotive frontier due to its low level of automotive ownership.

The key to expanding into Africa successfully and sustainably is premised on creating a coalition of the willing between public and private institutions to enact the necessary policy framework to level the playing field and encourage OEMs to invest.

A critical part of this is drastically reducing the importation of grey (second hand) vehicles which

are neither meant for Africa nor supported in Africa. Grey imports constitute the overwhelming majority of the retail motoring market, but often these vehicles are neither safe nor environmentally compliant.

The speed with which this plant was developed is testament to governments' determination to create a viable and sustainable automotive industry. We are in constant communications both as an OEM and through our involvement with the African Association of Automotive Manufacturers with governments across Africa who are keen to find out how they can be part of this process and indeed benefit from the AfCFTA.

**AR: Have you started to see the benefits to the company and the continent already?**

**MW:** Yes. The response to the Nissan Navara as we have steadily introduced it to Africa has been phenomenal, with demand outstripping supply. We expected the vehicle would be popular, because we had to make a worthy successor to the NP300 Hardbody which had become iconic throughout the continent.

The all-new Navara is the toughest vehicle ever designed by our engineers, specifically with Africa in mind, both in terms of road severity and fuel availability, but it is also loaded with the kind of Nissan Intelligent Mobility and the luxury touches you would expect too.

It's built for Africa, in Africa, by Africans to the toughest global standards. Now it's being assembled in Ghana by Ghanaians to those same non-negotiable Nissan standards. ■

Image Credit: Nissan



IVECO T-WAY

IVECO S-WAY

# DRIVE THE NEW WAY



## NEW IVECO T-WAY: HIGH PRODUCTIVITY AND SAFETY ON OFF-ROAD TERRAINS

With a complete line-up of AWD and PWD versions and the the 16-speed HI-TRONIX automated gearbox, the IVECO T-WAY features a host of functionalities such as Rocking Mode, Off-road Mode, Creeping Mode and 4 reverse gears to tackle with ease the toughest off-road conditions. The new architecture of the EBS system, combined with disc brakes on all wheels, greatly improves the vehicle's performance and the driver's safety in the most demanding applications.

## NEW IVECO S-WAY: HIGH TECHNOLOGY AND EFFICIENCY FOR ON-ROAD MISSIONS

The new IVECO S-WAY, with a completely redesigned and reinforced cab, offers a wide choice of Euro III/V diesel engines, a delivering class-leading power from 360 HP to 560 HP Euro III / 570 HP Euro V and superior fuel-saving devices, such as anti-idling feature, Ecoswitch, Ecoroll and Smart Alternator. 12-speed HI-TRONIX automated transmission with the most advanced technology in its category, electronic clutch and best-in-class torque-to-weight ratio.

**IVECO**

# Digital evolution brings cyber perils

Cyber crime is keeping pace with a rapidly developing cyber landscape, highlighting the importance of cyber security now more than ever.

The modern digital world is one of constant change. But as the brightest minds continue to roll out advances with the capacity to improve business/industry/daily life, their rate is matched by cyber criminals who generate profit in exploiting these innovations.

In the Sophos 2022 Threat Report, it was noted that “more than any previous year, in 2021 it felt like almost every week we were confronted with a major cyber attack that threatened thousands of large enterprises or organisations... the infrastructure that underpins business on the internet seemed to be under constant threat.”

In Africa the threat is just as pertinent. According to Interpol’s African Cyber Threat Assessment Report, a rise in malicious apps on mobile devices exploiting increasing vulnerabilities is of great concern due to the increased use of mobile banking, and a staggering 90% of African businesses are operating without the necessary cyber security protocols in place. Without these, threat actors have the opportunity to exploit vulnerabilities which can lead to significant financial loss – research from Serianu, a Kenyan IT cyber security company, indicated that cyber crime reduced GDP within Africa by more than 10%.

## Threatening business

This incessant threat is easy to see in the high-profile cyber scares which have made headlines on the continent.

In July last year, Transnet, a South African rail, port and pipeline company, was the victim of a ransomware attack which forced the firm to declare force majeure at several key container terminals. Durban port, which handles



The cyber security threat is just as pertinent in Africa.

approximately 60% of South Africa’s trade, was reduced to just 10% capacity and widespread disruption to supply lines was felt in the attack’s wake.

Debt-In Consultants, a professional debt recovery solutions partner to many African financial services institutions, was subject to a ransomware attack which resulted in a significant breach of consumer and employee personal information. It was suspected that consumer and personal information of more than 1.4 million South Africans was accessed from the company’s servers in April, a fact that was only discovered when confidential data was found on hidden internet sites in September.

In March 2022, TransUnion South Africa received an extortion demand after a criminal third party obtained access to its server through misuse of an authorised client’s credentials. Media outlets reported that the hacker gained access to 54 million personal records (although TransUnion suggests this is closer to three million) and demanded US\$15mn in exchange for not publishing them.

## Protection at hand

While nefarious actors continue to seek and exploit weaknesses in digital networks across the continent, cyber security providers are working just as hard to close these gaps and ensure organisations have access to protective solutions that will keep them safe from exposures.

Identifying “a gap in the visibility on the API layer from the perspective of consumption and exposure of information through the API”, Evansson, a value-added distributor specialised in Cloud Native and cyber security across Middle East and Africa, has strengthened its partnership with Noname Security, a leader in API Security, to ensure the African and Middle East region is well-equipped to defend against API attacks. The two companies are now working with some of the largest banks in the financial industry and airline providers to make API security a reality for the region.

CYBER1 has expressed delight over the positive development of Cyber Security South Africa (CSSA) and Cyber Security Africa Distribution (CSAD), which the

company acquired a 50% stake in last year. The two companies have continued their organic growth expansion in 2022 and are well placed to deliver on the growing demand for security products and services on the continent.

CSSA, working primarily with government, energy, financial systems and retail clients, offers a comprehensive list of solutions to mitigate information security risk and fields a team of skilled cyber security consultants and security engineers. Meanwhile, CSAD collaborates with some of the continent’s largest telecommunications and financial services firms. With a presence in East, West, North and Central Africa, it focuses on the mitigation of information security using niche, complex and relevant security solutions.

## Securex West Africa

From the 10-12 May, Securex West Africa is returning for its tenth edition and will be held at the Landmark Centre in Lagos, Nigeria. A leading conference on security, fire and safety it will play host to an expected 3,000 attendees with more than 150 brands on display.

Organisers of the conference have noted that cyber attacks are an evolving danger to organisation, employees and consumers with security remaining an investment priority in every industry. Attendees of the conference will be able to access information for network security, endpoint security, cloud security, ID systems, communications equipment, among others, and will be able to interact with the healthy contingency of exhibitors within the cyber security sector including CDVI LTD, UnoTelos, Proelium Law LLP and more. ■

Image Credit: Adobe Stock



# Closing the gap between can and do

Whether a start-up or fully-fledged enterprise, MTN offers the full suite of tools to support businesses convert intention into action.

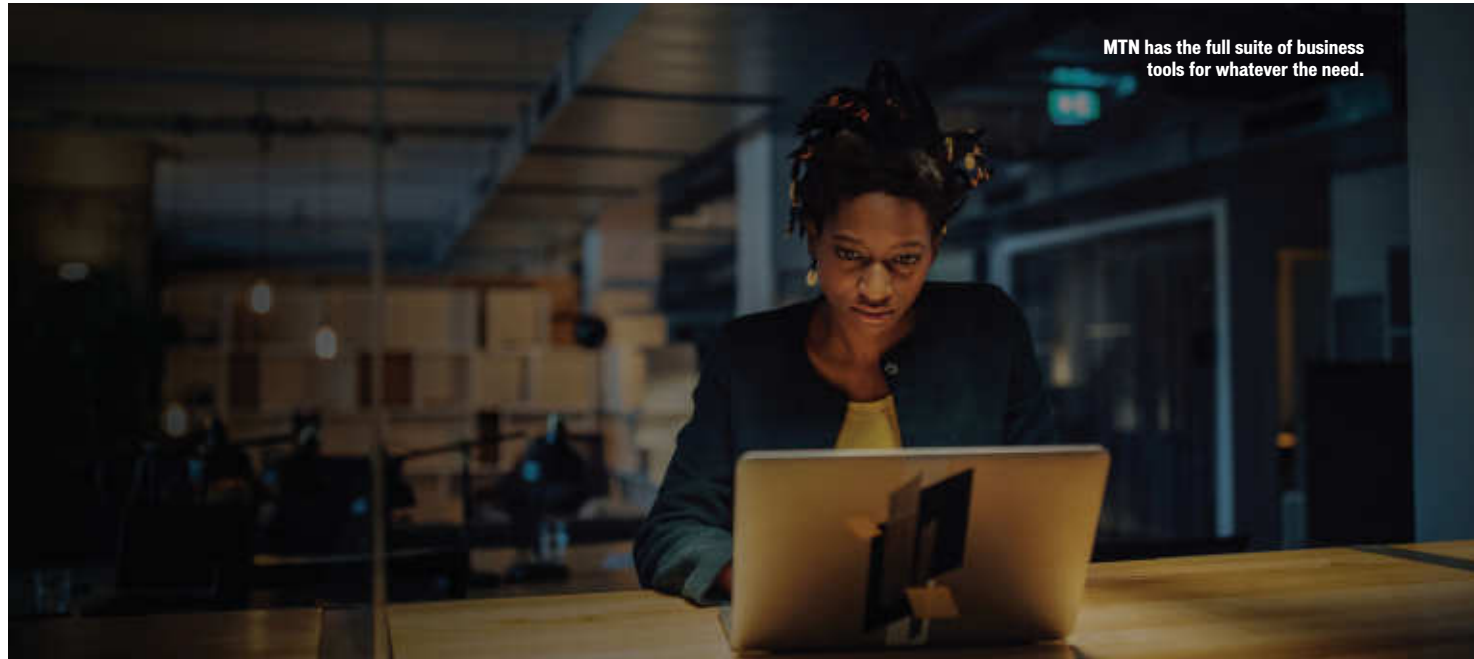


Image Credit: Getty Images

**W**hen it comes to running a business effectively, doing is a game changer. MTN puts the right tools in the hands of 'doers', closing the gap between can and do. After all, doers are everywhere in Africa. They are the people and businesses who dare to take the gap and convert intention into action. Whether a start-up or an enterprise, MTN has the full suite of business tools for whatever need.

MTN offers every possible solution, from network and products, to the platforms required to inspire the doing customers want to achieve today. But what are they actually doing that will help businesses move forward?

MTN has put in place specific business products that are tailored to ensure businesses thrive in this fast-moving digital world.

## MTN Business ICT Solutions

This gives a business an evolutionary leap that connects everyone and

everything. MTN Business ICT solutions simplify, automate, and speed up the administrative processes while enhancing networking, connectivity, and collaboration.

MTN's solutions can accelerate a business' progress in ways that will give it the agility to respond to customers, employees, and suppliers in real time. It can provide an organisation with efficient connectivity, integration, infrastructure, and network, using multiple solutions across five categories:

- Managed Networks
- Unified Communications
- Data hosting and Cloud services
- Security-as-a service
- IoT.

## MTN Managed Networks

MTN Managed Networks offer African doers fewer servers, and more service. With networks that are better managed, businesses

have access to smarter infrastructure, cost savings, as well as an always on, and always connected system.

## MTN Business Unified Communications

Providing a host of enterprise communication tools which will enhance collaboration, enable seamless connectivity, and increase efficiencies, these solutions equip an organisation with everything needed to work from wherever. In a world where work may sometimes be out of the office, it never has to be out of the loop.

## MTN Business Data Hosting and Cloud Services

Enhancing a business' digital experience by allowing service to continue, even when servers go down, all while securing data. Just because servers are down, does not mean data has to go down with them.

## MTN Business SaaS

MTN Software as a Service with no installation and management of software and hardware enables access to applications via the cloud while providing a secure and protected space for all data.

Organisations do not have to worry about software updates, but can trust MTN to take care of that on their behalf.

## MTN Business – Internet of Things

IoT enables an exchange of information between networked devices, allowing them to intelligently respond without human interference. This platform increases business efficiency, improves productivity and maximises human resources, while also reducing costs.

Everything MTN does is inspired by the doers. Its trusted business solutions will support more people to take this step and make progress happen every day. ■

## Steinmüller Africa wins four-year contract with Eskom

Steinmüller Africa, a specialist in the design and maintenance of power plants, has become the successful tenor of Eskom's four-year contract and will provide maintenance and repair services for the Arnot, Camden, Duvha, Kriel, Majuba, Hendrina, Kendal, and Kusile Power Stations.

The company was the successful bidder against several local and international companies.

"Steinmüller Africa is immensely pleased to have secured business with its largest customer. We have proven our expertise by fulfilling Eskom's stringent requirements," said Moso Bololo, director of Steinmüller Africa.

Steinmüller Africa aims to empower EMEs, QSEs, youth- and disabled-owned businesses through the support of their services, including accommodation, transport, and other consumables. It has noted that 30% of the contract value will support local businesses through sub-contracting.

The bulk of Steinmüller Africa's services will be carried out at the eight power station sites, with fabrication of some components at its 30,000 sq m Pretoria based facility. The company offers comprehensive expertise for boiler pressure parts, high temperature and pressure steam pipes, as well as in heat exchangers. Services include automated welding, pipe bending, pipe and tube manipulation, plant lifetime extension plans, and project management services.

Steinmüller Africa has been Eskom's service provider of choice for the maintenance and servicing of its power plants for almost 60 years. This contract will retain 600 jobs and create approximately 2,400 new jobs.



Image Credit: Steinmüller Africa

Steinmüller Africa has been Eskom's service provider of choice for the maintenance and servicing of its power plants for almost 60 years.

