

**MIDDLE EAST ENERGY**

Powering the energy transition **P13**

**SMART CITIES**

Providing security, sustainability and habitability **P16**

**USED EQUIPMENT**

A lift for contractors during challenging times **P30**

**MINING**

Maximum performance in all phases of screening **P47**

# African Review

MARCH 2023

of BUSINESS and TECHNOLOGY

**P15**

## AIR CARGO

Ready to bolster business volumes once more

## CONEXPO-CON/AGG

**P32**

Stage is set for another record event

## POWER RENTALS

**P22**

Underpinning the energy market



**P34**



“Africa has a lot to give to the world when it comes to sustainability simply because African lifestyle is generally a sustainable and inclusive one.”  
Ghislaine Tessa Ketcha, CEO of Millenium Group

**50** YEARS  
SERVING BUSINESS IN AFRICA SINCE 1964





**MENA**  
**CONSTRUCTION 4.0**  
**FORUM 2023**

24 - 25 MAY | DUBAI - UAE

150+ DELEGATES

30+ EXPERT SPEAKERS

10+ CASE STUDIES

15+ CONSTRUCTION TECH DEMOS

# EXPLORE HOW CONSTRUCTION DIGITALISATION IS SET TO TRANSFORM THE FUTURE OF PROJECT DELIVERY

## SPEAKERS INCLUDE



AZIZI



DAMAC

DUBAI  
HOLDING

EMAAR

energy  
institute

شركة القابضة  
FAM HOLDING P.S.C

KEO



OMNIMUM

Red Sea  
Global

SELECT  
GROUP

Turner

SOBHA

FOR SPEAKING AND SPONSORSHIP OPPORTUNITIES CONTACT  
**VINAY NAIR** on **+9714 448 9260** or **vinay.nair@alaincharles.com**



Cover picture: Kenya's Astral Aviation has signed an MoU with Etihad Cargo to boost trade between Africa and the Middle East.

© Astral Aviation

Cover Inset: Ghislaine Tessa Ketcha, CEO of Millenium Group

© Ghislaine Tessa Ketcha

**Editor: Robert Daniels**

Email: robert.daniels@alaincharles.com

**Feature Editor: Martin Clark**

Email: martin.clark@alaincharles.com

**Editorial and Design team:** Prashanth AP, Fyna Ashwath, Miriam Brtkova, Praveen CP, Shivani Dhruv, Matthew Hayhoe, Leah Kelly, Rahul Puthenveedu, Madhuri Ramesh, Madhurima Sengupta, Louise Waters and Minhaj Zia

**Publisher:** Nick Fordham

**Head of Sales:** Vinay Nair

Email: vinay.nair@alaincharles.com

**Magazine Manager:** Jane Wellman

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

Email: jane.wellman@alaincharles.com

**India TANMAY MISHRA**

Tel: +91 98800 75908

Email: tanmay.mishra@alaincharles.com

**Nigeria BOLA OLOWO**

Tel: +234 80 34349299

Email: bola.olowo@alaincharles.com

**UK RICHARD ROZELAAR**

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

Email: richard.rozelaar@alaincharles.com

**USA MICHAEL TOMASHEFSKY**

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

Email: michael.tomashefsky@alaincharles.com

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

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

**Production:** Rinta Denil, Ranjith Ekambaram, Nelly Mendes and Infant Prakash

E-mail: production@alaincharles.com

**Chairman:** Derek Fordham

**Printed by:** Buxton Press

**Printed in:** FEBRUARY 2023

**ISSN:** 0954 6782

#### SUBSCRIPTIONS:

To subscribe: visit [www.africanreview.com/subscribe](http://www.africanreview.com/subscribe)

For any other enquiry email [circulation@alaincharles.com](mailto:circulation@alaincharles.com)

**Alain Charles Publishing**

Serving the world of business

# Editor's Note

Welcome to the March issue of African Review, bringing you the latest news and insights around the continent's key industries to keep your business flourishing.

While geopolitical developments are waving a blanket of economic uncertainty over the globe, the will to prosper in the face of these challenges is palpable; nowhere was this more apparent than at the recently-concluded Investing in African Mining Indaba. Our review of the Cape Town conference, where Africa's mining community gathered to unlock opportunities and investment, spotlights the pressing concerns, such as ESG, which were discussed (page 38).

In construction, we explore the lack of female representation in the industry alongside promising environmental initiatives in an exclusive interview with Ghislaine Tessa Ketcha, CEO of Millenium Group, following her double win at The Big 5 Construction Impact Awards 2022 (page 34). We also look ahead to the upcoming CONEXPO-CON/AGG conference and explore some of the solutions that will be on display in Las Vegas (page 32).

Elsewhere, our air cargo report tracks the factors driving the sector's recovery since its dip during the pandemic (page 15) and we assess some of the energy sources being stimulated to help the continent meet its energy requirements (pages 24 and 25).

These are but some of the features that make up our March issue, alongside our regular round-up of news that is shaping the industries that matter to you. To remain in the know, read ahead, visit our website and remember that African Review remains your faithful business partner to keep you moving forward.

Robert Daniels, *Editor*

# Contents



15

## Air cargo

While serving as a lifeline for the continent's aviation industry during the pandemic, air cargo has still struggled since the outbreak of Covid-19. However, a range of new initiatives, partnerships and technology solutions are helping to bolster business volumes once more.



16

## Smart cities

African leaders are increasingly turning to smart city initiatives to ensure safety, security and habitability for the continent's swelling metropolitan population.

24

## Geothermal

As part of its Vision 2030 national development strategy, Kenya is pushing to increase the power capacity of this vital resource.

25

## Nuclear power

Often regarded as an unattainable ambition, serious developments in Egypt and Kenya could mean this energy source will play a larger role in the continent's energy mix in the near future.

30

## Used equipment

Against an uncertain backdrop, the used equipment market is providing a welcome lift for contractors.

32

## CONEXPO-CON/AGG

Already a firmly established name within the global construction community, this year's edition is expected to be bigger and better than ever before.

38

## Mining Indaba review

Highlights from the recently concluded Investing in African Mining Indaba where the continent's mining community converged under the key theme of 'Unlocking African Mining Investment: Stability, Security and Supply'.

47

## Screens

Haver & Boecker Niagara's Steve Fair provides advice on blending screen media for maximum performance.





## UD Trucks expands operations in MEENA

UD Trucks, a Japanese truck manufacturer, has continued its journey of growth throughout the Middle East, East and North Africa (MEENA) region by registering an average of 30% growth for the second year in a row.

The company has stated that this boost strengthens its position as a market leader in a largely European-dominated regional truck market which is bolstered by the positive stories around the company over the past 12 months. For instance, sales of heavy-duty trucks in Qatar were up by 35% thanks to the brands reputation for producing robust and modern trucks. Meanwhile, Saudi Arabia, UD Trucks' largest market by volume, enjoyed a 32% increase in sales, and the brand has now expanded into every segment, from construction and logistics to waste management.

In Africa, UD Trucks delivered a significant number of vehicles primarily intended for general cargo use, despite the hard economic conditions. In 2023, further countries are set to be added to the company's operations as the brand continue with its plans for expansion on the continent.

UD Trucks and its partners have invested significant time and resources in developing a network of workshops across the region to meet customers' needs. UD Telematics is a key USP for the brand as it helps customers by providing more information in real-time about vehicle location, speed, fuel consumption, driver behaviour and other relevant data to improve uptime and total cost of ownership. By optimising its fleet management processes, UD Trucks helps fleet managers to increase efficiency and reduce costs, resulting in improved customer satisfaction.

Mourad Hedna, president of UD Trucks MEENA, commented, "2022 has been an excellent year for UD Trucks in the region, a confirmation that its trucks, services and values are well appreciated by our customers. UD is clearly recognised as a brand providing its customers with efficient, reliable, and cost-effective products and services.

"With a strong foundation in place, we are on track for another successful year in 2023. We will continue to work on our growth and customer satisfaction in all areas."



Image Credit: UD Trucks

**In 2023, further countries are set to be added to the company's operations.**

## NEW PHASE OF CITYGATE CONSTRUCTION IN EGYPT

Qatari Diar, a large real estate developer, has awarded the new phase of CityGate New Cairo in Egypt.

The construction agreement was signed between Bawabat Al- Sharq New Cairo Real Estate Investment, a company under Qatari Diar Egypt, and Consolidated Contractors Company (CCC).