## NIGER READY FOR FIRST WIND FARM

Savannah Energy PLC, a British independent energy company focused around the delivery of projects in Africa, has signed an agreement with the Ministry of Petroleum, Energy and Renewable Energies of the Republic of Niger for the construction and operation of the country's first wind farm.

The project has a proposed installed power generation capacity of up to 250MW on an independent power producer (IPP) basis in the Tahoua Region of southern Niger.

Named Parc Eolien de la Tarka, the project is expected to be owned by a subsidiary of Savannah, Savannah Parc Eolien de la Tarka (SPET), and will consist of up to 60 wind turbines. The initial phase of the project will see SPET carry out a 24-month feasibility study which will include an assessment to confirm the wind conditions and an assessment as to how the generated power would be incorporated into the national and regional electricity grids.

The project is expected to take advantage of the development of the West African Power Pool (WAPP), a high voltage interconnection network allowing power exchanges between countries in the region.

Parc Eolien de la Tarka is expected to produce up to 600GWh of electricity per year and has the potential to reduce the cost of electricity for Nigeriens and avoid over 400,000 tonnes of CO<sub>2</sub> emissions annually.

The project is also intended to be capable of exporting power to neighbouring countries at competitive tariffs and would significantly diversify Niger's energy mix. It is expected to be sanctioned in 2023, with first power generation in 2025. The construction phase alone is expected to create over 500 jobs.

Andrew Knott, CEO of Savannah Energy, said, "Parc Eolien de la Tarka is a critical project for the development of Niger, which we expect to make a significant contribution to improving the lives of its people."

## SOLAR TYME SEEKS FUNDING FOR SOLAR EXPANSION IN SIERRA LEONE

Solar Tyme USA, a solar installation and development company, has announced plans to raise new investments worth US\$1.75mn for the construction of a 200KW solar microgrid power plant in Kumala and 50KW solar system power plant in Liro, Sierra Leone.

The two projects have been sanctioned by local and state government representatives, following the signing of a memorandum of understanding (MoU) with the Ministry of Energy. The U.S. solar provider will install and operate the two projects on an independent power producer and build-own-operate basis, delivering and selling electricity produced to the respective communities through an offtake agreement.

"Solar Tyme intends to be the leading provider of clean, affordable and reliable power to local communities, who have expressed both a willingness and a capacity to pay for connectivity," said Eric Jalloh, chief operating officer of Solar Tyme's Sierra Leone branch.

## ► BRIEFS

### Central Energy Fund eyes Virginia Gas Project

Following negotiations, a term sheet has been agreed between Renergen and the Central Energy Fund which, if binding agreements are executed, will see the latter

company invest approximately US\$68mn into Tetra4 Proprietary Limited and take a 10% stake in the company.

Tetra4, a subsidiary of Renergen, is the 100% owner of the Virginia Gas Project. Proceeds from the subscription will be used to progress development of Phase II of the project.



The project comprises exploration and production rights of 187,000 ha of gas fields in South Africa.

### Support for Temane energy projects



Representatives from the U.S. Government participated in a groundbreaking ceremony for the projects.

The United States Agency for International Development and the U.S. International Development Finance Corporation has provided critical support to the Central Termica de Temane power plant and the Temane Transmission Project in Mozambique.

Upon completion, the 450MW CTT plant will deliver much-needed electricity from the northern part of Inhambane Province to the more populous South via the 563 km TTP transmission line.



# Saving billions through renewable energy

Kenneth Engblom, vice president of Wärtsilä Energy, Europe and Africa, argues that Africa can adopt renewable energy on a massive scale.

**W**hen it comes to building the future of energy in Africa, the decisions facing the continent's leaders today are nothing less than of historical importance. More than anything else, energy systems are the very fabric of business and society. Countries across Africa want to make good on their objective of building huge amounts of new generation capacity to anticipate on vast increases in energy demand and set the continent on the path of growth and development it deserves.

Africa knows where it needs to go. The big question is how and, more specifically, what is the most cost-effective energy mix that can be built to deliver all the new electricity capacity that is needed? Wind, solar, gas turbines, coal, gas engines... numerous options are available, but there is only one sweet spot.

For the past decade and more, engineers and analysts at Wärtsilä have tapped into their deep bench of experience in the African energy sector to answer these very questions, country by country. We have mobilised state-of-the-science, technology-neutral energy modelling techniques, and took all local technical constraints, all technologies, and natural resources into account. Multiple energy mix scenarios have been developed and compared. We ran the models rigorously and the numbers have spoken. They reveal cost differences of mind-boggling magnitude between the various energy strategies possible.

## Billions of dollars at stake

When it comes to the choice of energy technologies,

keeping an open mind, free from preconceptions, is paramount. Technologies that can be right for Europe considering its existing infrastructure, population density, or natural resources, can be wrong for others. Each country, each region, must find its own optimal way to building its energy system. Many African countries have however one important point in common: maybe more than anywhere else, the models indicate that the best path to building the most cost-optimal energy system is to maximise the use of renewable energy.

One fact must be established once and for all. The cost of renewable energy equipment has decreased very rapidly in recent years, and when this equipment runs on Africa's massive solar and wind resources, what you have is a cost per KW/h produced that beats all other electricity technologies hands down. If you add to this the fact that most electricity grids on the continent are relatively underdeveloped, favouring renewable energy over traditional power generation like coal or gas turbine power plants becomes a no-brainer.

Although relatively ambitious renewable energy targets have been set by governments across the continent, it does not always go far enough. Maximising the amount of renewable energy that can be built in the system is by far the cheapest strategy available, while at the same time ensuring a stable, reliable network.

In Africa, renewables must become the new baseload. And yes, renewables are intermittent. But combining them to flexible power generation capacities will guarantee the stability of the grid and save billions of dollars along the way.



Image Credit: Wärtsilä Energy

Kenneth Engblom is the vice president of Wärtsilä Energy, Europe and Africa.

## A manageable issue

It would be misguided to consider the intermittency of renewables as a showstopper. It is not, provided they are paired up with highly flexible forms of electricity generation like gas engine power plants.

To maintain a balanced system, flexible backup and peak power must be available to ramp up production at the same rate that wind or solar production fluctuates, but also to match the fluctuating energy demand within the day. The systems must be able to respond to huge daily variations in a matter of seconds or minutes.

Gas engine power plants are the only source of backup generation that is designed to do just that. They will keep the system safe, while allowing the grid to accommodate huge amounts of cheap renewable energy.

For Senegal alone, to take only one example, the studies reveal a US\$480mn difference in total system cost over the next 15 years between a system incorporating lots of renewables combined to flexible gas engines, and a system built around inflexible thermal generation and minimal renewable capacity.

## A winning energy strategy

Renewables and flexible gas are the two pillars of a winning energy strategy for Africa. Similar studies conducted on other African countries indicate that this energy mix strategy will provide efficiencies worth billions of dollars continent-wide over the next few decades.

Highly ambitious renewable energy objectives in Africa are not only achievable, but they are also the soundest and cheapest strategy for the successful electrification of the continent. Making the smart strategy decisions will lead to more resilient electricity systems and offer vastly superior whole-system efficiencies. ■



Image Credit: Adobe Stock

# Stability for South Africa

Power storage may not be a new phenomenon but for the South African national electricity and energy corporation, Eskom, the Battery Energy Storage System (BESS) Project is a novel way of maintaining a steady flow of electricity to consumers in the country.



Image Credit: Adobe Stock

**F**or a country that has for the past decade experienced power outages, the BESS Project is the ideal programme for Eskom to address the plight of people subjected to frequent load shedding.

An official of the National Energy Regulator of South Africa (NERSA) said the battery energy storage project will help to mitigate against future power failures which undermine peoples ability to work, cook and light their premises.

The BESS Project is expected to cover eight sites in the provinces of KwaZulu Natal, Easter Cape, Western Cape and Northern Cape where the power storage batteries with a total load capacity of 360MW, the equivalent of 1,440MW/hour with four hours of uninterrupted supply, will be installed.

This has been made possible with funding from the World Bank, Africa Development Bank and the New Development Bank. In one of the most recent developments, Eskom has delivered a letter of acceptance to South Korean Hyosung Heavy Industries to install and maintain a 48MW BESS at a substation near Durban. According to media reports, the contract is worth approximately US\$80mn and will be delivered as part of a three phase project.

Eskom is testing different technologies from

both solid state and free flow batteries from companies such as BYD and General Electric. The general knowledge gained from testing of the two streams of batteries will be later harnessed into monitoring, evaluating and implementing the BESS Project.

## A step towards sustainably

BESS is the only way to go for Eskom's efforts to increase its power output with efficiency and reliability but it is also a way for the corporation to level the playing field between its renewable and traditional power sectors in terms of both cost and quality.

WiSolar, which specialises in solar energy, hopes to raise US\$2.9mn this year and is positioning itself within the BESS Project, according to its founder and chief executive officer, Tonye Irinus.

He said that at the moment his firm is involved in the design, installation and maintenance of solar power plants and systems. It is but one example of the many other companies expected to work with Eskom on the programme.

Recently the Eskom chief executive officer, Andre de Ruyter, was at the World Bank to explore options for the company's programme to transition from coal-fired power plants to cleaner

sources of energy. Company spokesperson Sikonathi Mantshantsha explained to *African Review* that this time around Ruyter's visit to the World Bank did not bring out any concrete agreements concerning the future funding of the BESS Project and other related matters. However, further talks are expected in the not too distant future.

It is important to remember that in November last year during the United Nations COP26 held in Glasgow, Scotland the USA, United Kingdom, Germany, France and European Union pledged US\$85mn to South Africa for the prototype battery energy storage programme that will be replicated to other coal-dependent countries for them to decarbonise.

With Eskom recently appealing to its large industrial customers to reduce their load consumption by 20% in order to ease up pressure on the national electricity grid, the BESS Project could prove critical to the South African energy sector. If successful, this may well be replicated into the other countries in the southern Africa region and beyond, but this will very much depend on how successful it will be in South Africa itself first. ■

*Katutu Sayila, southern Africa journalist/analyst.*



## Moteurs Baudouin and PSI announce new partnership

Moteurs Baudouin, the French manufacturer of marine and power generation diesel and gas engines, has signed an international distribution and service agreement with Power Solutions International (PSI).

The agreement will see Baudouin expanding its product range, offering the PSI rich burn gas engine range to the European, Middle Eastern and African markets. The partnership is a perfect complement to Baudouin's PowerKit diesel and lean burn gas product lines, as it means the company can deliver across the full spectrum of power solutions and provides even more choice for Baudouin's clients around the globe.

At the Middle East Energy show held from 7-9 March 2022 in Dubai, UAE, Baudouin showcased the groundbreaking 8.8L 200 kW PSI engine. For gas standby power generation applications, it has the highest output ever recorded from such displacement.

Gas power provides an opportunity for a smooth transition towards zero emissions, until large scale fully renewable energies are available. More new products are already in development, including new gas products from LPG and LNG to biogas under the Baudouin and PSI brands.



Image Credit: Moteurs Baudouin

The partnership was announced at the Middle East Energy show in Dubai.

### “EBLOX” DEMO PLANT BUILT

Mitsubishi Heavy Industries Engine & Turbocharger, Ltd. (MHIET) and Calik Enerji Sanayi ve Ticaret A.S. have constructed a demo plant of their stand-alone Triple Hybrid Power Generation System “EBLOX” in the Republic of Turkey. The plant was built in Malatya, in the factory of Calik Denim, a group company of Calik Holding.

EBLOX optimises the use of renewable power sources by combining them with a reciprocating engine generator and a battery. This allows for a stable power supply that meets the local electrical demand. The companies plan to use the demonstration to collect data for further improvement and to display EBLOX's ability to potential customers, partners, and government authorities who are involved in constructing microgrids around Africa and neighbouring countries of Turkey.

Renewable energy can be highly unstable due to changes in the environment and other factors, making it unreliable to power microgrids or minigrids. MHIET developed EBLOX as a solution to this problem, and Calik Enerji showed strong interest in the technology, offered assistance to develop EBLOX and to spread tailored solutions to Turkey, neighbouring countries and Africa.

The plant demonstrates how EBLOX can supply power to isolated microgrids, reduce fuel costs, and contribute to decarbonisation using renewable energy, and consists of a 120kW solar power system, 150kW/167kWh storage battery, two 34kW gensets, a 300kW dummy load device, and the control system “COORDY”.

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# Full steam ahead in Egypt

The ongoing construction of the high speed rail line under construction in Egypt is being supported by a fleet of equipment supplied by Mantrac.

The Egyptian high-speed rail line is a comprehensive rail system which is being undertaken by Siemens Mobility, Orascom Construction S.A.E. and The Arab Contractors. The contract for the project was awarded to the consortium by Egypt's National Authority for Tunnels (NAT) in early 2021 and is worth approximately US\$4.5bn.

It will feature the first ever high-speed, electrified main and freight rail line in the country and is expected to transform transportation in the country. A total of 1,800 km of rail network is planned (starting with an initial 660 km phase) which will connect the port cities of Ain Sokhna on the Red Sea to Marsa Matrouh and Alexandria on the Mediterranean. It is intended to strengthen infrastructure in the areas it passes through as well as link in the New Administrative Capital to the cities along the network for the transport of both goods and passengers.

## Mantrac at the heart

The first phase of the project is expected to be completed within 30 months starting from January 2021 and, in the progress made so far, Mantrac has played a critical role in the supply of reliable equipment and support services.



The rail line is expected to transform transportation in Egypt.

Image Credit: Siemens Mobility

Samir Helmy Abozied, civil engineer of Negeda Contracting, said, "Negeda Contracting is working to establish the foundational layers for the line which are 3,500 metres long. We have 2,500 metres of low-level land to fill which we do by adding soil. For the rest we have cutting work to do to reach the foundation level designed for the train line."

"Mantrac is the main partner we deal with regarding machines we use. Cat machines are well known

for being the best and the most powerful on the market. Therefore, almost 100% of machines used here are Caterpillar. They are the most powerful machines we have ever worked with. Mantrac is also on hand with their after sales services. All Mantrac staff are very committed to helping us do the work."

Yehia Nabil Mansour, site engineer for Negeda Contracting, added, "No company cannot depend on Caterpillar machines. They are a basic tool we use in any project whether it is a high-speed train project, a marine construction project or road constructions. Mantrac always guarantees high productivity whether in cutting or filling and with any machine including excavators, soil compactors, loaders and more."

Khaled Kasaly, owner of Kasaly for Contracting who is working on three points across the line, said that his company relies on Cat

machines for around 90% of the work they are doing.

He remarked, "Mantrac is a big supporter of the project. Its machines are very tough and durable and help us to achieve our work 24 hours a day. They work in all kinds of weather, whether the temperature is high or low."

"As for the after-sales services, Mantrac provides all spare parts for any working machine we have, whether loader, bulldozer, grader, excavator, or soil compactor. All spare parts are available and on hand and we don't waste any time as experienced maintenance engineers are available whenever we need. This helps ensure we do not waste time in the event of malfunctions and have higher productivity." ■

Learn more about Mantrac Egypt solutions for construction at: <https://www.mantracgroup.com/en-eg/industry-solutions/construction/>



Caterpillar equipment is being extensively used for the project.

Image Credit: Mantrac



## Bobcat updates dealer network

Bobcat has announced a number of new developments in the company's authorised dealer network in Africa.

As part of changes in countries around South Africa, Bobcat has appointed Harare-based Machinery Exchange as the new Bobcat authorised dealer for Zimbabwe. Bobcat is also aiming to make further dealer announcements in the near future for Botswana, Namibia and Zambia.

Khartoum-based Albadri Power Co. Ltd has been announced as the company's new authorised dealer for Sudan in response to the opening up of the market in the country.

Nicolas Dumont, district sales manager – Africa for Doosan Bobcat EMEA, commented, "We have changed the way we operate in Zimbabwe, Botswana, Namibia and Zambia, and Machinery Exchange is the first announcement we are making in this respect, with more to follow. With Sudan being removed from sanctions lists, this opened the door to a new market for Bobcat, which is now the responsibility of Albadri Power Co. Ltd. Both appointments provide us with strong dealers in place to meet the local demand in these countries."

Libreville-based Sodim TP, a major player in construction equipment, trucks and the automotive industry, was appointed as the new authorised dealer for Bobcat in Gabon at the end of 2020.

Dumont added, "We are delighted with the impact Sodim TP has made as the new authorised dealer in Gabon. After only one year in the role, Sodim TP has succeeded in repositioning Bobcat as the market leader in compact equipment in Gabon, with a market share of over 20% in 2021."

Bobcat has also reactivated a number of dealers including Rock Plant, with offices in Nairobi, Dar Es Salaam and Kampala serving Kenya, Tanzania and Uganda, respectively; Douala-based Speed Appro for Cameroon; Chanic, with branches in Kinshasa and Lubumbashi, for the Democratic Republic of the Congo; and Tunis-based CME for Tunisia.

Dumont remarked, "With all these changes, the Bobcat network for Africa now comprises 19 dealers, officially covering 22 countries. Algeria remains a top priority and we are actively working behind the scenes and making ourselves ready to re-enter this market with a leading Algerian company.

"As mentioned above, we will be making further announcements in southern Africa, where we are exploring our options with high potential, especially in the Backhoe Loader segment. West Africa is another area full of potential with the mining sector on one hand, and many infrastructure projects in the area on the other. We are in advanced talks with companies offering a multi-country presence in this part of Africa."



Machinery Exchange is the new Bobcat authorised dealer for Zimbabwe.

## AFRISAM SUPPORTS BEITBRIDGE BORDER POST CONSTRUCTION

At the Beitbridge border between South Africa and Zimbabwe, leading contractor Raubex is continuing the construction of three new immigration facilities and is utilising AfriSam cement for the task.

When completed, the facility will provide three new immigration facilities, each custom designed to speed up the flow of traffic, according to Raubex construction manager Herkie Sandenbergh.

The first area, dedicated to freight trucks, has already been handed over, and construction of the second phase, which focuses on bus transport, is expected to be completed in May. The third phase will be the facility for light traffic, and will be handed over in November this year. There is considerable related infrastructure around the town of Beitbridge that is also included in the scope of work.

AfriSam is a key partner in the project and has supplied around 7,000 tonnes of its High Strength R42.5 Cement from its Roodepoort plant near Johannesburg. The company will have delivered around 10,000 tonnes of bulk cement by the time work is completed, all of which will be delivered in 34 tonne tankers.



There are around 1,160 people on site with more than 570 labourers from the local area.

## VOLVO CE SUPPORTS CUSTOMERS TO REACH GREEN GOALS

Volvo CE has developed a step-by-step approach with the CO<sub>2</sub> Reduction Program to help customers realise their goals towards carbon neutrality. The tailored solutions offer a practical way to make significant improvements to how machines are used on site today and in the future.

Niklas Nilroth, head of sustainability and public affairs at Volvo CE, said, "Climate change is one of the biggest challenges of our time, and one of the most important actions we can take is to help reduce our customers' emissions. It is vital to get everyone involved and make it easy to contribute as part of one's daily work. Every step on the path to net zero counts."

The CO<sub>2</sub> Reduction Program is designed to be easily integrated into customers' plans and is based on four steps:

- **Insights:** Volvo CE starts by understanding where the customer currently is in terms of carbon emissions and establishes a baseline to compare against. Using telematics data from connected machines, the company determines the footprint for all machines on site and maps it to allow the customer to visualise the impact of carbon reduction changes over time.
- **Analyse:** Experts at Volvo CE analyse the machine data and conduct a site study to understand how the material flow, fleet composition, and operator behaviour affects emissions produced on site. Volvo CE then shows where improvements can be made and what actions need to be taken to reduce emissions. Using Volvo Site Stimulation, the customer can be shown the impact that these improvements will have to help motivate change.
- **Improve:** After identifying the specific actions required, Volvo CE helps customers to implement them. This can vary depending on the customers, but Volvo CE will provide support with key services such as Eco Operator training and other efficiency services.
- **Sustain:** With the customer starting to see rewards – both economically and environmentally – the next step is for Volvo CE to support in sustaining these efforts by continuously monitoring CO<sub>2</sub> levels over time. This will ensure old habits are not returned to. Volvo CE will also look for new ways to reduce emissions even further in the future.

# Construction industry looks to more hopeful 2022

Despite supply chain issues, construction firms are looking ahead with greater confidence as pandemic-era restrictions loosen and development needs come back into sharp focus.

There's good reason to be optimistic about Africa's construction prospects, as the fog of uncertainty clears in the aftermath of the pandemic and all the disruptions imposed on businesses by governments and health agencies worldwide.

With greater certainty comes greater confidence and the release of funding for more projects.

In this case, that means a jump in both public and private investment spending, across a whole range of areas from transport, energy and infrastructure, through to commercial real estate.

With increased government-led initiatives and greater private sector spending on the cards in 2022, things generally look more positive according to South Africa-based construction and engineering group, RIB CCS.

That's one of the key insights from a 2022 Construction Industry Outlook survey conducted by the firm in Africa and the Middle East in the final quarter of 2021.

Andrew Skudder, RIB CCS chief executive, said this is good news for an industry that has experienced extreme stress over the past few years. He said, "In South Africa alone, the total value of plans passed for building construction fell by 37% year-on-year in the first eleven months of 2020, preceded by annual declines of 1.1% and 11.8% and in 2018 and 2019 respectively."

The picture has been similarly bleak for the industry in the Middle East and North Africa region, he noted, areas that had been in decline since the fall in oil prices in 2014, and then exacerbated by the pandemic in 2020.

The firm's survey revealed that the vast majority of companies are much more bullish about prospects



Major infrastructure projects focusing on upgrading roads, rail, air and sea communications are underway across the continent.

moving into 2022 than in the past couple of years – most said that Covid-19 had had a significant impact on business. It also means that construction firms and their suppliers are now able to focus on other things, such as enhancing productivity and efficiency.

The main strategic initiatives that companies are focusing on in 2022, according to survey respondents, include digital transformation, implementation of 'lean' construction principles (essentially trimming waste, maximising efficiencies and delivering more value to clients), as well as extending geographic reach.

## South Africa market

In South Africa itself, the construction industry is expected to rebound this year and expand by 9.1% in real terms, according to a report by ResearchandMarkets.com.

Going forward, it then expects the industry to stabilise at an annual

average growth of 3.1% up to 2025, although output will still not return to pre-pandemic levels during that period. It states that the industry's growth will be strongly supported by government-funded investments in transport, energy, residential, telecommunications and industrial projects.

Over the longer term, South Africa's construction industry will be supported by investments related to the 10-year ZAR2.2 trillion (US\$133bn) infrastructure plan unveiled by the government last year. This plan comprises 276 projects in various sectors, including transport, energy, industrial and housing — of the total spend, around half will be spent over the next four years alone.

One key priority will be in overhauling the nation's failing energy system, with renewables replacing traditional coal-based power over time.

South Africa aims to produce 26%

of its total electricity from renewable energy sources by 2030.

To do this, state-owned power utility Eskom plans to invest ZAR106 billion (US\$6.6bn) on the construction of wind farms and solar plants through to 2030.

Plans to increase the number of Special Economic Zones (SEZ) across the country will also help to underpin the construction industry's growth, and boost its manufacturing and industrial sectors.

## Threats and opportunities

At the same time, there are immense challenges facing Africa, and other regions, with supply chain disruption and sourcing issues likely to affect project delivery and margins the world over.

That's a point highlighted by Deloitte in its 2022 engineering and construction industry outlook.

Problems include the lack of materials and the rising cost of construction inputs, as well as

Image Credit: Adobe Stock



labour shortages, among other issues. It is expected to trigger a wave of supply chain reshuffling as firms look for ways to get things done on the ground.

Indeed, in a separate Deloitte survey, almost a third of firms in the industry indicated 'strategic sourcing' as an area they are likely to invest in during 2022.

Deloitte's report talks about 'connected construction', which will likely be a catch-all for major digital investments during 2022 to connect, integrate, and automate construction operations and bring the entire value chain onto a secure, intelligent infrastructure.

These are all issues that could, perhaps, pose a greater threat to Africa more than other regions.

New figures released by GlobalData show that sub-Saharan Africa is the region most struggling to meet its project deadlines at the current time.

North Africa and the Middle East are also reported to be struggling to keep on track, according to GlobalData's Construction Project Momentum Index, which is based on analysis of thousands of individual construction projects around the world.

By contrast, projects in North East

Asia have remained more or less on track despite all the uncertainties of the past couple of years.

### Infrastructure growth

There is clear long-term potential, however, given Africa's pressing developmental needs and anticipated population surge over the coming decades.

Major infrastructure projects focusing on upgrading roads, rail, air and sea communications, as well as other areas, are underway across the continent.

In Nigeria, flagship projects include the development of the largest deep sea port in West Africa, which is being built in Lagos via a partnership between Tolaram Group, the Lagos State government, and the National Investment Promotion Commission (NIPC).

The US\$1.5bn project will be capable of berthing large vessels that are currently unable to dock in West African waters, thereby increasing the capacity and efficiency of the ports sector.

As part of its efforts to develop infrastructure, the Nigerian government has also created a US\$2.7bn Infrastructural Corporation of Nigeria Limited fund backed by the Central Bank of

Nigeria, Africa Finance Corporation, and the Nigerian Sovereign Investment Authority.

The energy sector likewise continues to provide a steady stream of work for contractors as well, such as the expansion of the mighty Nigerian Liquefied Natural Gas (NLNG) terminal on Bonny Island. It is expected to increase NLNG's current six-train plant capacity by 35% from about 22mn tonnes per annum (mtpa) to 30 mtpa.

All of these initiatives feed a ready market for construction equipment such as dump trucks, excavators, dredgers, and graders, either purchased new or used from manufacturers or dealers.

### Building materials

Building materials are also largely imported as Nigeria's manufacturing sector for building products remains limited, which presents opportunities for local suppliers.

Where resources are available locally, demand is strong, such as in the cement business, often viewed as a barometer for the construction industry overall.

Performance at Dangote Cement, for instance, suggests robust demand from users, with the company reporting sales and

earnings growth way up in 2021 compared to the year before.

Group volumes for the year were up 13%, with Dangote experiencing its strongest year across all line items, according to Michel Puchercos, its chief executive.

That reflects the group's ambitions across the wider Africa region, not just in Nigeria itself.

"Over the last two years, we have finalised the deployment of 6mn tonnes of new capacity in Nigeria," said Puchercos. "Looking ahead, we are now focused on a less capital-intensive expansion cycle, which includes building grinding plants across West and Central Africa to leverage and strengthen Dangote Cement's regional integration."

He said the company is on track to deploy new grinding capacity in Cote d'Ivoire and Ghana, while plans are also underway to improve waste management and cut carbon dioxide emissions.

Dangote Cement is Africa's leading cement producer with nearly 51.6Mta capacity across Africa, with operations spanning Cameroon, Congo, Ghana, Ethiopia, Senegal, Sierra Leone, South Africa, Tanzania and Zambia, as well as its home Nigerian market. ■

## NEW LAGOS DIPLOMATIC MISSION WORK BEGINS

Work has commenced on the new US\$537mn US Consulate General project in Lagos, Nigeria.