This agreement inaugurates the construction of Opal 3D-A and Garnet 3D-B at CityGate New Cairo, a self-sustaining city in the heart of New Cairo. Abdullah bin Hamad Al-Attayah, CEO of Qatari Diar Real Estate Investment Company, commented, "Implementing the new phase of CityGate New Cairo marks an important milestone for Qatari Diar in Egypt as the project will value over US\$12bn once completed. We are pleased to announce that our valued partner CCC will be administrating the new phase of CityGate New Cairo, in the wake of their notable success in the project's first phase.

"The new phase of CityGate New Cairo comes in line with our strategy in the Egyptian market. We focus on implementing large-scale projects with the highest international standards while integrating them with a green and sustainable approach to support the Egyptian economy as well as the real estate sector. On the other hand, our projects consistently contribute to local job market with numerous job opportunities throughout the construction phases and after they're completed."

Jamal Bahlawan, CEO of CCC, added, "It is with great pleasure that we continue our successful partnership with Qatari Diar in Egypt and across the Arab world with the construction of the new phase. As the main contractor of the first phase of CityGate New Cairo, encompassing the construction of 430 units, we are committed to deliver the highest quality in line with what we have priorly achieved."

## GREECE-AFRICA POWER INTERCONNECTION BOOSTED BY COLLABORATION

McDermott and Eunice Energy Group have announced the signing of a memorandum of understanding (MoU) for cooperation on the 2GW electrical interconnection between Greece and Egypt.

Eunice Energy Group is leading the transnational consortium between Greece and Egypt for the Greece-Africa Power (GAP) Interconnector project, which aims to contribute to regional energy security and stability by facilitating intercontinental clean energy transfer. McDermott, a leader in engineering, procurement, construction and installation (EPCI) for subsea and deepwater, will be providing engineering and construction guidance.

George Kalavrouziotis, Eunice Energy Group CEO, said, "The 2GW interconnector will help Egypt export its surplus power to Europe, and enable Greece to export its domestically produced green energy into the Balkans and Italy, thus contributing to Europe's energy independence from Russia's energy resources."

## ► BRIEFS

### Oil Dynamics reaches Algeria milestone



Image Credit: Oil Dynamics

Oil Dynamics is also active in other North African countries.

Oil Dynamics, an artificial lift specialist, has completed one year of trouble-free operation with its first pumping systems in Algeria. The custom-made pump systems were designed by the company's engineering office to match the application and, when in Algeria, an experienced Oil Dynamics field service engineer supported the local partner, Atlas Fluides & Services, with installation and commissioning of the pumps for the customer, Sonatrach.

### Eni launches gas development in Libya



Image Credit: ENI

'Structures A&E' is the first major energy project in the country since the early 2000.

ENI and the National Oil Corporation of Libya have agreed to develop 'Structures A&E', a strategic project aimed at increasing gas production to supply the Libyan domestic market and ensure export to Europe.

The project consists of the development of two gas fields located offshore Libya and the construction of a carbon capture and storage facility. The overall estimated investment of US\$8bn will significantly contribute to the Libyan economy.

# Be a part of the energy transition.

20,000+ energy professionals | 800+ exhibitors  
170 countries represented | 18,400 SQM

-  Renewable & Clean Energy
-  Transmission & Distribution
-  Backup Generators & Critical Power
-  Energy Consumption & Management
-  Smart Solutions



Scan to register for free  
#MEE2023

Diamond Sponsor



Platinum Sponsors



Gold Sponsors



Silver Sponsor



Transmission & Distribution Sector Sponsor



Technology Partner



Supporting Exhibitor Partners



Energy Markets Information Partner



Outdoor Advertising Partner





## Teraco secures syndicated loan for growth

Teraco, a leading carrier-neutral data centre and interconnection services provider in South Africa, has announced the conclusion of a syndicated loan facility worth US\$659.2mn. The new facilities mature in December 2028, providing a 2.9-year extension of the weighted average tenor.

The growth funding is for the expansion of Teraco's key interconnection hubs located within the Isando, Bredell, and Cape Town campuses, and a significant renewable energy generation programme aligned to the company's long-term Environmental, Social and Governance (ESG) goals. Teraco's new data centre builds are designed to put sustainability first, minimise environmental impact, reduce energy consumption, and minimise water usage. Teraco's investment in digital infrastructure supports the growing demand by enterprises and cloud providers for world class data centre facilities.

"As a leading carrier-neutral data centre and interconnection solutions provider, Teraco is dedicated to protecting, connecting, and growing the enterprises and ecosystems shaping Africa's digital future sustainably and responsibly. As we continue our journey, our ESG goals form the cornerstone of how we grow our business, engage with employees and suppliers, support our clients, and minimise our impact on the environment," said Samuel Erwin, chief financial officer at Teraco.

"We are committed to managing our environmental impact sustainably by optimising our use of energy and natural resources. We remain focused on efforts to create energy-efficient data centres that address our environmental challenges, and we are grateful for the continued support from partners that share our vision," he added

As most enterprise organisations accelerate their digital transformation strategies and place greater focus on cloud adoption strategies, these same businesses are looking for the ability to scale in a sustainable way. This is a source of competitive advantage in a world where fast and secure interconnection with strategic business partners is a priority.



Samuel Erwin, chief financial officer at Teraco.

## GREEN GIRAFFE SUPPORTS THREE RENEWABLE ENERGY PROJECTS

Green Giraffe has supported EDF Renewables and its partners, in achieving financial and commercial close of Phezukomoya, San Kraal and Coleskop wind energy facilities.

The three projects, which were developed by a consortium led by EDF Renewables, together with its local BEE partners, H1 Holdings Ltd and GIBB-Crede, as well as a local community trust, were awarded in the fifth bid window of the Renewable Independent Power Producer Procurement Programme (REIPPPP).

Phezukomoya, San Kraal and Coleskop are three 140MW onshore wind farms which will be located in the Umsobomvu Local Municipality, on the boundary of the Eastern Cape and Northern Cape provinces. The projects were awarded preferred bidder



Phezukomoya, San Kraal and Coleskop are three 140MW onshore wind farms.

status in October 2021 and in November 2022, Phezukomoya and San Kraal reached financial close first, shortly followed by Coleskop which reached financial close on the 18th January 2023.

The projects will sell power to Eskom under a 20-year power purchase agreement. In addition, the main transmission substation will be constructed on behalf of Eskom and transferred to Eskom on completion.

Green Giraffe has been supporting EDF Renewables on this transaction since April 2021, acting as exclusive financial advisor throughout the bidding phase all the way until financial close.

## DBSA & SADC WATER FUND LAUNCH WATER SUPPLY PROJECT

The DBSA, as the implementing partner of the SADC Water Fund, a regional fund for water and basic sanitation, is launching a US\$9.4mn basic water and sanitation project in Kazungula, Zambia.

The first phase of the project will include the construction of a new water intake structure abstracting from the Zambezi River upstream of the Kazungula bridge. This phase will also include construction of a new treatment plant, larger storage reservoirs, construction rehabilitation and the extension of water transmission and distribution pipelines. This will significantly improve access to potable water and ensure reliability of supply to Kazungula town. The second and third phases will focus on improving the sanitation system. "This project highlights the importance of developmental financial partnerships in the realisation of SADC's regional integration agenda, which seeks to provide quality water and sanitation services," said Chuene Ramphela, group executive of Infrastructure Delivery Division at the DBSA.

## Trigon completes extension in Namibia



Map of Kombat Project.

Trigon Metals Inc. has entered into a definitive agreement to expand its land holding in Namibia, through the acquisition of an exclusive prospecting licence which surrounds Trigon's Kombat and Gross Otavi projects in the Otavi Mountainland, a region associated with high grade copper and silver mineralisation.

## Scatec sells Upington plant in South Africa



The plant is expected to deliver an annual production of 650GWh.

Scatec ASA, a leading renewable energy company in emerging markets, has signed an agreement with a subsidiary of STANLIB Infrastructure Fund II to sell its 42% equity share in the 258MW Upington solar power plant for a gross consideration of approx. US\$54.6mn. "We are very pleased to secure a value accretive transaction and are confident that STANLIB will be a solid owner of the asset going forward," said Scatec CEO, Terje Pilskog.



## NEW Purpose-built State-of-the-art Medium Voltage Lab in the Middle East is NOW Operational!

BASEC is the global leader in product testing and certification services for the cable industry across numerous sectors, including construction, electrical installation and power distribution, rail, marine, oil and gas and renewables.