Lagos State Governor Babajide Sanwo-Olu joined US Ambassador Mary Beth Leonard for the groundbreaking ceremony on 31 March 2022 at the 12.2-acre site in the rapidly developing Eko Atlantic City on Victoria Island.

The development is being overseen by the US State Department's Bureau of Overseas Buildings Operations (OBO), which has over 50 active projects either in the design phase or under construction worldwide, though it is expected to generate substantial local work opportunities.

Over the course of construction, an estimated US\$95mn will be invested in the Nigerian economy through local subcontractors, and suppliers.

Overall, the project will employ approximately 2,500 Nigerian citizens, including engineers, architects, artisans, construction workers, and administrative staff.

Ennead Architects LLP of New York is the design architect, Pernix Federal, LLC of Lombard, Illinois, is the design/build contractor, and EYP, Inc. of Albany, New York, is the architect of record.

According to the Ennead Architects, the building prioritises "resilient



An estimated US\$95mn will be invested in the local economy through local subcontractors and suppliers.

Image Credit: U.S. Department of State

and sustainable design strategies" for the hot, humid environment — it reduces energy use and uses on-site generation to manage high energy demand.

The building façade is self-shading and the exterior diagrid is designed to reduce solar heat gain while maintaining access to daylight and views on the interior.

The project is expected to take approximately five years, with completion expected in 2027.

# All eyes on Lekki Free Zone

The countdown is on to the launch of Nigeria’s flagship Dangote refinery, as contractors complete the finishing touches to the giant steel structure in Lagos State. But first comes the massive fertiliser complex, commissioned this March by President Buhari.

The countdown has begun to the launch of Nigeria’s flagship refinery later this year. As our new images reveal in this article, the Dangote refinery project is now nearing completion.

According to the company’s group president, Aliko Dangote, start up is still on track for the third quarter of 2022. “The refinery will commence operation by the third quarter of 2022,” he said in an email statement to ATR at the end of January.

“On the mechanical completion, we are almost finished but we have started hydro testing, almost 70% gone. Hopefully, before the end of Q3, operation will commence.”

Several months on and work is now believed to be even more advanced, as the project edges towards completion. It’s an enormous undertaking for the company and a testament to Nigeria’s energy industry and the capabilities of the vast contracting team that have gathered from all around the world to build it.

Although somewhat behind schedule – the refinery was originally anticipated in 2019 – it represents a landmark achievement for all involved.



The refinery is expected to commence operations by Q3 2022.

Image Credit: Dangote

The 650,000 barrels per day (bpd) refining facility is expected to transform domestic fuels production and hugely benefit the local economy. The project site covers a vast land mass of around 2,635 hectares within the Lekki Free Zone near Lagos, Africa’s biggest city.

As well as being the continent’s

biggest refinery when it launches, and the world’s largest single-train facility, it is hoped that the project will end the days of fuel imports and long queues at gas stations that are so familiar to all Nigerians. While the country remains Africa’s top crude oil producer, it has long been dependent on imported fuels to

meet domestic demand because of legacy issues with existing refineries.

The new images of the refinery show an impressive feat of construction that has taken years to design and build. As well as overhauling Nigeria’s fuel production, the site has its own 400 MW power plant that is able to meet the total electricity requirements of Ibadan DisCo, the local distributor, underling the size of the project.

## Fertiliser plant

Excitement is also building after the launch of another flagship project, the three million tonne fertiliser plant, also at Lekki Free Zone, within the periphery of the refinery.

On 22 March, Dangote unveiled the state-of-the-art fertiliser plant, which cost of US\$2.5bn, and will target both African and foreign markets. The plant, commissioned by President Muhammadu Buhari



It will be the world’s largest single-train facility.

Image Credit: Dangote



and located within the Lekki complex, is designed to produce three million tonnes of urea per year and supply all the major markets of sub-Saharan Africa.

It comes at a crucial time as well, as the war in Ukraine has driven up prices for natural gas, a key ingredient for making urea. Dangote said exports will also go to Brazil, which relies heavily on Russia for its fertiliser imports, as well as the United States, India and Mexico – providing a further boost for Nigeria’s foreign exchange earnings.

There is also hope that the plant will help alleviate chronically low crop yields, which are hindered partly due to insufficient access to fertiliser. The launch of the fertiliser plant is a major event for local agriculture and a step on the road to bigger things nearby, as the refinery – now estimated to cost US\$19bn – approaches its own start date.

“This fertiliser plant is expected to further advance this administration’s drive towards achieving self-sufficiency in food production in our beloved country, Nigeria,” said President Buhari at the commissioning of the project.

Group executive director in charge of capital projects and portfolio development, Dangote Industries Limited, Devakumar Edwin, whose team oversaw the construction of the plant, explained the scale of the fertiliser plant.

“The complex consists of 2 x 2,200 MTPD Ammonia Plants based on



President Muhammadu Buhari commissioned the fertiliser plant.

Halder Topsoe technology; 2 x 4,000 MTPD Melt Urea Plants based on Snamprogetti technology; 2 x 4,000 MTPD Urea Granulation Plants based on Uhde technology; a captive power plant comprising of three steam turbine generators of 40 MW capacity each totalling 120 MW, and three auxiliary boilers for 40 ATA steam generation of 200 TE capacity each,” he said.

### New contracts

There is still work to do on the refinery site, however, and new contracts continue to be awarded to international firms in highly specific niches.

Kewaunee Scientific Corporation, a leader in the design, manufacture, and installation of laboratory,

healthcare, and technical furniture products, reported in March that its Indian subsidiary had landed a US\$17.3mn contract to supply lab furniture and equipment to the refinery. This underscores the increasing sophistication of the African market generally.

“The African market has always been a market that we expected to begin generating laboratory opportunities as the continent continues to develop and invest in infrastructure requiring these types of spaces,” said Sathya Murthy, managing director and vice president, international operations at Kewaunee Scientific.

“The Kewaunee International team possesses market leading design, manufacturing, and

installation capabilities which make possible the delivery of large, complex projects like Dangote Oil on a turnkey basis. We are excited for this opportunity to showcase Kewaunee’s capabilities on such a high-profile petroleum project at Africa’s largest oil refinery facility.”

### International effort

A roster of major international firms have been brought together to contribute to the mega project.

Other key contractors to have played an important role include the likes of Hyundai Heavy Industries (HHI), Sulzer Chemtech, SOFEC, Schneider Electric and Wabag. Some of these sub-contracts have been worth many millions of dollars, reflecting the scale of the development at Lekki. Germany’s MAN Diesel & Turbo, for example, has supplied two compressor trains as part of a contract valued in the double-digit million dollars.

Heavy lifting specialist Mammoet was also tasked with transporting, lifting and installing all over-dimensional cargo for the refinery, alongside its Nigerian partner, Northridge Engineering. That included moving a 3,000-ton regenerator to the site, the heaviest item ever to be transported over a public road in Africa. ■



The plant will supply all the major markets in sub-Saharan Africa.

# Gearing up for growth

Africa's airports are gearing up for the future amid massive investment in terminal infrastructure and other facilities.

As international air transport begins a slow recovery to pre-pandemic levels, a number of airport projects across Africa are making steady progress towards commercial operations. The new roster of airport projects also reveals a defined split between Chinese-funded and traditional European-backed schemes.

In Nigeria, President Muhammadu Buhari recently commissioned the newly-built international terminal at Murtala Muhammed Airport, Lagos, which was built by China Civil Engineering Construction Corporation (CCECC) and supported by the Export and Import Bank of China (China Exim).

The terminal has the capacity to process 14 million passengers per year, reflecting the city's growing significance as a business hub for the continent.

It is part of a much broader upgrade plan for Nigeria, with other new terminals also underway or completed in Abuja, Port Harcourt, Kano, and Enugu.

Nigeria operated a total of 9,675 flights on international routes and 74,537 flights on domestic routes during 2021, with passenger numbers reaching just over one million and six million respectively, according to the country's Civil Aviation Authority.

Given that Nigeria's population is set to grow exponentially over the next generation, the new facilities will provide a platform for long-term growth and underpin the next stage of economic development.

Analysts at GlobalData note that airport investments are also mopping up depleted passenger traffic in the aftermath of Covid-19.

Global passenger traffic in 2021 is estimated to have reached only half of what it was in 2019, with traffic



Image Credit: Adobe Stock

for 2021 totalling only 4.6 billion passengers worldwide.

The uncertainty from Covid-19 made it impossible for airport operators to predict future passenger traffic trends, said Joel Hanna, an economist at GlobalData.

“Development plans made before the pandemic became obsolete and governments have generally held off from announcing any new major developments.”

However, some degree of certainty has returned in 2022 as travel restrictions begin to ease.

High-potential emerging markets like Africa can perhaps be more confident in their planning, however, given that existing facilities may not be up to scratch, new developments are not only pinning hopes on higher passenger numbers, but also reflect long-term infrastructure and even safety improvements.

## Across the continent

Like Nigeria, many other countries are bolstering their airport infrastructure too.

Last year, Zambia commissioned a Chinese-built second terminal at the Kenneth Kaunda International Airport in Lusaka. Also financed by China Exim, it was designed and built by China Jiangxi Corporation

for International Economic and Technical Cooperation.

But European funding also remains integral to Africa's infrastructure upgrade. At the end of 2021, Madagascar inaugurated a new terminal at Ivato International Airport that will accommodate 1.5 million travellers annually with funding support from Meridiam.

The investor has also signed a 30-year concession to build and finance a new international airport in Burkina Faso, 35 km northeast of Ouagadougou, underlining the continuing importance of traditional funding sources in Francophone Africa.

The US\$220mn investment also brings in Aéroport Marseille-Provence, which will utilise its expertise through a technical assistance contract and a minority equity stake in the project company.

The new site will replace the existing Ouagadougou-Taamsê International Airport, first built in the 1960s and located in the densely populated city centre.

Various other key airport infrastructure projects are also underway. They include:

- Uganda: Hoima International Airport has been under construction since 2018 and is expected to be completed next

year. It will facilitate the mobilisation of equipment for the long-awaited development of Uganda's oil industry following discoveries in and around the Lake Albert area. The project is being built by SBC Uganda Limited, a joint venture company between the UK's Colas Limited and SBI International Holdings, and will provide huge logistical benefits for businesses accessing the landlocked country. It will become Uganda's second international airport.

- Sudan: Another China Exim-supported scheme is the New Khartoum International Airport, which, like many other transport projects worldwide, has faced delays. Located 40 km from the capital, the new site is eventually expected to replace the existing Khartoum International Airport. Initial passenger capacity is around six million per year, rising potentially up to 12 million in subsequent phases. Turkish construction firm Summa –which helped build Niamey's Diori Hamani International Airport and Dakar's Blaise Diagne International Airport – is leading the work team.
- Angola: Luanda International Airport is a flagship scheme funded by China that has faced delays, linked to both financing and the Covid-19 shutdowns. The lead construction company, China International Fund, is also reported to have lost its contract for the project. Brazilian conglomerate Odebrecht is also involved in the long-running scheme which, it is hoped, will eventually boost passenger capacity numbers to 13 million per year in support of Angola's economy. ■



# Heavy machinery delivering under demanding conditions

A mammoth undertaking in Tanzania demands only the most capable heavy lifting equipment.



XCMG has provided dozens of excavators, rollers, concrete spreaders and cranes.

Image Credit: XCMG

The Julius Nyerere Hydropower Station represents one of the most ambitious projects currently under construction on the continent. The approximately US\$2.9bn undertaking, being built across the Rufiki River in eastern Tanzania, was approved in 2018 with work beginning shortly afterwards.

Upon completion, it is expected to boast an expected installed capacity of 2,115MW and will be able to produce approximately 5,920GWh of power annually, representing the largest hydropower station in the East African Community.

Egyptian firms Elswedy Electric and The Arab Contractors, alongside the Tanzania Electric Supply Company (TANESCO), are undertaking the project which will see an area of approximately 1,350 sq km occupied by the power station and reservoir lake.

According to The Arab Contractors, the scope of work required to reach completion (which is expected in 2022) includes the construction of:


- The main dam of length 1025 m at crest level and 130 m at dam level.
- Four saddle dams for reservoir impounding with length of 1.4 km, 7.9 km, 4.6 km, and 2.6 km, with a maximum height of 21.3 m, 14 m, 12.4 m and 5.5 m.
- A hydropower plant with a substation and transmission lines to the nearest public network.

- Permanent road access of about 21 km.
- Temporary access roads to connect permanent facilities with length 59 km.
- An administration building, a control building, workshops and stores.
- A main spillway located at centre of the dam with seven radial gates and an emergency spillway.
- A residential complex including housing and offices.

At the heart of this mammoth undertaking has been a fleet of construction machinery operating almost non-stop with a host of equipment providers supporting the project.

For instance, XCMG has provided dozens of excavators, rollers, concrete spreaders and cranes. Due to the complex geographical and climatic conditions of the country, the company customised and upgraded the fleet to deliver optimal performance.


Amongst these was the XCA60E all-terrain crane which is equipped with the world's first large-load, single cross boom independent suspension technology. Left and right wheels can rotate independently to adapt to the road conditions autonomously, improving the cross-country performance by 47% and high-speed cornering manoeuvrability performance by 15% to cope with working conditions such as high temperatures and wet, soft soil. ■




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## FLSMIDTH CUTS EMISSIONS WITH CLAY CALCINATION INSTALLATION IN GHANA

For a new clay calcination project located in Accra, Ghana, FLSmidth will deliver equipment to replace cement clinker with environmentally friendly clay, cutting up to 20% of CO<sub>2</sub> emissions compared to current practices on site. The order includes the world's largest gas suspension calciner system and a complete grinding station adding another 120% grinding capacity.

In what will become the world's largest clay calcination installation and the second record-breaking clay calcination order, FLSmidth is set to provide significant reductions in carbon emissions to CBI Ghana Ltd.'s cement production. Together with the new grinding station, the company expects both financial and environmental return-on-investment from lower specific CO<sub>2</sub> emissions, energy and fuel savings, and reduced costs from clinker imports.

Frédéric Albrecht, CEO at CBI Ghana Ltd., commented, "Ghana is the perfect location for using clay as an environmentally friendly alternative to clinker. West Africa is traditionally a clinker and cement importing region due to the lack of suitable limestone reserves. Developing countries with their young populations and a growing need for infrastructure and housing represents the future



Image Credit: FLSmidth

The clay calcination project in Ghana marks a key milestone in the green transition of cement production.

in cement consumption.

"Calcined clay cements are the most sustainable alternative to traditional clinker-based cement. With the support from FLSmidth, we will be able to operate clay calcination in a large scale."

Carsten Riisberg Lund, cement industry president of FLSmidth, remarked, "In the light of the commitments made by the international community, most recently at COP 26, the CBI Ghana project is yet another example of how the cement industry is responding to the need for

more environmentally friendly processes. We are very excited to work with CBI Ghana on the project that sets a new standard for green cement. Using clay as a supplement in the cement production is not new – it has been done for decades.

"But, with our new clay calciner system, we can produce a highly reactive clay that is able to substitute between 30-40% of the clinker in the final product, resulting in up to 40% CO<sub>2</sub> reductions per ton of green cement compared to traditional OPC cement."

## TADANO ELECTS FOR ROLLS-ROYCE ENGINES

Crane manufacturer Tadano has said it will be relying more strongly on mtu engines from Rolls-Royce in the future, a move which signifies a deepening of the long-standing cooperation between the two companies.

Most of Tadano's 26 crane models with two to nine axes and payloads from 45 to 900 tons are already powered by in-line mtu Series 1000, 1100, 1300 and 1500 engines. Expansion of the partnership will see the sale of around 3000 mtu engines and Daimler transmissions by 2025.

Tadano's standard platform strategy, of which mtu engines form an integral part, reduces the complexity of its portfolio, enabling customers worldwide to benefit from even better products and a more streamlined service.

Jens Ennen, president and CEO of Tadano, said, "This cooperation agreement marks a milestone in the re-orientation of our mobile crane business. We're delighted to have strong, reliable partners like Rolls-Royce and Daimler Truck at our side as we grow.

"Even in the midst of the pandemic with its supply chain uncertainties, Rolls-Royce has continued to deliver reliable drive solutions of the highest quality."

## Rental units in quick time

Kwikspace, an African manufacturer and supplier of prefabricated modular buildings, has helped provide sufficient work, leisure, and accommodation space for 15,000 contract workers as they carried out plant maintenance.

509 fit-for-purpose relocatable modular buildings, comprising offices, accommodation, ablution facilities, locker rooms, and dining and recreation rooms, were tailor-designed and delivered to the site 'plug-and-play' ready in just six weeks.

Claude Naidoo, Kwikspace sales manager, Rentals Division, commented, "Given the project scope and the constantly changing variables like building quantities, applications, and delivery dates, even with immense resources at our disposal, our team achieved a remarkable feat in completing the scope of work in time and to every single specification.

"Our flexibility is a benefit we bring to our clients, which is made possible by our ability to quickly add and redistribute resources that enable the exact, timeous, and effective execution of all projects."

**509 relocatable modular buildings were designed and delivered to the site.**



Image Credit: Kwikspace



## LIEBHERR UNVEILS LR 1100.1 CRAWLER CRANE

Liebherr's new crawler crane LR 1100.1 is optimised for all typical lifting applications in the 100-tonne category and can be configured either with a main boom up to 62 m, or with a main boom up to 44 m in combination with a fixed jib up to 20 m.

The LR 1100.1 is fitted with the most powerful engine in its class – the 230 kW to provide the necessary performance for the lifting operations and, thanks to the Eco-Silent Mode, the engine speed can be reduced to a predefined level. This means that diesel consumption and noise emission are reduced without affecting performance while the Automatic Engine Stop Control offers a further economic and environmentally friendly solution.

Optimised for quick transfer between sites, the transport width is 2,983 mm or 3,500 mm and, on location, the assembly of the LR 1100.1 is simplified through the self-assembly system and radio remote control.



Image Credit: Liebherr

The LR 1100.1 is a multi-purpose crane for any construction site.

## RMD Kwikform bridges the construction market gap

RMD Kwikform (RMDK) has launched its next-generation, heavy-duty R800 modular panel girder system.

Allowing for the construction of clear spanning and bridging structures, the R800 enables long lattice girders to be assembled quickly and safely. It is ideally suited to meet the most demanding requirements for simply supported, continuous/multi-span, cantilever or launched falsework, and vehicle, pedestrian, and service bridging.

Galvanised components produced in accordance with EN 1090 (Execution Class 3) guarantee a safe, reliable system and reduced cost of ownership over a long product life. Users will benefit from higher strength steels and optimised forged girder connections.

Versatility is a key feature of R800, for instance, its trapezoidal end panel enables support from the top chord, which reduces the required headroom and minimises clashes with battered abutments, while at the same time maximising opportunities for structural support using permanent works foundations. Uniquely, the trapezoidal panel can also be used inverted, affording the same geometry advantages for the support of spans supported by V-shaped piers, and arches.

Further flexibility is provided by the inclusion of 4.5 m, 2.25 m and 1.25 m long 'quarter length' girder panels, together with tapered end posts. When coupled with slidable bearings, these provide continuous and infinitely adjustable span length adjustment.



Image Credit: RMD Kwikform

The R800 is compatible with RMDK 80jN Rapidshor falsework system and can be used in conjunction with RMDK's Megashor and Superslim products.



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## Kamao-Kakula ahead of schedule

Ivanhoe Mines has announced the start of hot commissioning of the Phase 2 concentrator plant at the Kamao-Kakula Mining Complex.

The first filtered copper concentrate production from the Phase 2 plant has also commenced.

First ore was introduced into the Phase 2 milling circuit and first copper concentrate has been produced, approximately four months ahead of the original development schedule. The Phase 2 concentrator plant is identical to the Phase 1 plant, with a design throughput of 475 dry tonnes per hour, or 3.8mn tonnes of ore per year.

Over the last six months, the Phase 1 plant has consistently exceeded design ore throughput by approximately 10% to 15%.

Mark Farren, Kamao Copper's CEO, commented, "We now have successfully built the first two concentrator plants ahead of schedule and on budget. Given the experience gained by our operations team during the ramp up of the Phase 1 plant, we anticipate the ramp up of the Phase 2 plant will go even smoother."

"In addition, since the Phase 2 plant has started earlier than planned, we now expect to achieve the upper end of our copper production guidance for 2022, which currently is estimated at between 290,000 tonnes and 340,000 tonnes of copper in concentrate."

"The entire Kamao Copper team has done a tremendous job in getting the Phase 2 plant up and running less than 10 months after the Phase 1 plant began operations," said Ivanhoe Mines' co-chair Robert Friedland. "The commissioning of the Phase 2 plant is the second important step on the path to establish Kamao-Kakula as one of the two largest copper mining complexes on our planet... with a mine life that will last for generations. Kamao-Kakula is by far the greenest and highest-grade major copper producer in the world. As Phase 2 is handed over to our operations team, the projects team now will turn its focus to the Phase 3 expansion, which currently is scheduled to begin operations by the end of 2024."



Kamao-Kakula's Phase 1 and Phase 2 concentrator plants at night.

Image Credit: Ivanhoe Mines

## NEW WAYS TO REFINE ZINC

The International Zinc Association (IZA) Africa Desk has secured significant research funding to investigate the feasibility of new zinc refining processes to meet South Africa's own demand for refined zinc, whilst using locally produced ore and concentrates.

"The funding has been secured from within South Africa. The sponsors are very keen to see that we can develop our own capability within South Africa to produce special high-grade refined zinc and at the same time support fundamental chemical engineering research, while developing postgraduate research," remarked IZA Africa Desk spokesperson, Simon Norton.

Vedanta South Africa, an IZA member, and Duferco Steel Processing, which galvanises steel in Saldanha Bay, are two industrial sponsors participating in the project.

The research will focus on developing and understanding novel refining processes to significantly reduce the external power input compared to traditional pyrometallurgical processes. This will allow for economically viable production of SHG refined zinc. Ore usage may be further maximised by producing refined by-products such as silver and rare earth elements.

The research work will be carried out at the University of Cape Town (UCT) in its Department of Chemical Engineering under the leadership of Professor Jochen Petersen.

Vedanta South Africa will sponsor a desktop study of a wide variety of zinc processes, while Duferco Steel Processing is funding laboratory-scale research on zinc process chemistry.

The experimental study will carefully explore the in-principle feasibility of a novel flowsheet for refined zinc production and by-product recovery from local ore concentrate materials, with the express emphasis on reduced and/or renewable energy input, as well as reduced carbon and environmental footprints.

## GREEN LIGHT FOR KINSEVERE EXPANSION

MMG Limited, together with its subsidiaries, has approved the development of the Kinsevere Expansion Project at the Kinsevere mine in the Democratic Republic of Congo (DRC).

The project will mine and process copper sulphide and cobalt resources and includes the installation of new facilities and associated processing methodology involving a flotation plant, a roaster system and a cobalt processing circuit which the existing SX-EW plant will be integrated into.

It is estimated that the project will extend the life of the mine for at least 13 years and will result in total annual production of up to 80,000 tonnes of copper cathode and between 4,000-6,000 tonnes of cobalt in cobalt hydroxide.

Construction will commence in 2022 with first cobalt production estimated to arrive in 2023 and first cathode production expected in 2024.

Image Credit: Solid Wedge

### Solid Wedge makes gold plant progress



The client has commended Solid Wedge for its good workmanship.

Solid Wedge, a leading electrical and instrumentation solutions provider, is forging ahead in the supply and installation of electrical and instrumentation for a new gold plant. The project has a five-month timeline and was commenced in December 2021. Largely due to the experience in executing projects of a similar nature, the work is currently due to be completed on time and within budget despite the time and budget constraints imposed by the client.

Image Credit: Adobe Stock

### Resource estimate raised in Ghana

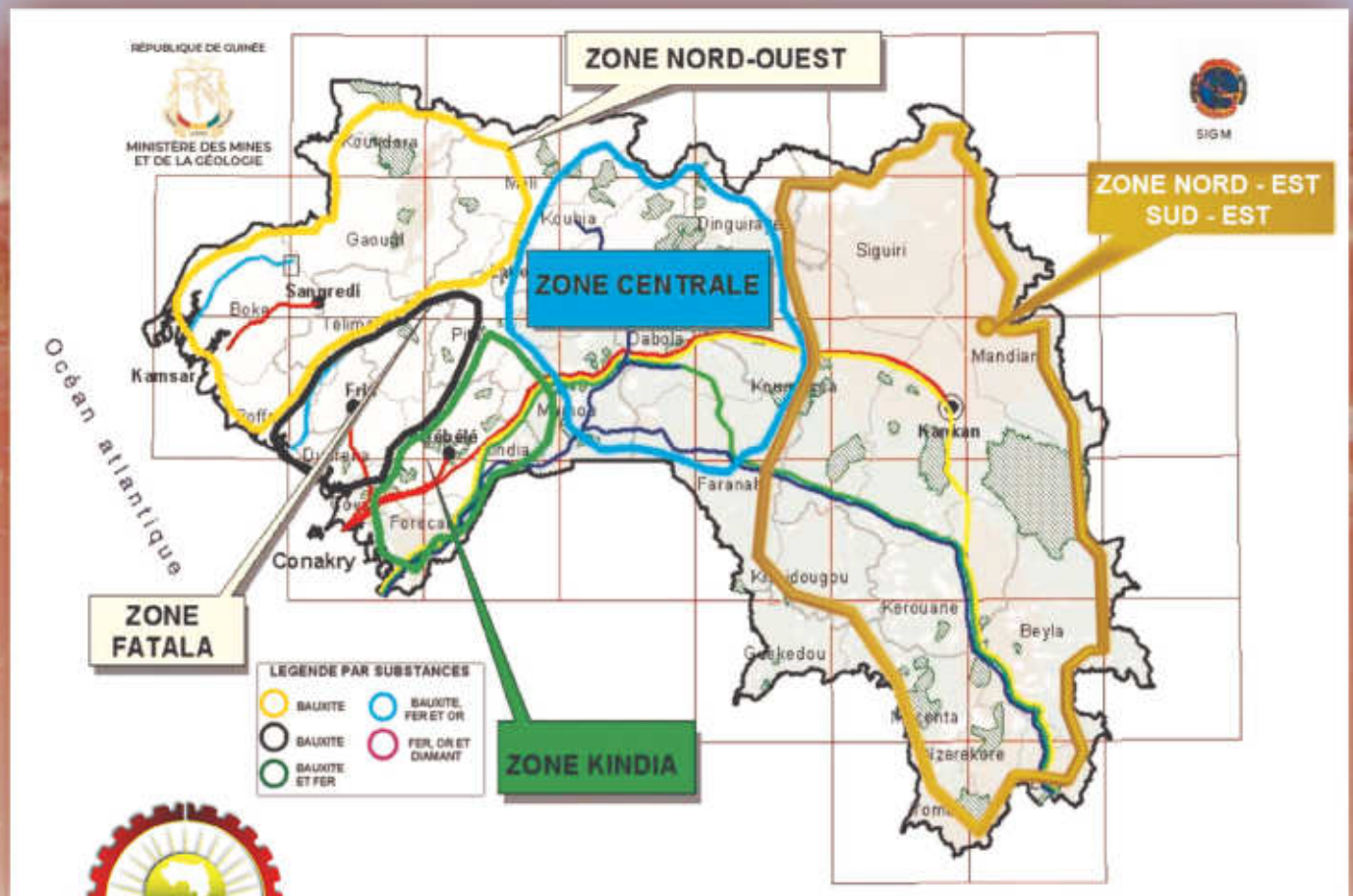


The resource estimate has been increased by 42%.