- Low, medium and high voltage cable testing & certification, including quality management systems
- All-inclusive testing, including electrical, mechanical, material, chemical, fire and data communications

### Critical tests for MV:

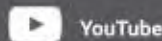
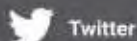
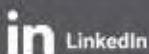
- Partial Discharge test
- Bending test
- Tan Delta - concerning voltage
- Tan Delta - concerning temperature
- Heating Cycle test
- Impulse Voltage test
- D.C. Voltage test on over sheath
- Adherence of Screens at Short Circuit Temperature test

BASEC is synonymous with quality and safety; our cable certification is trusted and respected worldwide.



## WHEN QUALITY MATTERS.

Learn more at [www.basec.org.uk/news/basec-news/](http://www.basec.org.uk/news/basec-news/)  
Follow us on



Call us on +44 (0)1908 267300  
[mail@basec.org.uk](mailto:mail@basec.org.uk)

Scan the barcode to  
download the app



SCAN ME

## Lekki Port and CMA CGM Group to aid trade volume growth

Du Ruogang, managing director of Lekki Port LFTZ Enterprise Limited (LPLEL), promoter of the Lekki Deep Sea Port, disclosed that Lekki Port will facilitate trade volume growth for Nigeria and increase the Gross Domestic Product (GDP) as part of the macro-economic benefits of the port to the economy.

Other benefits include improvement of external trade competitiveness through improved port efficiency; cost-effective port operations and services, and improved turnaround time for cargo handling and clearance; a reduction in delays in the supply of raw materials and equipment, as well as reduced costs of importations and charges such as demurrage, among others.

“With Lekki Port, Nigeria will witness a growth in maritime traffic and global trade and strengthen connectivity and capability to provide efficient and reliable services. Lekki Port will be a critical engine that will drive the Nigerian economy upon the commencement of operations. I am equally confident that it would help to reinforce Nigeria’s status as a regional maritime hub and enable many related industries to flourish,” Ruogang said.

The CEO of Lekki Freeport Terminal, operated by CMA Terminals, a subsidiary of the CMA CGM Group, Denrick Moos, highlighted that in addition to its state-of-the-art infrastructures, Lekki Port would become a new-generation container terminal, a game-changing infrastructure in Nigeria and West Africa. The Port is Nigeria’s first deep sea port and is equipped with 13 quay cranes for a capacity of 2.5 million twenty-foot equivalent units (TEUs) on a 1.2 km quay with a depth of 16 m; it will operate vessels with a capacity of up to 15,000 TEUs and become one of the largest in West Africa.

Through the new container terminal at Lekki Port, the CMA CGM Group will further develop its presence in Nigeria, the continent’s largest economy and population and the most critical consumer market in West Africa. It will consolidate its global African shipping and logistics network.

The CMA CGM Group also strengthened the region’s logistics and port infrastructures through significant investments as a global port operator with its subsidiary CMA Terminals.



Image Credit: LPLEL

The deepsea port has been officially completed and commissioned.

## YILPORT HOLDING SIGNS MOU FOR TAKORADI PORT

Global ports and container terminals operator, YILPORT Holding, has announced the signing of an MoU to operate the Takoradi Port in Ghana starting from April 2023. The agreement was signed in Istanbul, Turkey by YILPORT Holding’s chairman and CEO, Robert Yuksel Yildirim, and Takoradi Port’s operating company Ibis Tek’s chairman, Kwame Gyan and director Nana Yaw Boahene.

The signing ceremony was attended by Ernest Yaw Amporful, deputy head of mission at the Embassy of Ghana in Turkey.

YILPORT and Ibis Tek will establish a joint venture company of YILPORT Takoradi Port Management Company on 70-30 basis respectively to invest in and operate the Takoradi Port. The project scope is to develop the existing container terminal in three phases to reach up to 2.25 million TEUs annual capacity. The joint venture company, under the vision and management of YILPORT, will also develop multipurpose berths for liquid, bulk, and general cargo operations for about 20 million tons annual handling capacity.

YILPORT plans to build new access roads and gate facilities for Takoradi Port, in order to increase handling capacity and avoid traffic congestions. The plan is to invest more than US\$700mn in three phases to build and operate a state-of-the-art port complex. They will also have Tacotel Inland Terminal and Marshall Oil Jetty Terminal. Yilport plans to build a tank farm to handle 2.5 million tons of liquid products annually.

The company will expand the total length of the berths to 2.5 km and deepen the draft between 14 m and 16.5 m. This new deep-sea terminal will serve the West African corridor cargo in Ghana and Burkina Faso, Mali and Niger. YILPORT is expected to take over operations in the second quarter of 2023.

## SCHNEIDER ELECTRIC AND AMTEC TECHNIQUIP PARTNERSHIP INCLUDES NIGERIA

Schneider Electric and Amtec Techniquip, a leading provider of locally manufactured educational equipment in South Africa, are to extend their collaboration beyond the SADC region’s borders to include Nigeria.

“There is dire need for high-quality electrical and engineering training education equipment in Nigeria. Through our partnership with Amtec Techniquip we hope to emulate the success of our counterparts in southern Africa and provide students with equipment that will support and accelerate their studies as electricians and engineers,” said DL Steyl, project manager - access to education, sustainable development & academy at Schneider Electric.

Schneider Electric and Amtec Techniquip will provide tertiary institutions in Nigeria with the following training options: Domestic wiring solutions, Industrial Wiring Solution, The Industrial Automation Solution, The Home Automation bench, and The Solar solution.

## ► BRIEFS

### Côte d'Ivoire to receive 50MW PV solar plant



Image Credit: Adobe Stock

The solar project is fully developed by AMEA Power.

AMEA Power has signed a concession agreement and 25-year power purchase agreement (PPA) with the Government of Côte d'Ivoire for a 50MW solar PV project in the country. At a total investment of around US\$60mn, the solar project is being fully developed by AMEA Power under a Build-Own-Operate and Transfer (BOOT) model and will generate more than 85GWh of clean energy per year, enough power for around 350,000 people.

### Senegal receives improved digital education



Image Credit: Adobe Stock

The focus will be on digital education.

Nokia has announced a new collaboration with UNICEF to bridge the digital divide by helping to improve digital education and training in schools in select parts of Senegal. The project with UNICEF Finland and UNICEF Senegal will involve teachers, as well as students in underserved areas in Senegal. The focus will be on digital education and training activities so students can develop their digital skills, including coding.



## ZFM purchases third ECO concrete batching plant

Following its recent purchase of an ECO90 stationary concrete batching plant, a Mali-based contractor now owns three of the four units that make up the Eurotec ECO range.

Z For Mining (ZFM), which provides contracting services such as roadbuilding and the civil works of crushers, thickeners and mills, etc., for mines across the West African nation, immediately set the plant to work, producing all the concrete required for the extension of a SOMISY gold mine.

Soon after this, ZFM acquired a brand-new ECO50 model that was also installed at the Syama gold mine, where it supported the shotcreting of underground tunnels. Daily production output of both the ECO30 and the ECO50 varied between 10-100 cu/m in response to the needs of the project and client requests.

Most recently, ZFM took delivery of a brand-new Eurotec ECO90. Installed in the Mali capital, Bamako, this plant has already begun operations in January 2023, supplying ready-mix concrete to local contractors – many of whom will be involved in supporting the nationwide push to increase public housing construction.

With an output of up to 90 cu/m per hour with mixer size at 2 cu/m per batch, the ECO90 features a cement weigher and water weigher, both of which are accurately metered using load cells. Optional additive weighers can also operate in conjunction with Eurotec's in-house developed ECS process-control system software.

The ECS programme runs on a user-friendly Windows OS and helps to produce a precise and consistent blend. The robust steel structure and thick interior abrasion-proof linings of the ECO90's twin-shaft mixer ensure durable performance while mixing particles of up to 150 mm in diameter.

Transportation is both easy and economical. After arriving onsite, they can be quickly installed as they need little or no foundation. The aggregate bins are designed to enable materials to be loaded effortlessly, with minimal ramps.



Image Credit: Limece & Limhoff

**The Eurotec ECO90 uses proprietary ECS software to enable a precise and fast production rate.**

## TRADEMARK AFRICA LAUNCHES IN WEST AFRICA

TradeMark East Africa has rebranded to TradeMark Africa (TMA) and simultaneously officially launched its West Africa operations.