Atlantic Lithium Limited, an African-focused lithium exploration and development company, has announced a significant resource estimate increase to 30.1Mt at 1.26% Li<sub>2</sub>O for the Ewoyaa lithium deposit within the Cape Coast Lithium Portfolio in Ghana.

The company reported that the goals of increasing the resource to support a >12-year mine life and to convert >80% of the previous resource from inferred to indicated status have been achieved.





## SOGUIPAMI IS THE GATEWAY FOR INVESTORS IN THE MINING SECTOR IN REPUBLIC OF GUINEA (CONAKRY)

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- It may hold mining research permits on its own or in partnership for promotional purposes.

*In addition to this, SOGUIPAMI has developed expertise in supporting investors in the development of mining projects, in order to accelerate the process of moving from the research phase to the exploitation phase.*

### Our services

- Identification of promoter mining sites and support in the process of obtaining mining titles.
- Technical support and review of feasibility studies.
- Facilitation and support in community relations and respect for local content.
- Support for infrastructure development and pooling.
- Structuring of partnership in research and mining.
- Funding raised support.

### Areas of partnerships

#### 1) Development of mining permits

SOGUIPAMI holds four (04) research permits :

**Two gold search permits N°22270 and N°22271** in the prefecture of Siguiiri, covering an area of **90.03 km<sup>2</sup>** and **90.72 km<sup>2</sup>** respectively.

**A diamond search permit N°22307** covering an area of **20.4747 km<sup>2</sup>**.

**A Nickel-Cobalt search permit N°23324** in the prefecture of Lola, covering an area of **92.1178 km<sup>2</sup>**.

**On these permits, the following work was completed :**

- Reconnaissance work (gold and diamond permits).
- Geochemistry work on the ground (permits N°22270 and N°22271).
- Drilling (diamond permit N°22307).
- Trenching (permit N°2270).

#### 2) Transport of state mining products

SOGUIPAMI is mandated by the State to transport up to 50% of the State's mining products in technical and financial partnership (joint venture).

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# Strengthening gender diversity

Ahead of Mining Indaba 2022, Dr. Stacy Hope, managing director of Women in Mining UK (WIM UK), explained to African Review the prevailing issues and future opportunities around diversification within the mining sector.

**African Review: How much of the mining workforce is made up of women?**

**Stacy Hope:** According to a recent McKinsey report, the global mining industry has an extremely low rate of 8-17% female participation. As per an IGF report from 2018, in Africa, women represent up to 40-50% of the workforce engaged in artisanal and small-scale mining. For those in South Africa's formal mining sector, roughly 12% are women, with 16% of all top management, 17% of senior management, and 18% of skilled technical positions occupied by women.

It is important that we look at Africa not only as a whole, but within the context of its very diverse countries and mining operations to understand the national composition of women in the sector. Some countries still pose restrictions on women working on mine sites while others have more robust gender-inclusive policies, all determining the gendered landscape of each country.

**AR: Why are there fewer women in mining, particularly in high-level positions?**

**SH:** Although we are seeing a fair amount of women entering the industry, there is also a high level of attrition once they arrive to mid-management. The reasons include corporate culture, a 'boys club' mentality and few opportunities to grow. At the heart of it, we still see mining through the male default, which in turn deters corporate culture from meeting the needs of all participants within the sector, particularly the needs of women – be it in maternity, menopause, work-life balance or corporate inclusivity as a whole.

**AR: What is being done to address this issue and what could be improved upon?**

**SH:** A lot is being done to address these issues, therefore we can say with certainty that, yes, the industry is heading in the right direction.

We are seeing great initiatives from some of the major mining companies to increase the number of women in mining. For example, in Mali, Resolute Mining advocated for regulatory change so that its trained female engineering staff can work underground and in June 2020 it obtained an exemption to allow women to do



Image Credit: WIM UK

**Dr. Stacy Hope is managing director of WIM UK.**

so. In Egypt, our Industry Partner, Centamin, has initiated a programme to identify and resolve barriers to the advancement of women in the workplace. This has led to female appointments at the mine site.

Away from the mine site, companies still have a role to play. For example, our foundation partner, Anglo American, provides extensive support to its employees and host communities through its WeCare programme to fight gender-based violence. By acting as a good corporate citizen, Anglo American shows that mining companies are responsible employers and take a holistic view of their employees' health.

The last example of organisations addressing the issues women in the mining sector face is the World Gold Council (WGC), another WIM UK industry partner. The WGC has addressed the challenges women face through its Responsible Gold Mining Principles (RGMPs), which is a clear commitment to the advancement of women in the workplace and socio-economic empowerment of women in mine-impacted communities. The RGMPs are a historic step for the mining industry because it is the first time a framework of responsible mining principles explicitly focuses on the role of women within the industry and acknowledges the need for more action to

improve the representation and empowerment of women, both in the workplace as well as the communities surrounding mining operations.

Governmental and non-governmental agencies also play a role in the mining industry's success. What we are seeing in countries, like South Africa, has been a concerted effort to truly drive diversity. The roadmap by the Minerals Council to double the current percentage of women in the sector to between 30-40% across the industry by 2025 and to 50% in management over the next decade is but one example.

WIM UK also plays a vital role by promoting the employment, retention and progression of women in the mining industry. Our initiatives run the gamut, starting with our scholarship and internship programmes, which ensure that women are given the tools to enter and participate within the sector; events and conference partnerships where we ensure women in the sector are visible and active participants in the mining discourse; research and thought leadership to ensure that the business case for equitable female participation is continuously made and strengthened; our partnership with Women on Boards to support women on their journey to become non-executive directors; and through our 100 Global Inspirational Women in Mining publication, where we highlight the outstanding pool of female talent across all jurisdictions and all areas of mining.

**AR: What benefits will the African mining industry receive from encouraging gender diversity?**

**SH:** The entire sector, regardless of geography, benefits from more diversity. It is proven that more gender diversity leads to better problem-solving and creativity and this is particularly important in our sector as the world needs innovation to address climate change and creativity to build new environmental, social and governance frameworks.

What is evident is that for the sector to be sustainable, gender diversity is a vital driver. In order to drive gender parity within the sector, it takes a multi-stakeholder approach, where we are all equitable partners working towards a greater future for the sector and beyond. ■



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# Open for business at Mining Indaba

An overview of some of the companies attending Investing in African Mining Indaba 2022 who are looking to make the most of the networking, insights, and business development opportunities available.

## WÄRTSILÄ PROVIDES RELIABLE POWER GENERATION IN A REMOTE OFF-GRID LOCATION

When AngloGold Ashanti's Geita Gold Mine, situated in Tanzania, required a reliable power generation solution to support its growing operations, Wärtsilä provided a turnkey engineering, procurement and construction (EPC) solution and will take care of ongoing operation and maintenance (O&M).

Wärtsilä was approached to install an EPC solution featuring a 40MW flexible power plant with four 32TS engine generating sets that offer excellent load taking capabilities in isolated power systems. Once the plant became operational, a 10-year agreement for O&M services was put in place to ensure optimal operation for its entire lifecycle. Wärtsilä remotely monitors the plant's performance through an Expertise Centre, providing operational support, troubleshooting and improvement advice to ensure optimal performance.

All four of the plant's performance targets – availability, net heat rate, power capacity and specific lubricant consumption – have been exceeded, including 100% availability compared to a target of

98.7% and 0.31g lubricant per kWh compared to 0.8g. In addition, fuel efficiency has improved from 39% to around 43%.

Thanks to the flexibility of the installation, the rplant can also be optimised during its lifetime through upgrades, modernisation and fuel conversion.



Image Credit: Wärtsilä

Four 32TS engine generating sets were supplied which offer excellent load taking capabilities in isolated power systems.

## BME HIGHLIGHTS MINING EFFICIENCY

BME will be showcasing its breakthrough electronic initiation system, AXXIS Titanium, which was globally launched in November last year.

“Buoyed by strong commodity demand, mines in Africa nonetheless face a range of compliance demands in terms of sustainability – and are constantly in search of efficiency solutions,” said Michelle Fedder, BME marketing manager. “AXXIS Titanium, in concert with BME's ongoing innovations across its offerings, is helping mines drive down their energy costs and carbon footprint.”



Image Credit: BME

**AXXIS Titanium is helping mines drive down their energy costs and carbon footprint.**

She said that AXXIS Titanium boasts improved safety levels by enhancing communication with the detonator during manufacturing to avoid defects. Performance is raised through the increased blast duration per detonator, more units per blasting box and precise firing accuracy.

Safety remains BME's priority, with the incorporation of a Swiss-designed application-specific integrated circuit (ASIC) chip in BME detonators, delivering several added benefits.

The ASIC gives the system more internal safety gates against stray current and lightning, enhancing safety levels and allowing for inherently safe logging and testing.

## FLSMIDTH PUTS ENVIRONMENT FIRST

With demand for minerals expected to double by 2050 it is essential that governments and industry ensure this supply is reliable and sustainable in light of the precarious environmental balance.

FLSmidth is supporting its customers to deliver minerals while decreasing their environmental footprint through its MissionZero initiative. The company is placing itself as the go-to partner for sustainable productivity to enable customers to move towards zero water waste, zero energy waste and zero emissions by 2030.



Image Credit: FLSmidth

KREBS slurry pumps deliver efficiency and reliability by eliminating grinding and recirculation problems.

To make MissionZero possible, FLSmidth is dedicated to the development and co-creation of digital and technologically innovative solutions and is collaborating with customers, third parties and universities across the globe. At the heart is automation and digital technologies to increase efficiency, reduce energy consumption, extend the lifetime of equipment and allow operators to do more with the same or less.

Tailings and water management are central, but the company is also focussing on pumps, flotation, IPCC and comminution.



## EFFECTIVE DEWATERING WITH ASOE HOSE SOLUTIONS

ASOE Hose Manufacturing Inc. is a leading manufacturer of various lay flat hoses and hose equipment especially used in mine dewatering, both for surface dewatering and underground water extraction.

Mileflex TPU lay flat hose has the advantages of high pressure, abrasion resistance, and UV resistance. Mileflex consists of three parts of construction which ensures high strength, flexibility and durability. The size ranges from 1-1/5inch to 16inch, and the standard length of each one is 200 metres or longer per request.

Welline TPU hose is a flexible rising main for groundwater extraction. Welline makes submersible pump installation and retrieval easier and quicker than regular rigid pipes. The size ranges from 1-1/4inch to 10inch, and the length of each can reach up to 400 metres. The main advantages include maintenance-free on rising main, corrosion resistance, microbiological and internal scaling resistance, and high tensile strength.



The Mileflex TPU hose is a key product of ASOE Hose Manufacturing.

Image Credit: ASOE Hose Manufacturing

## AGGREKO EMBRACES THE ENERGY TRANSITION

There is no doubt that the mining industry is undergoing a meaningful energy transition from traditionally relying on diesel for power generation to moving towards renewable and alternative fuel solutions.

Globally there has been increasing commitment to net-zero emissions by 2050 and the mining sector is no different. This has led to significant investment in the electrification of equipment, process improvements, hybrid energy systems and on-site power generation across the sector.

Over the past few years, Aggreko has witnessed greener technologies moving from boardroom discussions to adoption at the coal face, with many mining companies now embracing the energy transition.

In line with the Mining Indaba 2022 overarching theme of 'Evolution of African Mining: Investing in the Energy Transition, ESG, and the Economies', Aggreko will be focusing on this transition, providing insights into what the mining sector's energy landscape will look like in the next few years. From short and long-term trends in decarbonisation, to current and future fuel sources, hybridisation will be critical to the future of mines in the region and across the globe.




Image Credit: Aggreko

Aggreko will provide insights into what the mining sector's energy landscape will look like in the future.

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# Raising the standard

Preparing to speak at Mining Indaba 2022, Bady Baldé, deputy executive and Africa director at the Extractive Industries Transparency Initiative (EITI), explains to African Review how open and accountable governance could help unlock the potential of mineral resources.



Bady Baldé, deputy executive and Africa director at the EITI.

Image Credit: Ntsh. Neerland / EITI

The EITI provides a global standard for the transparent and good governance of natural resources for oil, gas and mining. With 27 of its 56 member countries from Africa, the EITI has an excellent representation on the continent and most of the countries involved have been implementing the standard for more than 10 years.

Baldé explains, “The EITI is a standard for transparency across the entire value chain – from how extractive resources are identified through to how revenues are managed. It provides for states to develop the industry and for citizens to oversee how the sector is managed and benefits them.”

Today, Baldé notes, a significant amount of African government revenue depends on the extractive industry and with the ongoing energy transition picking up speed, many countries could increase their returns by producing minerals that are critical to a low carbon economy.

“There are opportunities across the continent with many countries having huge mineral potential, but to develop them they need to do better than what has been done in the past.”

International investment could of course play a big role here as many countries require foreign direct funding to develop the sector and projects.

“There was recently a major agreement signed between Rio Tinto, a Chinese-backed consortium and the Guinean Government. This US\$15bn framework agreement represents an investment that is around the same size as the GDP for the entire country.”

## Encouraging investment

The example in Guinea highlights the enormous opportunity foreign investment holds for the continent as the Government will benefit from the construction of a 670 km railway between the mine site and the new deepwater port at Moribayah and hold a 15% stake in the project and associated infrastructure.