TMA has to date, made cumulative investments of more than US\$1.3bn in East Africa and the Horn to reduce the time and costs of trading across borders and to improve export competitiveness of African businesses. These have among other results slashed the time for traders to cross borders by 70% on average and for businesses to receive certification – often from many days to a number of hours. Its programmes have contributed to a 16.5% reduction in the total time it takes to transport a container on the Northern Corridor from Kenya's Mombasa Port to Bujumbura, Burundi.

As part of the pivot to West Africa, TMA will support the Secretariat of the African Continental Free Trade Area (AfCFTA), based in Accra, Ghana, to realise its vision of integrating the US\$3.4 trillion African market. The organisation will also work with regional economic communities (RECs) such as the Economic Community of West African States (ECOWAS) to boost regional economic integration and accelerate trade. Furthermore, it will work with member states to ensure governments and businesses benefit practically from the opportunities presented by these shifts – in particular, along the Lagos-Abidjan corridor. The successful implementation of the AfCFTA is predicted to boost incomes in Africa by US\$450bn by 2030.

At the same time, TMA announced that its new strategy will build on and scale up on its core strengths, to focus on facilitating development of digital and green trade corridors, to position Africa as a partner of choice for global off takers, while promoting inclusive trade that drives down poverty levels.

## RESPITE INCREASES GRID-CONNECTED CAPACITY

Activities under the new Regional Emergency Solar Power Intervention Project (RESPITE) have officially kicked off in Freetown to increase electricity access to millions of existing and prospective consumers in Chad, Liberia, Sierra Leone, and Togo. RESPITE aims to rapidly increase grid-connected renewable energy capacity and strengthen regional integration in the participating countries.

The project will help reduce emissions by financing the installation and operation of approximately 106MW of solar photovoltaic power with batteries and storage systems, 41MW expansion of hydroelectric power capacity, and by supporting electricity distribution and transmission interventions across the four countries. It also includes a regional approach, providing US\$20mn to help the West Africa Power Pool (WAPP) to enhance the potential for power trade in West Africa and to facilitate knowledge sharing among ECOWAS member countries.

## BRIEFS

### Ghana receives US\$4.8mn for reducing carbon emissions

Image Credit: Adobe Stock



Ghana received US\$4.8mn.

Ghana has become the first country in West Africa to receive payments from the World Bank's Forest Carbon Partnership Facility (FCPF) for reducing emissions from deforestation and forest degradation. FCPF paid the country US\$4.8mn for reducing 972,456 tons of carbon emissions for the first monitoring period under the programme (June to December 2019). Ghana has become only the second country to receive payments from FCPF after Mozambique.

### West African firms receive digital transformation boost



The partnership will bring analytic tools to companies.

Global analytics software provider FICO has announced a partnership with FPG Technologies & Solutions LTD to bring advanced decision management and analytics tools to companies. FPG will sell, implement and support FICO Blaze Advisor decision rules management system and FICO Xpress Optimisation, leading tools that businesses use to automate high-volume decisions, rapidly change strategies and leverage advanced analytics to improve performance.

## NEFC transforms operations with Infor M3

Infor, an industry cloud company, has announced that NEFC Group, a UAE-based holding company that operates dealerships supplying machinery and heavy equipment for sectors including construction, power generation, automotive and agriculture in the horn of Africa, has deployed Infor M3, a



Infor M3 is an equipment-focused enterprise resource planning (ERP) system.

powerful equipment-focused enterprise resource planning (ERP) system to help it gain greater control of its business while raising efficiency and agility.

The markets in which NEFC operates are experiencing rapid growth. The Middle East and Africa construction equipment market, alone, is anticipated to reach US\$5.4bn by 2027, according to research from Mordor Intelligence. The company is also looking to increase its presence in the agriculture sector, which is experiencing significant demand amid population growth averaging 3% per year in NEFC's areas of operation. NEFC has 10 subsidiaries in countries in the horn of Africa, including Ethiopia, Djibouti, South Sudan and Somalia, and has more than 1,000 employees across its operations and its Dubai-based headquarters. The company supplies heavy equipment from major brands, including Hyundai CE, Massey Ferguson, Nissan and Cummins. It also offers fully-fledged dealership services, providing integrated sales, support, and logistics services to a diverse customer base across its core sectors.

Due to its broad business interests and geographic footprint, NEFC was keen to simplify its processes and gain greater control and visibility of its operations. One of the challenges was the sheer volume of diverse parts and components being sourced from numerous vendors, which was difficult for the company to keep track of.

Since going live with Infor M3 in September, NEFC has gained full visibility of its operations including its inventory, while also automating processes including purchase orders and invoicing. The data analytics component of the dealer management system means that NEFC is now able to collect and analyse its data, helping it better understand its own business and markets. "By using Infor M3, we have transformed NEFC's operations, making previously complex, labour-intensive tasks simple and easy to execute with minimal use of human resources," said Hussain Alamoudi, CEO of NEFC Group.

## ITSCI APPROVES EASTINCO APPLICATION

Aterian Plc, an exploration and development company advancing its portfolio of Africa-focused critical and strategic metal assets, has announced that the International Tin Supply Chain Initiative (ITSCI) programme for responsible mineral supply chains has approved the Eastinco Limited application in Rwanda and granted membership status to the company.

The ITSCI programme supports better governance, human rights, and stability in conflict-affected areas and monitors supply chains allowing metal users to demonstrate responsible sourcing of raw materials within the framework of the ITSCI principles.

Charles Bray, chairman of Aterian, said, "The granting of the ITSCI membership is an important milestone for the company and unlocks the capability to build and develop a metals trading business in Rwanda and the wider Great Lakes Region of central Africa."

## CLEAN ELECTRICITY FOR RURAL MADAGASCAR

WeLight, a company co-owned by AXIAN Group, has secured US\$21mn in funding from a group of lenders including the European Investment Bank (EIB), to help 250,000 people in rural Madagascar gain first-time access to clean electricity. The group, comprised of the EIB, Triodos Investment Management and EDFI ElectriFI, a European Union-funded Electrification Financing Initiative, will fund the construction and development of small solar-powered mini-grids in over 120 villages in rural Madagascar.

"Africa has a unique opportunity to spearhead a low-carbon revolution while eliminating energy poverty on the continent," said AXIAN Group CEO Hassanein Hiridjee. "We are delighted that the European Investment Bank, Triodos Investment Management and EDFI ElectriFI are supporting Africa in reaching its clean energy potential."

The financing will help to connect as many as 45,000 households and businesses in Madagascar to the nation's power grid, enabling them to gain access to clean and affordable energy.

WeLight is owned by pan-African conglomerate AXIAN Group, as well as Norway's sovereign development bank Norfund and Sagemcom.

Decarbonisation and climate risk have been at the top of the Davos 2023 agenda. According to World Economic Forum research, climate-related risk disruptions, such as heatwaves, have surged by 96% in the past year alone while the top four most severe risks over the next 10 years are all environmental.

AXIAN launched New Energy Africa (NEA) in October, a division that will drive investment in both present and future renewable-energy projects across the continent.

## BRIEFS

### Swissport expands to Mombasa



The company is offering aviation ground services at 31 airports.

Swissport is adding Mombasa, Kenya, to its growing African network. With the new presence at Mombasa's Moi International Airport (MBA), Swissport is now offering aviation ground services at 31 airports across Africa. In Kenya, Swissport has been supporting airlines in Nairobi since 1997 where it also operates a cargo centre. Swissport started operations at the airport of the coastal city of Mombasa, Kenya, at the end of December 2022.

### ADC to give extra IT load



The expansion will be completed early next year.

Africa Data Centres (ADC) has broken ground on an additional data centre facility in Nairobi. The new build will see the existing facility on the adjacent piece of land expanded up to an extra 15MW of IT load.

ADC's expansion at the new site will be completed in the first half of 2024 and will bring five times more capacity than is currently installed.

The new data facility will begin with 5MW of IT load.



## Nokia to deploy next-generation optical transport network

Nokia has been selected by Liquid Intelligent Technologies to deploy a next-generation optical transport network connecting Kenya, Uganda, Rwanda, Democratic Republic of Congo (DRC), Zambia, Zimbabwe and South Africa. As part of the agreement, Nokia is deploying a first-of-its-kind terrestrial network connecting submarine landing stations in Kenya, South Africa and DRC to create a highway with the potential to handle massive traffic across sub-Saharan African.