While Baldé sees more investment coming into the continent, he admits this is currently coming in slowly. “Globally, on average more mining investment is going into regions such as Australia and the Americas. This is, in part, due to a lack of infrastructure (such as power connection) which means more investment is required but it is often due to the issue of country risk – risk of instabilities, risk relating to corruption and wider governance standards.”

“There are opportunities across the continent with many countries having huge mineral potential, but to develop them (and attract foreign investment to do so) they need to do better than what has been done in the past. Contract negotiations should be done in an open and transparent manner, making sure that terms are clear, fair and open and that there are no conflicts of interest. This needs to be maintained all the way through the value chain.”

“The EITI Standard provides a platform for community engagement and agreements to be independently verified. It ensures that operating companies engage with local communities, local officials and have an open table to discuss potential risks.”

Doing so enables trust to be built up between companies, local communities and the international community. “Governments need to implement reforms so that revenues which are redeemed from resources adhere to international standards and benefit societies as a whole. That is a critical element today for how these sectors can be developed and how countries can attract investment.”

To emphasise this, Baldé expresses that around the copper belt, there is strong interest by various stakeholders to secure those minerals but that it is down to the governments of the DRC and Zambia to not return to the old habits such as secret deals and maximising interests for officials. Instead, ensuring these resources will be produced in a responsible manner, mitigating risk against corruption, will serve the best chance of bringing in investment and utilising these natural resources for the benefit of all.

## Environmental concerns

In today’s world, responsible mining does not just mean a responsibility to citizens but to the environment as well.

“In Europe,” Baldé remarks, “there is much talk about the creation of products in terms of carbon content and other standards. Within the mining industry it used to be just a competition on cutting costs but now there is competition on producing while respecting the environment as well as local communities.”



“Incorporating environmental standards will mean a higher chance of procuring investment, and produced resources are more likely to find a market against those that do not include them.”

**A roadmap for development**

The implementation of the EITI Standard has helped many countries develop transparent practices and procedures and ensure information is much more accessible than those countries not participating.

Baldé notes, “We are coming from a legacy where frankly the older practices have not been productive and the sector has been associated with some challenges which cannot be wiped out overnight. Therefore, we need to understand that while progress will come, this is a long journey.

“It is also important to recognise that change will come at different rates. For countries like the DRC with a more complex, entrenched, sector, it will take more time to change old practices whereas in countries with like Senegal with a less entrenched sector, the pace of change may be quicker.”

“A country where for a long time we felt we achieved some of our primary objectives is Madagascar. Local communities had much greater access to information on the level of

“**Incorporating environmental standards will mean a higher chance of procuring investment.**”

revenue transfers from Central Government as a result of transparency on the expected value of such payments. Around 20 communities benefitted and the mine, which accounts for nearly two-thirds of the Government’s extractives revenues, was able to strengthen its social license to operate.”

“There have been significant and positive improvements in Ghana in both oil and gold production. It has been a member throughout the development of these industries and the EITI contributed to that success.”

It is not just countries which sign up to the EITI, but companies as well – more than 65 companies support the EITI and just under half of these are within the mining industry. Notable and long-standing members include Rio Tinto, Anglo American, African Rainbow Minerals, BHP, AngloGold Ashanti, Barrick Gold and more.

Benefits for members include improving investor confidence in resource-rich countries; the chance to build trust and expand access to governments, industry and civil society; and the ability to gain insights into what investors and key stakeholders expect. Additionally, they can enjoy benefits from a more local perspective such as strengthening social licenses to operate by showing their economic and social contributions to communities, reducing investment and corruption risk, and acting as a catalyst in developing local capacity and infrastructure.

“We are fortunate to have a standard which is being implemented by African countries and companies for an extended period and, while there are varying degrees of success, in all countries we operate information availability at the least is better than those who are on the outside. For those involved, there may be challenges along the way and we must be patient, but we will see improvement and progression over time.” ■

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Many countries across the continent have huge mineral potential.

Image Credit: Adobe Stock

# Power is the enabler

Nicolas Kuhn, business development director of Altaaqa Global Energy Services, discusses the operational, logistical, and financial merits of having a dedicated turn-key power supply, and sheds light on the roadmap ahead of hybrid power plants for mines.



Nicolas Kuhn is the business development director of Altaaqa Global Energy Services.

Image Credit: Altaaqa Global Energy Services



Altaaqa airlifted manpower and equipment to the mining site to deliver at the soonest possible time.

Image Credit: Altaaqa Global Energy Services

**M**ining is a power intensive industry, characterised by ever changing requirements on the power infrastructure during the life cycle of a mine. We work within these power needs, as well as emerging requirements for greener solutions.

One of the structures we use to support mining companies, juniors as well as majors, is a fit-for-purpose approach, both from a technological and financial perspective. For instance, our plants are set up in modules, thus enabling mining companies to invest in a phased approach and manage upfront cost.

## The case of a mine in Africa

We have a client, an international mining company, who operates a gold mine in Africa. They had the mandate to increase production levels to enhance the profitability of the mine. Naturally, ramping up productive activities would require power that is reliable and sufficient to support all the extraction and associated processes involved.

However, power from the grid, the mine's primary source, was not always available nor sufficient to sustain all the activities. There had been several instances of power insufficiency that had affected the mine's daily output levels. This had caused delays in the mine's operations as the facilities needed time to restart after the blackout.

Therefore, the mine immediately needed to have a dedicated power plant suited to their requirement to implement the increase in production, and avoid the operational complications related to the instability of power supply in the remote area.

Due to the urgent nature of the project, we had to elaborate a plan that would allow us to deliver the equipment and mobilise the manpower in the fastest possible time.

We arranged an emergency airlift to site, transporting personnel and 590 tons of materials in 10 days. We successfully installed a turn-key plant powering the entire mine with some redundancy within this short lead time. We are

operating and managing the power plant 24/7 with our in-house engineers and local technicians, ensuring its efficiency and safety.

Our plant runs on fuel-efficient and low-emission modules. This has equated to '0' downtime and record production levels for the mine.

## On energy transition and integration

The market is accelerating the transition towards hybridisation, which means in certain cases combining existing power plants, with PV or other renewable power solutions within one seamless system.

As the system integrators, we work on solutions which comprise a complete system, using our expertise and working knowledge.

The integration of the various power sources can help avoid operational and logistical risks to site operations. These evolutions in the power mix can enable mines to achieve the goals of reducing their emissions levels, generating at a lower cost of electricity, and also achieve certain ESG targets. ■



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## SANDVIK AND BOLIDEN EXPLORE 3D PRINTING POTENTIAL

Sandvik Mining and Rock Solutions and leading mining company Boliden are conducting a small-scale trial to explore the potential of 3D manufactured parts.

Additive manufacturing – or 3D printing as it is more commonly known – is maturing fast, and has progressed from printing plastic components to now being able to print ceramics and metals. To discover the potential of the technology, Boliden has teamed up with Sandvik to run a trial that will see machine parts printed digitally and installed on underground drill rigs.

The trial with Sandvik involves a set of specially redesigned components printed digitally at a Sandvik-managed facility in Italy, with their performance being monitored on machines in Boliden's underground mine worksites. At least in theory, the 3D metal parts



Image Credit: Sandvik

**3D metal parts could perform as well as traditionally manufactured items.**

could perform as well – or even better – than traditionally manufactured items.

3D printing is an exciting prospect for OEMs too, as Erik Lundén, president, parts & services

at Sandvik Mining and Rock Solutions explained, “Mining equipment can last up to 25 years – and needs to be supported throughout that time – even in the most remote of locations. We have many different stock keeping units, and from an inventory point of view we can't tie up the capital that keeping all these parts in stock would entail. 3D printing of parts locally offers us the prospect of not only getting parts to the customer much faster, but doing so far more sustainably.”

Although in theory any part could in future be 3D printed, it is likely to be maintenance and repair operating items that are the first to get the additive manufacturing treatment, such as the bushes, brackets, drill parts, etc. that customers need to change every 3,000-4,000 hours.

## Anglo American commissions Benguela Gem diamond recovery vessel

Anglo American plc has announced the commissioning of the Benguela Gem diamond recovery vessel, ahead of schedule and below budget.

The Benguela Gem forms part of the fleet operated by the joint venture between De Beers and the Government of Namibia. It will add an additional 500,000 carats of high value diamonds to annual marine production, an increase of around 45%, following an investment of approximately US\$420mn.

Mark Cutifani, CEO of Anglo American, said, “The commissioning of the Benguela Gem ahead of schedule and below budget marks further progress towards Anglo American's margin-enhancing organic growth of more than 20% over the next three years. This additional vessel further enhances production of some of the highest quality and value diamonds in the world, while delivering sustained economic benefits for Namibia.”

Bruce Cleaver, CEO of De Beers Group, stated, “Diamond recovery by Debeers Namibia is the single biggest contributor to Namibia's economy and we are proud to play our part. The Benguela Gem is the first of its kind and represents an outstanding feat of engineering design, technology innovation and sustainability performance. The investment in this vessel will support a long term, sustainable future for Namibia's diamond sector, which is home to some of the most sought-after diamonds in the world.”

The Benguela Gem is a custom built vessel that combines latest technology and fully integrated design to achieve unrivalled efficiency, reliability and accuracy. A state-of-the-art dynamic positioning system automatically optimises the vessel's performance in changing weather conditions to minimise energy use. The vessel also generates its own fresh water through the use of heat recovery systems and a reverse osmosis plant.



**The Benguela Gem is a custom built vessel that combines the latest technology and fully integrated design.**

Image Credit: Debeers Namibia

## WEIR MINERALS ANNOUNCES NEW PARTNERSHIP WITH XMPRO

Weir Minerals has announced a new partnership with XMPRO, a leading digital twin platform.

The partnership will enable intelligent equipment and services and support miners to achieve higher performance while also reducing the environmental footprint of their operations.

The XMPRO platform – as a part of the Synertrex digital ecosystem – will facilitate the delivery of event intelligence, predictive analytics, and real-time insights. It allows for data orchestration and value creation from multiple sources, including sensors, miners' digital ecosystems, and data.

The platform identifies critical events by applying AI and predictive analytics, which will provide Weir Minerals' customers with the next generation of predictive services and recommended actions. XMPRO facilitates easy collaboration between reliability engineering and operations by providing real-time information and equipment insights, viewed via mobile devices and the Synertrex intelligence web portal.

Weir Minerals also recently signed a digital partnership framework for strategic cooperation with AVEVA. Weir Minerals will utilise the AVEVA PI System to collect and contextualise IIoT data streams, which will become the IIoT data foundation of its Synertrex digital ecosystem.

Ole Knudsen, digital director at Weir Minerals, said, “XMPRO takes an actionable and collaborative approach to data that closely aligns with our Synertrex digital ecosystem. It is a platform ensuring maximum customer value from all the data we collect, ranging from equipment and process data to the in-house data we have access to as an OEM.”



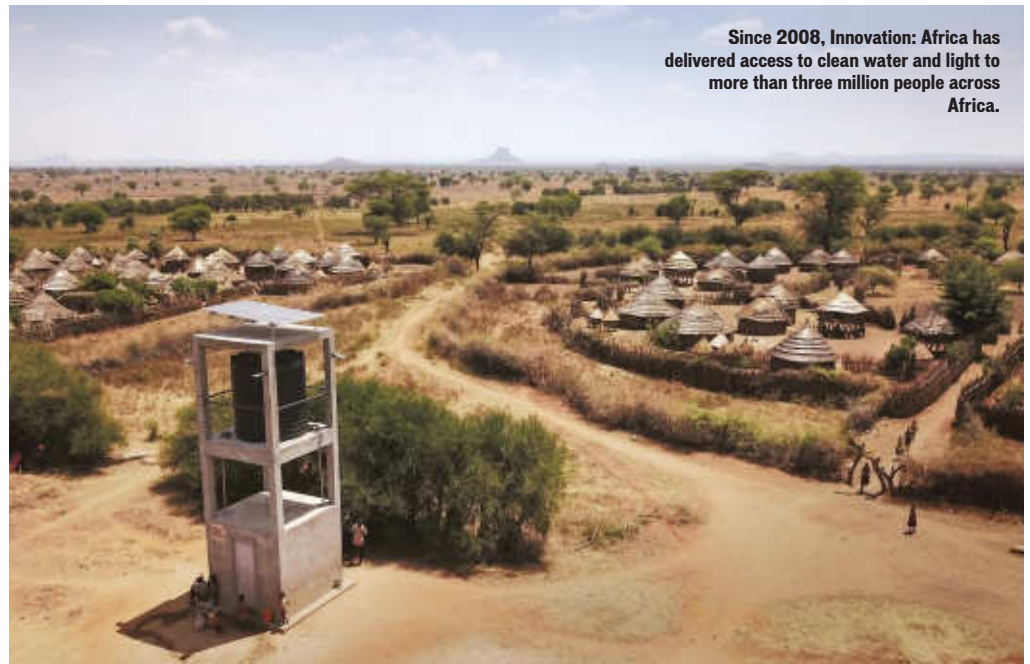
# The water-energy nexus and the power of the sun

Sivan Ya'ari, founder and CEO at Innovation: Africa, discusses the pivotal role the sun plays in providing clean water and reliable energy, the cornerstone for sustainable development across the continent.

**A**frica has the resources required to empower its people, but any future prosperity will be unimaginable without access for all to affordable, reliable and sustainable energy and safe water.

For sustainable development to take place across Africa, it is essential to understand the inextricable nexus between water and energy. Access to clean and safe drinking water is a fundamental human right and is recognised as Goal 6 of the United Nation's Sustainable Development Goals (SDGs). And yet, one in three Africans face water scarcity and approximately 400 million people in sub-Saharan Africa lack access to basic drinking water. Aside from these concerning numbers, this lack of water is severely impacting the continent's ability to produce energy in its bid to achieve its aspirations of prosperity, wellbeing and inclusive sustainable development – today and for future generations.

The challenges faced by low-income countries are, among others, a lack of funding, education and infrastructure to take action. But there is an immediate answer to Africa's water and energy crisis, which comes in the form of solar power. Solar powered pumps offer an effective way for communities to access clean and safe water for the long term, and are becoming a critical component within the nexus. Innovation: Africa, for example, harnesses the energy from the sun and, by installing solar-water pumping systems, has been able to provide safe and clean water to millions of community members across rural African villages.



Since 2008, Innovation: Africa has delivered access to clean water and light to more than three million people across Africa.

Image Credit: Innovation: Africa

## A golden opportunity

Since 2010, the price of solar energy has decreased by 89%, making it the most affordable form of energy in history. There is a real opportunity to use these solar powered water pumps to deliver electricity to millions of Africans living in darkness that is simple, cost effective and incredibly easy to install within communities.

Solar-powered, efficient micro-irrigation, as one example, is increasing farm-level incomes by five to ten times, improving yields by up to 300% and reducing water usage by up to 90%. This has incredible economic impact for communities relying on farming to keep themselves sustained and bring in life-changing revenue. Agriculture is at the heart of Africa's economy and has an extensive social footprint. It accounts for 14% of the total GDP in sub-Saharan Africa, as well as the majority of employment for the continent's

population. But, due to increasing water scarcity, Africa does not have the energy required to reach its full agricultural potential. This could be immediately addressed with solar solutions.

Many African countries have already succeeded in making the necessary advancements to scale up renewables, such as adopting support policies and promoting investment and regional collaboration, but most of the continent is still severely lagging on the renewable energy front. Overcoming the continent's energy access gap will require a paradigm shift from energy as a commodity to energy as an enabler.

Climate change also puts additional stress on water availability. Touted as the most solid and urgent report released to date, the UN's recent Intergovernmental Panel on Climate Change's (IPCC) Special Report revealed that climate change is widespread, rapid and

intensifying. Although a key finding in the report highlights that global temperatures are expected to reach or exceed 1.5°C of warming over the next two decades, it is not only temperature increases which should be cause for alarm, but also the impact of unstable wetness and dryness cycles critical to tolerance thresholds for health and agriculture. Solar energy can address many critical gaps and challenges associated with climate change policies.

In short, a few solar panels can transform communities. The benefits of solar energy, particularly in remote areas, are undeniable. The technologies exist, they are environmentally friendly and affordable. The time is now for African countries to reimagine their energy policies and join forces to innovate and define new paths for socioeconomic growth by empowering rural communities through the sun. ■

# On display at IFAT 2022

The world's leading trade fair for environmental technologies, IFAT, will arrive in Munich from 30 May to 3 June. With around 150,000 visitors expected to attend, exhibitors are preparing to showcase their latest products and services available on the market.



## ENVIOLET UV-OXIDATION FOR INDUSTRIAL WATER DETOXIFICATION

Capable of treating every kind of waste water containing aromatic compounds or other organics, Enviolet is consistently developing new formulations and processes to open up new applications.

The company's UV-reactors for advance oxidation processes (AOP) redefine the technological state-of-the-art in UV-Oxidation and AOP. Robust UV-reactor housings built of Borosilicate glass and the rotational flow-through concept are critical elements for successful AOP applications. Such construction eliminates corrosion issues and allows visibility inside the reactor and the company's electronic performance controller (RECO) provides precision control of the UV-lamp

UV-Oxidation in operation.

and guarantees an optimised UV-output. Complete installations for end-users as well as skid mounted core-units for integrators are offered by the company.

At IFAT 2022, Enviolet will also be showcasing other solutions including the Microspear and Microfloat UV systems which effectively suppress microbial growth to convert any type of tank into large disinfection reactors with long retention times. Optimal applications are in the field of cooling tower disinfection, rinsing technology and the hygienic storage of water and aqueous media.

## DOPPSTADT PREMIERES NEW TOOLS AND ATTACHMENTS

Doppstadt have announced that at IFAT it will be presenting new attachments and tools for its universal talent METHOR.

The robust single-roller shredder, designed as a multi-tool, is capable of processing small- to medium-sized and frequently changing material flows. It can reliably process commercial and organic waste, building rubble, waste wood and bulky waste as well as mono batches such as mattresses.

A newly developed roller for the METHOR will be presented at IFAT, which is particularly robust and extremely competent for processing rubble. With all attachments changeable within minutes, customers can now combine the METHOR with a double drum, a spiral shaft or star screen, an air separator or a magnet to form a compact processing solution.



Doppstadt offer a wide range of equipment options for the multi-tool as well as the a choice between diesel or electric drive.

## SENNEBOGEN BRINGS LIVE DEMONSTRATION

In addition to the innovations in the exhibition hall, at IFAT, SENNEBOGEN will present four machines live in action at the VDMA Demonstration Days and the VDMA Crushing Zone.



The SENNEBOGEN 821 E & 825 E recycling machines feed the shredder with biomass, the 830 R-HDD demolition specialist and the versatile 355 E telehandler are used in the recycling of construction materials.

SENNEBOGEN's extensive machine portfolio includes not only recycling machines and telehandlers for professional waste handling, but also demolition machines for effective deconstruction, each of which will show what they are capable of in eight demonstrations over five exhibition days. During these demonstrations, product experts will explain the machines in detail.

One of the machines on display will be the 830 R-HDD demolition machine with an operating weight of 45 t. Unique stability is provided thanks to its telescopic wide track undercarriage and its demolition shears can be equipped with a sorting grab and the pulveriser in a very short time.

Image Credit: Sulzer



Attendees can explore solutions to support the whole process of collecting and treating wastewater.

## BOOSTING THE ENERGY EFFICIENCY OF WATER TREATMENT

Sulzer and Nordic Water will be presenting their combined offering for the water sector which can provide opportunities for greater energy savings as well as achieving improved sustainability. Starting with pumps and controls for pumping stations, the journey pauses with a live grinder display and continues through flood protection, static and submersible mixers, screens and turbo-blowers before finishing with sand filtration systems.

On Sulzer's stand, visitors can review the extended VUPX and XFP pump ranges as well as discuss the Monster Stack grinder. There will also be videos explaining the significant energy savings that can be made by switching to the HST turboblower as well as asset control systems. On the Nordic Water stand, visitors will be able to see a 3D-printed model of a treatment plant showcasing various pieces of the company's equipment as well as full size examples of filtration systems, bridgeless scrapers and pumps from Sulzer.



Sunset over the Chobe River from which the new water treatment plant will draw water.

Image Credit: Joe McDaniel, Unsplash

# Providing potable water

For many across Africa, water scarcity is a daily occurrence, with nations like Botswana relying on efficient water treatment for maintaining essential, potable water supplies. Tim Guest reports.

**W**ater scarcity, for whatever reason, is pushing some already water-stressed nations and regions across Africa to the brink of potential environmental and social calamity. Urban populations experience interrupted potable water supplies and many rural communities, which rely on natural sources for their water, find them fast disappearing and less reliable than ever.

## Environmental pressures

There is currently an ongoing drought throughout many areas of southern Africa. Seasonal rainfalls through mid-December into this year have been significantly below average. In Botswana, the drought has only exacerbated the country’s typically low rainfalls and semi-arid conditions, the two key geographical features contributing to the nation’s already scarce water resources. As a result, significant segments of Botswana’s population face severe, daily water shortages due to this protracted drought period; people in the Greater Gaborone area, for example, as well as other outlying cities, come under stark water rationing several days a week, sometimes without any supply at all. On 26 March, for instance, a ‘Water Supply Interruption’ notice for Kasane and surrounding areas was posted by Botswana’s Water Utilities Corporation (WUC), a parastatal organisation wholly owned by the Botswana Government. It read, “WUC informs its customers in Kasane and surrounding areas that their areas may experience low water to no water supply on 26 March 2022 due to planned maintenance

works at the Kasane Treatment Plant.”

On the face of it, grim reading, however, there is a silver lining, as the planned maintenance mentioned was at the small and aging Kasane Treatment Plant, which will soon be replaced by a new multi-stage water treatment facility, slated for completion in 2023.

## Plant progress

Kasane is in Botswana’s booming northern region and the new water treatment plant will eventually provide 18 million litres of potable water per day for 90,000 domestic and business users, helping to boost new business possibilities and tourism through the new potable water resource it will deliver.

The main engineering, procurement and construction (EPC) sub-contractor for the project is South Africa’s WEC Projects, which has presence and various water treatment and sanitation projects in more than 20 countries in sub-Saharan Africa. The Johannesburg-based company aspires to ‘a world where economic growth supports environmental sustainability, with better living standards for everyone’, and is a specialist in the provision of engineered solutions in the water and wastewater treatment industry.

During lockdown, Zhong Gan Engineering and Construction (Botswana), prime contractor to the government’s WUC on the project, selected WEC Projects to be its EPC specialist water treatment partner to meet the design-and-build tender requirements of the WUC for the new Kasane plant. The project began and entered its design

phase in February 2021. WEC, together with fellow sub-contractor, Bergstan SA, are responsible for the completion of the full mechanical, electrical and telemetry scope of works for the plant.

The new facility itself will draw and treat raw water from the Chobe River. This is a major waterway, which forms the northern boundary of Chobe National Park and part of the national boundary with Namibia. From the river’s source as a small mountain spring in Angola, it travels through the Kalahari before reaching Botswana, finally becoming the Chobe at the border post of Ngoma. From there it continues to run along Botswana’s northern border before meeting the Zambezi, then onto, and over, the Victoria Falls.

To meet the potable water standards required, the new Kasane plant will use proven and well-designed processes on the Chobe’s water, including: coagulation, flocculation, lamella clarification, sand and carbon filtration, chlorine dioxide disinfection. According to WEC, “combining these unit operations within the treatment process will ensure the facility achieves its treatment objectives.”

The 30-month project is well underway with WEC Projects and Bergstan now onsite conducting mechanical and electrical installation activities. Commissioning will happen thereafter, prior to successful handover to the client in 2023.

Wayne Taljaard, managing director of WEC Projects, has said that once the plant is up and running it will “ensure a consistent supply of potable water to one of the country’s fastest growing regions, well into the future.” ■

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# Strong automotive potential gaining speed in SSA

According to a report by Fitch Solutions, while sub-Saharan Africa (SSA) currently has limited rewards against high risk at present, good long-term fundamentals means it could become a strong automotive manufacturing region in the future.

**F**itch Solutions' Autos Production Risk/Reward Index (RRI) quantifies and ranks a country's attractiveness within the context of the automotive industry, based on the balance between the risks and rewards of beginning or maintaining auto manufacturing operations.

Applying the index to key SSA countries, the company has noted the region has a cumulative score of 38.4 out of a possible 100, which is below the global average of 50.0. While this indicates that, at present, the environment is unfavourable for the industry, the report noted that good long-term fundamentals, such as low labour cost and supportive automotive policies, present the possibility that the region could become a strong automotive manufacturing region in the future. Rising incomes and the large young population also offer growth opportunities for vehicle producers, albeit from a low base.

## South African dominance

With a relatively large number of automotive component manufacturers present and a diversified set of automakers, South Africa has maintained its dominance in the SSA region, the report states.

The country now has an overall score of 55.7, up from 52.6, which is aided by its strong automotive industry policy and favourable competitive landscape. It is, however, limited by the cost and availability of utilities due to the state of its power sector. This is limiting further investment and causing automakers to develop their own electricity production. While long- and short-term economic risks remain high, the rising demand from SSA countries and the



Good long-term fundamentals mean SSA could become a strong automotive manufacturing region.

potential of free trade areas (a nod to the African Continental Free Trade Agreement) means opportunities could be inbound.

## Nigeria climbs to second

In the latest quarter's results, Fitch Solutions has identified that Nigeria has replaced Kenya in second position with a sizeable difference in overall scores. A large driving-age population has encouraged investment which has been bolstered by a competitive landscape and low wage costs. This has resulted in an overall score of 42.9.

However, the country's appeal has been dented by high risks and vulnerability to international oil price swings, often resulting in foreign currency shortages. In addition, there is little support given to companies operating in the country and imported new and used vehicles (unhampered by

tougher restrictions) flood the local market and undermine domestic brands.

## Kenya remains steady

Kenya has retained its well balanced risk and reward profile (33.5 and 35.0 respectively) to provide an overall score of 34.4. An attractive combination of favourably low-cost and abundant labour, along with a conducive industry policy, has enticed original equipment OEMs to set up assembly facilities in the country in recent years and these have often partnered with smaller local businesses.

Fitch Solutions noted that the country has an impressive growth potential which is aided by Kenya's industrial policy aimed at limiting used imported vehicles and implementing higher import tariffs for imported vehicles. ■

	Industry Rewards	Country Rewards	Rewards	Industry Risks	Country Risks	RISKS	RRI	Regional Rank	Global Rank
South Africa	78.5	33.4	60.5	68.3	34.8	51.6	56.9	1	24
Kenya	44.3	22.7	35.7	49.6	17.4	33.5	34.8	2	45
Nigeria	57.7	28.1	45.9	21.9	12.5	17.2	34.4	3	46
Ethiopia	32.1	17.4	26.3	23.7	2.4	13.0	21.0	4	56
Global Average	50.0	50.0	50.0	50.0	50.0	50.0	50.0	~	~
Regional Average	53.2	25.4	42.1	40.8	16.8	28.8	36.8	~	~

Sub-Saharan Africa - Autos Production Risk/Reward Index.





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