As part of the agreement, Nokia is deploying 145 nodes of 1830 Photonic Service Switch (PSS) in the seven countries with a total design capacity up to 12 terabits per second. Once launched, the new, advanced optical transport backbone will enable Liquid Intelligent Technologies to address the growing demand for capacity and deliver submarine traffic to landlocked countries at an affordable cost.

Liquid Intelligent Technologies' new optical backbone covers the sites with a colourless and flexgrid ROADM network for improved agility and flexibility. The Generalised Multi-Protocol Label Switching (GMPLS) feature of the new optical transport network will help reduce network disruptions by enabling automatic rerouting to alternate paths as needed.

Shahzad Manzoor Khan, group chief technology officer at Liquid Intelligent Technologies, said, "Internet giants, established cloud service providers and other mega-organisations are demanding hyperscale data centres that can support high levels of performance, spikes in demand, and redundancy while enabling massive availability. Our new terrestrial fiber corridor is the first of its kind in Africa in terms of distance and capacity. We are thrilled to partner with Nokia on this prestigious project which will transform Africa's digital infrastructure and propel the region's economy."

Rajiv Aggarwal, head of Central East and West Africa (CEWA) market unit at Nokia, said, "Nokia's next-generation optical network will enable Liquid Intelligent Technologies to maintain its leadership position and emerge as a preferred partner of organisations requiring massive capacity. We are delighted that our technology and expertise will help Liquid Intelligent Technologies provide the best-in-class digital infrastructure to Africa's enterprises and will play a role in strengthening the digital infrastructure of the continent."

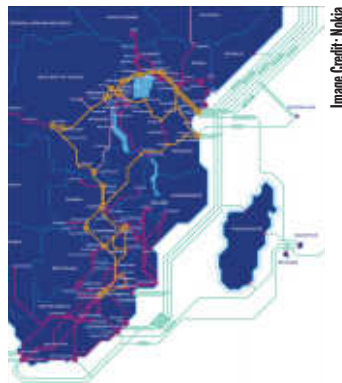


Image Credit: Nokia

The company is deploying a first-of-its-kind terrestrial network.

## GREENYELLOW AND MCB TO FINANCE SOLAR PLANT IN MAURITIUS

GreenYellow, an expert in solar photovoltaic production, and MCB have concluded a major transaction to finance a future solar photovoltaic power plant in Arsenal, located about 10 km north of Port Louis. With this partnership, GreenYellow and MCB have the common ambition to accelerate the energy transition of Mauritius by supporting the objectives of the Mauritian Government, led by the Central Electricity Board (CEB), in its programme to reduce the country's dependence on fossil fuels.

As the leader in photovoltaic production in the Indian Ocean region with more than 100MWp installed, GreenYellow is strengthening its presence in Mauritius by becoming one of the key contributors to the objectives of green energy production in the Mauritian energy mix, which should reach 60% by 2030.

With this new solar power plant, more than 20GWh of green energy will be produced each year to power more than 4,500 Mauritian homes. The new facility, which will be commissioned during 2023, will contribute to the reduction of carbon emissions in Mauritius, avoiding the emission of more than 13,000 tons of CO<sub>2</sub> per year.

Pierre Marouby, CEO of GreenYellow Indian Ocean, said, "This agreement marks a key step in the Arsenal project. This financing is in line with our model of being a long-term owner and operator of assets. We would like to thank our financial partner MCB for the confidence it has shown in GreenYellow to accelerate the energy transition in Mauritius."

Alain Law Min, CEO, MCB Ltd, said, "The financing of this new facility reflects our ambition to support the Government's objectives in producing clean, local and affordable energy."

## INTEGRATED PUMP TECHNOLOGY GROWS GRINDEX REACH IN AFRICA

Dewatering, slurry and sludge pump specialist Integrated Pump Technology will now be marketing the Grindex submersible pump range in more countries around Africa.

The company's success in southern Africa with the quality Grindex brand has led to an expansion of its geographic footprint, according to Jordan Marsh, general manager at Integrated Pump Technology. This feather in the company's cap comes with a five-year renewal of the Grindex distributorship - a step up from the previous three-year term. "We welcome this vote of confidence in our ability, and look forward to the new business that we anticipate from a number of exciting new markets," said Marsh. "Our strategy over the years has been to build traction across Africa through a systematic expansion into new markets."

The company will market Grindex in Angola, Gabon, Kenya, Malawi, Rwanda, Tanzania and Uganda.

## BRIEFS

### dnata and partners to deliver world-class services at ZNZ



Image Credit: dnata

Launch of operations at ZNZ.

dnata, a global air and travel services provider, has celebrated the launch of its operations at Zanzibar Abeid Amani Karume International Airport (ZNZ) with its partners Emirates Leisure Retail and SEGAP, a joint venture between airport infrastructure and operations specialists Egis, and private equity fund manager AIIM. The three companies will work closely together to deliver world-class services for airlines and passengers at the newly-built international terminal of ZNZ.

### Toggle launches B2B solution for SMEs in Rwanda



Image Credit: Toggle Market

The platform offers direct access to financing.

Toggle Market has announced the launch of Toggle Finance, its innovative B2B product aimed at SMEs seeking supply chain trade finance and payable financing alternatives, to its new customer base in Rwanda. This innovative solution transforms B2B e-commerce by providing SMEs direct access to financing for their operational purchasing needs. Through Toggle Finance, customers can receive a flexible B2B BNPL (Buy Now Pay Later) solution.

## Upcoming Events Calendar 2023

### MARCH

7-9

#### AFRICA ENERGY INDABA

Cape Town, South Africa  
<https://energyindaba.co.za>

7-9

#### MIDDLE EAST ENERGY

Dubai, UAE  
<https://www.middleeast-energy.com>

7-9

#### SECUREXPO EAST AFRICA

Nairobi, Kenya  
<https://www.securexpoeastafrica.com>

13-16

#### NAEPEC

Barcelona, Spain  
<https://naepec.eu>

14-16

#### PROPAK EAST AFRICA

Nairobi, Kenya  
<https://www.propakeastafrica.com>

14-18

#### CONEXPO-CON/AGG 2023

Las Vegas, USA  
<https://www.conexpoconagg.com>

30-1 April

#### MEGA CLIMA KENYA 2023

Nairobi, Kenya  
<https://megaclimaexpo.com>

### APRIL

17-21

#### HANNOVER MESSE

Hannover, Germany  
<https://www.hannovermesse.de>

18-20

#### INTERMODAL AFRICA

Durban, South Africa  
<http://www.transportevents.com/ForthcomingEventsDetails.aspx?EventID=EVE191>

### MAY

9-11

#### SECUREX WEST AFRICA

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

16-18

#### ENLIT AFRICA

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

23-25

#### OMC RAVENNA

Ravenna, Italy  
<https://www.omc.it/en>

## Uniting Africa's energy ecosystem

From 16-18 May 2023 at the Cape Town International Convention Centre (CTICC) Enlit Africa 2023 will return as a forum for Africa's energy community to meet and inspire each other.

The conference will feature an unrivalled exhibition, showcasing the latest technology and services on offer in the sector under the theme 'The multi-dimensional, multi-sectoral energy transition'. Around 368 exhibitors, across digital and live, are expected to present their solutions to a combined audience of around 200,000. In doing so, they will be able to meet local partners, build brand awareness, generate leads and generally expand their footprint on the continent.

At the conference, keynotes will be delivering their expertise alongside various content presented in speaking hubs on the expo floor. Conference delegates will also be able to enjoy the networking and site visits that the event has popularised for over two decades. In 2022, Enlit Africa focused on



Africa's just energy transition and this year, the lens adjusts to Just Energy Transition Investment and South Africa's Just Energy Transition Investment Plan. In doing so, speakers and attendees will investigate where the green financing will come from and what are the capacity requirements to make South Africa's plan a reality. Understanding the plan gives context to the multi-sectoral elements that make up the overall roadmap to a low-carbon future.

"We are excited to explore the various elements of Just Energy Transition investments, not only in South Africa, but across the continent as a whole. Understand where the money is coming from, and how it will be invested will give us a clear picture of the challenges and opportunities the transition will bring. Because each country's transition will be unique, this is an opportunity to be innovative in the way we plan Africa's future," said Claire Volkwyn, head of content for Enlit Africa.

The event will also explore Africa's energy transition ambitions which are currently being tested in the face of a global recession, rising poverty, unemployment and falling utility revenue. It will also delve into renewables and the new landscape facing IPPs, shining a light on regional energy developments.

Volkwyn added, "We look forward to welcoming the industry back to Cape Town for our first event with no Covid-19 restrictions. We had a wonderful event in 2022 despite the restrictions under which we operated and know that 2023 will exceed expectations."

Enlit Africa includes a live event, exhibitions, roundtables, co-located events and exclusive one-on-one interviews with leaders in the energy sector. In addition, there will be product launches, innovative technology showcases, and more.

More information can be found at <https://enlit-africa.com/>



# Middle East Energy to unpack MEA's challenges and opportunities

Middle East Energy, the exhibition and conference powerhouse, is set for the biggest showing in its 48-year history when it opens at the Dubai World Trade Centre from 7-9 March 2023.

**F**or the first time, the event will host a strategic conference, the only high-level forum exclusively focused on unpacking today's complex opportunities and challenges for senior energy and utilities decision-makers in the Middle East and Africa (MEA).

The conference, themed 'Powering The Energy Transition', has been launched by Middle East Energy organiser, Informa Markets, as energy leaders look for fresh insights into enabling sector transition, efficiency, supply resilience and sustainability.

"For almost 50 years, Middle East Energy has brought together global buyers and sellers who have advanced the sector, but the 2023 event comes at a pivotal time in the industry's evolution as worldwide energy challenges impact economic and social performance, fuelling intense governmental and consumer pressure to find solutions," explained Azzan Mohammed, Informa's exhibition director, Energy portfolio – MEA.

Over the event's three days, the Strategic Conference will deep-dive into the planning and policies that will drive MEA's future energy outlook and examine ways of decarbonising the energy and utilities sectors, and drive industry-wide digitalisation and innovation.

Unprecedented challenges such as a growing hydrogen demand, and need for investment and collaboration to tackle carbon emissions has boosted interest in the event – more than 20,000 energy professionals are now forecast to attend. Over 800 exhibitors from 170 countries are so far confirmed for the exhibition's five dedicated product sectors of backup generators and critical power, transmission and distribution, energy conservation and management, smart solutions as well as renewables and clean energy.

"Registrations are pouring in, and all the signs are for a record turnout," added Mohammed. "And with companies looking to invest in alternative and technology-led solutions, we also envisage the show beating the onsite business deals tally of the last show which totalled over US\$705mn."

Alongside the Strategic Conference, the event will also host the Intersolar Middle East



Image Credit: Middle East Energy

**More than 800 exhibitors from 170 countries are confirmed for the exhibition's five dedicated product sectors.**

Conference, in partnership with Intersolar and Electric Energy Storage, to unearth insights into the transformative global dynamics of renewables. The Forum is designed to be an unrivalled platform for both public and private sectors to explore critical issues, key developments, investment opportunities, and rising energy ecosystem trends.

Technical Seminars will explore the practical application of the latest sector research, innovation, and technological advancements empowering stakeholders building, operating, and maintaining power plants, as well as transmission and distribution grids. Meanwhile, newly introduced CEO Roundtables will see industry leaders engage in peer-to-peer discussions focused on emerging market opportunities in the renewables and critical and backup power sectors, as well as grid investment plans.

## Driving business

The 2023 event will also see the return of Middle East Energy's successful Hosted Buyer Programme, which brings key industry stakeholders, investors, and suppliers from across

the globe in direct contact with more than 100 direct purchasing authorisers and influencers to explore business opportunities. The programme has a strong track record of business development and has won acclaim from both sides of the buying equation.

Caroline Chema Eric, a public-private partnerships consultant with the World Bank, was hosted at the last event and noted, "The Hosted Buyer programme was incredible, from the preparation and logistics to attend the show and conference. I was looking for contacts as the World Bank is preparing a number of projects in the power sector and my role is to find credible private sector actors for various components from generation to transmission distribution and also product suppliers, and I found them."

Sponsors include Al Fanar, Baudouin, and Ducab at this year's event. ■

Find out more about Middle East Energy at: <https://www.middleeastenergy.com/en/home.html>

Register for the event at: <https://middleeastenergy.me/RegisterNow>

# AFRICAN REVIEW / ON THE WEB

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

## MAERSK AND MSC AGREE TO TERMINATE 2M ALLIANCE



Image Credit: Maersk

*When introduced, the agreement had a minimum term of 10 years with a two-year notice period of termination.*

Maersk A/S, an entity under A.P. Moller – Maersk, and MSC Mediterranean Shipping Company (MSC) have mutually agreed to terminate the present 2M alliance.

Coming into effect in January 2025, the announcement will end the agreement signed between the two entities in 2015. 2M has served as a container shipping line vessel sharing agreement with the aim of ensuring competitive and cost-efficient operations. When introduced, the agreement had a minimum term of 10 years with a two-year notice period of termination.

The companies have stated that this announcement has no immediate impact on the services provided to customers using the 2M trades. Each company's customer teams will communicate with their respective clients to support during, and beyond the phase-out of the 2M alliance.

In a joint statement, Vincent Clerc, CEO of A. P. Moller – Maersk, and Soren Toft, CEO of MSC, commented, "MSC and Maersk recognise that much has changed since the two companies signed the 10-year agreement in 2015. Discontinuing the 2M alliance paves the way for both companies to continue to pursue their individual strategies.

"We have very much appreciated the partnership and look forward to a continued strong collaboration throughout the remainder of the agreement period. We remain fully committed to delivering on the 2M alliance's services to customers of MSC and Maersk."

## GENIE ANNOUNCES NEW PLATFORM AVAILABILITY IN EMEA REGION



Image Credit: Genie

**S-65 XC with the 4 m platform.**

Genie, which provides lifts and telehandlers for jobsites worldwide, has announced that its 13 ft / 4 m platform for boom lifts is now available for use on three Genie XC (Xtra Capacity) boom lifts in North America and the EMEA region (Europe, Middle East, Africa and India).

Logan Wood, Genie associate product manager, commented, "This new platform offers benefits for equipment owners and operators. Because the expanded work space allows operators to cover more area, the number of boom movements required to get a job done can be cut in half, significantly boosting jobsite productivity. At the same time, because the platform is compatible with multiple Genie boom lift models and can be swapped for the machine's standard platform the same day, it also offers rental companies a simple, cost-effective way to boost the versatility of the booms in their fleet."

Compatible with Genie S-45 XC, S-65 XC and S-85 XC boom lifts, the 13 ft / 4 m platform is especially well suited for tasks which involve an extensive working area, such as renovation and painting of buildings and window cleaning and cladding, as well as jobsites with limited space to maneuver on the ground.

After following instructions to install the 13 ft / 4 m platform and calibrating the machine, the S-45 XC, S-65 XC and S-85 XC can take up to two workers to height and deliver a 600 lb (272 kg) lift capacity.

## IEA: RENEWABLES TO DOMINATE GROWTH OF ELECTRICITY SUPPLY OVER THE NEXT THREE YEARS



Image Credit: Adobe Stock

*Renewables are set to dominate the growth of the world's electricity supply over the next three years, according to the IEA.*

Renewables are set to dominate the growth of the world's electricity supply over the next three years as, together with nuclear power, they are likely to meet the vast majority of the increase in global demand through to 2025, according to a new IEA report.

After slowing slightly last year to 2% amid the turmoil of the global energy crisis and exceptional weather conditions in some regions, the growth in world electricity demand is expected to accelerate to an average of 3% over the next three years, the IEA's Electricity Market Report 2023 finds.

More than 70% of the increase in global electricity demand over the next three years is expected to come from China, India and Southeast Asia, although considerable uncertainties remain over trends in China as its economy emerges from strict Covid restrictions. China's share of global electricity consumption is currently forecast to rise to a new record of one-third by 2025, up from one-quarter in 2015. At the same time, advanced economies are seeking to expand electricity use to displace fossil fuels in sectors such as transport, heating and industry.

IEA executive director, Fatih Birol, said, "The good news is that renewables and nuclear power are growing quickly enough to meet almost all this additional appetite, suggesting we are close to a tipping point for power sector emissions. Governments now need to enable low-emissions sources to grow even faster and drive down emissions so that the world can ensure secure electricity supplies while reaching climate goals."

## ENGEN COMBINES WITH VIVO ENERGY TO CREATE PAN-AFRICAN ENERGY DISTRIBUTOR



Image Credit: Engen

*The new group will have more than 3,900 service stations across 27 African countries.*

Vivo Energy, a major pan-African retailer and distributor of fuels and lubricants, and Engen, which boasts around 1,300 service stations across the continent, have combined their respective African businesses to create one of the largest energy distribution companies in Africa.

The new group will have more than 3,900 service stations and more than two billion litres of storage capacity across 27 African countries.

Petronas will sell its 74% shareholding in Engen to Vivo Energy at completion, while Phembani Group will continue its strong association with Engen and remain invested as a 21% shareholder in the South African business.

Stan Mittelman, CEO of Vivo Energy, said, "Four years ago, we acquired the Engen business in nine African markets, and have since worked to enhance and develop these. Vitol's acquisition of 100% of Vivo Energy last year brings more opportunity to grow even faster.

"Completion of this transaction, which reunites the Engen brand across Africa, will be a step change in our growth and represents a significant commitment to the South African market whilst enhancing Vivo Energy's portfolio in other important markets."

Seelan Naidoo, managing director and CEO of Engen, commented, "This is an exciting opportunity for Engen to build on its market leading position in South Africa and a number of southern African countries."



# Africa's air cargo sector is ready for take off

A range of new industry initiatives, partnerships and technology solutions seek to streamline Africa's air cargo sector and bolster business volumes once more.

**A**ir cargo stood out as a lifeline during the Covid-19 crisis, supporting vital supply chains and propping up airline revenues after passenger numbers tumbled. Yet it is fair to say that Africa's airlines have faced a very tough time since 2019.

While a recovery is underway, as businesses claw back both passenger and cargo traffic, much damage has already been done. According to the African Airlines Association – which represents 44 airlines across the continent – revenue losses among the region's airlines for 2022 are estimated at about US\$3.5bn, equivalent to a fifth of 2019's full year revenues.

Nonetheless, business is regaining momentum. In November 2022, traffic and airlines capacity deployed reached 85.7% and 84.2% of the 2019 level respectively. Seven African airlines have even surpassed the number of international routes they operated before Covid-19.

## Embracing the challenge

Other challenges are looming for the sector, however, including a broad industry commitment to achieving net zero emissions by 2050, at the same time as higher jet fuel prices are pushing up costs. Navigating this landscape presents a big test for the major airlines, such as South African Airways, Ethiopian Airlines and Kenya Airways. But given Africa's long-term growth trajectory, there is real opportunity for those airlines ready to face the challenge with a mix of innovative thinking, embracing new technology and forging the right partnerships.

In January, Kenya Airways' cargo unit, KQ Cargo, along with Astral Aviation, a dedicated cargo airline based at Jomo Kenyatta International Airport, signed a



Kenya Airways Cargo and Astral Aviation have inked a codeshare agreement to boost trade between Africa and the Middle East.

Image Credit: Astral Aviation

codeshare agreement to boost their trade with the Middle East. KQ Cargo will put its codeshare flight numbers on Astral Aviation flights originating from Dubai in the United Arab Emirates coming into Nairobi for onward distribution within Africa.

The agreement is expected to boost trade and commodity movement from the Middle East into Africa by leveraging the strengths of the two operators in the Nairobi cargo hub at Jomo Kenyatta. Kenya Airways cargo director, Dick Muriangi, said the deal will provide both airlines' customers with more options to boost trade between the UAE and Africa.

Sanjeev Gadhia, Astral Aviation's chief executive, said the codeshare agreement – a first among two major players in the cargo sphere in Africa – will lead to “a more efficient schedule and increased capacity for African traders wishing to bring in goods from the Middle East.”

Astral Aviation is the fastest growing cargo airline in Africa and

operates a fleet of 15 cargo aircraft to more than 50 destinations across the continent, from its hubs in Nairobi, Johannesburg, Liege, Dubai, and Hong Kong. During the pandemic, it contracted Kenya Airways repurposed Dreamliners to carry Covid-19 related materials from Guangzhou, China to Nairobi for onward connection to the rest of Africa. Earlier this year, Astral also announced a new partnership with Air Logistics Group, with the aim of increasing market-share for its perishables services into Europe.

## Technological aid

Technology is also helping Africa's cargo airlines claw back some of the ground lost in recent times.

Ethiopian Airlines has just partnered with MailAmericas, a private postal operator and gold member of the committee for the Universal Postal Union, to develop competitive cross-border e-commerce services within Africa and the Middle East using Addis Ababa as a hub.

Ethiopian will offer air transport services for carrying goods across its network, while MailAmericas will provide its market expertise and the know-how it has gained in Latin America and Africa, where it has networks in more than 40 countries.

The airline is currently building an e-commerce hub in Addis Ababa with a total annual capacity of 150,000 tons per annum to boost its logistics service and capacity.

Fully dedicated for e-commerce logistics operations, the new hub will also be equipped with an automated sortation system plus electronic transport vehicles to ensure the smooth handling of shipments ranging from small parcels to boxes, skids, and built-up units.

Tomas Miguens, president of MailAmericas discussed how the tie-up with Ethiopian Airlines “will grant every customer a better shopping experience, improving delivery time and traceability of their packages.” ■

Smart cities are becoming increasingly under focus across the globe.

# The smart choice

As Africa's urban populations swell, smart cities are helping to improve security, sustainability and habitability.

Image Credit: Adobe Stock

According to the African Mayoral Leadership Initiative, which provides mayors and governors tailored support to hone visions for their cities, the number of people living in cities across the continent is expected to double by 2050, reaching 1.2 billion. This represents the most rapid rate of urbanisation in the world and poses significant challenges for the visionaries who are planning the development of existing and new cities. While considering the issues this population boom will bring, they must also take into account local and global concerns around the environment and look to contain the climate footprint that the ever-increasing urban community will leave.

“The Africa we want must be one where our cities are well planned to become drivers of greater economic growth and prosperity for Africa. This cannot happen by chance. The future is not created by a roll of the dice. So let us act to transform Africa's cities,” commented African Development Bank Group (AfDB) president, Akinwumi Adesina.

So what does the future of Africa's cities look like? Well, a trend that is continuing to grow momentum across the globe – including the continent – is smart cities. As described by the World Economic Forum, digital thinking is enabling the development of new infrastructure that is both low-

carbon and more suited to the sustainable future the world must strive for. Smart cities, where digital solutions are deployed to enhance traditional networks and services, can enable and unlock sustainable growth while improving safety, security and habitability. This phenomenon is being driven in the developing world increasingly by the economic slowdown, which is pushing countries and businesses to look for cost and carbon-efficient workarounds that support social development and growth.

In addition, more frequent extreme weather (which is disproportionately affecting Africa over other regions) is spurring the interest in smart cities even more, as not only do they offer the chance to curb emissions (which is driving the weather fluctuations) but they can help communities and metropolitan areas to respond to such disasters more quickly and efficiently. By example, Honeywell has explained how microgrids and battery energy storage systems that leverage real-time, adaptive control strategies can help cities better respond to power

outages and help ensure essential services remain functioning.

## Egypt embraces digital

Perhaps the most ambitious smart city project under development on the continent is the New Administrative Capital in Egypt, which is finally becoming the seat of government after the move was initiated at the beginning of 2023.

The planned new capital of Egypt has been under construction since 2015 and is utilising the latest technologies to become an internationally recognised smart city. Built over a connected fibre infrastructure and shared mobile towers, the administration of the city is run from a centralised and integrated control rooms. It includes several smart services including smart utility networks, intelligent utility counters, smart poles, building management systems, transport management, IPTV, parking services, waste management services and unified web and mobile applications. Across the city, surveillance systems are also being implemented to detect theft, track suspicious individuals,

monitor traffic and crowds, and provide automatic alerts in emergency situations.

Contributing here is Giza Systems which has been brought on to implement an intelligent traffic system to solve recurrent challenges and issues facing urban cities. The company will integrate several smart solutions and functions under a unified ITS platform that will shift the traffic experience from time-static to adaptive and dynamic.

Ahmed Abdelazim, transportation sector sales manager at Giza Systems, explained, “Using Big Data and adaptive traffic technology, the solution uses generated data to feed a dynamic traffic system that responds to incidents and even generate predictions for safer and more efficient traffic management.”

Giza Systems was awarded this project following many others that the company has implemented at the new capital, such as the smart buildings project for the Administrative Control Authority, the Parliament, the MASA complex, the Opera, and its recent award of Egypt's International City for Olympic Games Operation Center.

Last year, in front of the new capital in East Cairo, Assem El Gazzar, Egypt's Minister of Housing, Utilities and Urban Communities, and Hisham Talaat Moustafa, CEO and managing director of Talaat Moustafa Group, laid the foundation stone for the Noor City Project.

“The Africa we want must be one where our cities are well planned to become drivers of greater economic growth and prosperity.”

AKINWUMI ADESINA, AFDB PRESIDENT



Across an area of 5,000 acres, the city is expected to accommodate 600,000 residents as well as integrated commercial, administrative and government service areas and is being developed in partnership between TMG subsidiary the Arab Company for Urban Investment, and the New Urban Communities Authority (NUCA). The green smart city has been planned with a philosophy and scientific vision for the future led by SWA, SASAKI, BCG and Perkins Eastman to meet 21st century 4G cities standards.

“We will create a smart city, using the latest technologies, and an advanced fibre optics infrastructure, as well as providing high-speed Wi-Fi in all public, commercial, and service areas. The city will include high accuracy security services through the latest security systems, CCTV cameras, and control rooms in all areas,” remarked Moustafa.

Moustafa added that Noor City facilities will be managed by utilising latest technologies as smart irrigation methods to decrease water consumption, the use of clean energy, smart environment friendly transportation, as well as smart lighting system for the whole city.

### Taking hold

While Egypt may be blazing a trail, many countries across the continent are quietly progressing with their own smart city initiatives or are, at the very least, opening up the conversation ready for deployment in the future.

At the start of 2023, the Nigerian Communication Satellite (NIGCOMSAT) opened up discussions with Hydropolis Free Trade Zone to explore areas of business interest which includes the

deployment of full broadband services for the proposed eco-friendly smart city in the free trade zone. Hydropolis Free Trade Zone is situated on approximately 2,000 ha on the eastern bank of Kainji Lake. The land was acquired through Niger state government to create the best enabling environment for manufacturing, real estate, tourism, mining, education, health, airport and smart infrastructure and facilities.

Elsewhere, at the end of last year in Uganda, Kampala Capital City Authority (KCCA) hosted the World Smart Sustainable Cities Organisation (WeGO) executive committee meeting which focused on how to make cities smart – a clear indication of the country’s ambitions in this area. At the event, participants gave insights on the measures to develop agile cities and the key role of citizens as contributors to policy and implementation of smart cities.

By doing this, Kampala became the first city on the Africa continent to host the international event. Speaking at conference, Dorothy Kisaka, KCCA executive director, said, “Kampala City is championing a smart city campaign by leveraging technology to improve service delivery based on the three core pillars that drive smart cities that is: technology, infrastructure and people well-being.”

In Kenya, attention is firmly focused on the Konza Technopolis, a flagship project of Kenya’s Vision 2030 economic development portfolio. With the masterplan approved by the Government in Kenya in 2013, it is touted to become a world-class city and will be powered by an ICT sector. Located approximately 70 km south of

Nairobi, it is expected to incorporate advanced integrated infrastructure, sustainable development and information technology-enabled services. Konza will gather data from smart devices and sensors embedded in the urban environment and share it via remote communications systems. This will be analysed by software to deliver valuable information to enhance the services to Konza’s population. Konza Techopolis has noted that the population will also have direct access to collected data such as traffic maps, emergency warnings as well as detailed information illuminating energy and water usage.

Development of phase one infrastructure is occupying approximately 1,977 acres. Key projects within the city include the Konza Complex, complete with a nine-storey office block; the national data centre and smart city

facilities, the former of which is expected to become the largest data centre in East Africa with a capacity of 1.6 petabytes; and the Kenya Advanced Institute of Science and Technology, a university with a focus on science, technology, engineering and mathematics.

As of June 2022, more than 80% of the investment parcels available at Phase One of the Konza Technopolis had been taken up by investors for development. Horizontal infrastructure in Phase One – streetscapes, a wastewater reclamation facility, municipal and public buildings, parks and more – are still under construction. However, good progress is being made on this technology hub which could well evolve into a major driver for the nation, with a mix of business, workers, residents and urban amenities, all aided by an integrated urban smart city framework. ■



Pipe laying and backfilling as well as manhole construction for solid waste network.

Image Credit: Konza Technopolis Development Authority



Fixing of formwork reinforcement for ground slab and beam at first floor of police building.

Image Credit: Konza Technopolis Development Authority



Asphalt laying at UR01.

Image Credit: Konza Technopolis Development Authority



KoTDA Complex Building & LR 11.

Image Credit: Konza Technopolis Development Authority



Volvo Trucks has expanded its range with the launch of several new electric trucks.

## Driving electric

In response to customer demands, electric vehicles are continuing to permeate the mainstream in South Africa.

Image Credit: Volvo Trucks

The future of the global commercial vehicle market is not entirely certain. Valued at US\$67bn in 2021, according to various market reports, analysts seeking to foretell its fate have placed its worth anywhere from US\$280bn, US\$500bn, even to as high as US\$850bn. While in disagreement on its exact final valuation when the decade comes to a close, they all are assured that, due to increasing governmental policies of decarbonisation and customer demands with similar concerns, the market is set for a period of unprecedented, exponential growth.

As the technology and infrastructure around this continues to develop, this will almost certainly only drive the market to more lucrative heights.

### Following the demand

Africa's current contribution here is far smaller than that of Europe or North America, as infrastructural requirements and expensive technology are (and will remain) inhibitors for uptake. Nevertheless, interest continues to grow on the continent with South Africa leading the charge. Volvo Trucks, for instance, has continued to expand its range with the launch of several new heavy electric trucks.

"Already producing the most

complete electric line up in the global truck industry, we are now expanding our offering with the introduction of rigid versions of its extra heavy electric trucks: the Volvo FH, Volvo FM and Volvo FMX," commented, Waldemar Christensen, MD of Volvo Trucks South Africa.

"This makes it even easier for transport companies to make the move to electric vehicles in urban and regional areas. Fleets can have these trucks custom-built for their specific operation, to cut emissions while getting the same functionality as the diesel truck they are using today. Our customers are already ordering electric vehicles that will suit their specific business needs, with the first local deliveries expected during the first quarter of 2023."

Meanwhile, Kempower, a rapid EV charging technology provider, has signed a distribution and services framework agreement with

sustainable mobility technical solutions supplier, TSG. The companies have made note of the growing calls for fast-charging EV capabilities in Europe and Africa and will together serve this demand by delivering charging systems, electrical infrastructure and life-cycle services in 32 countries across both continents. TSG will be able to provide Kempower's charging solutions to its TSG customers, helping the transport industry reduce CO<sub>2</sub> emissions.

Tomi Ristimäki, CEO of Kempower, remarked, "We're happy to join forces with TSG as we continue our mission to accelerate the global transition to sustainable mobility. Customers will benefit from our innovative solutions, such as our user-friendly Kempower charging systems, which offer unique features and a low total cost of ownership."

### Climate in the spotlight

The desire to reduce emissions from their vehicles is a desire also shared by UD Trucks Southern Africa which is following a desire to 'make the trucks the world needs today' and has stated that the world needs less CO<sub>2</sub> harmful emissions released into the environment. It is for this reason that the company launched the Quester and Croner Euro 5 models in 2022 (following the Quon in 2019). The fuel-efficient vehicles (fitted with selective catalytic reduction technology) reduce CO<sub>2</sub> emissions as well as total cost of ownership. The Euro 5 model has already nearly sold 1,000 units in South Africa and the Quon line range is reportedly receiving new safety features in line with the company's Vision Zero goal of no injuries or deaths from road collisions. The announcements here are part of the wider Vision 2030 which will address the need for connectivity, automation and automobility in logistics by 2030 – no doubt signalling the intention of the company to delve further into electric vehicles in the future.

Their faith in the southern market in line with these ideals is also assured with the announcement that UD Trucks SA will open more than three new dealerships in 2023 in strategic areas to better serve customers and grow their brand. ■



UD Trucks Southern Africa is following a vision to 'make the trucks the world needs today'.

Image Credit: UD Truck Southern Africa





Better waste management can bring economic opportunities.

# The waste management agenda

Nawa Mutumweno explores how waste management has become a topical issue now more than ever before in light of the upsurge in disposed materials.

Image Credit: Adobe Stock

**T**he relevance of waste management cannot be overemphasised: it saves the environment from the toxic effects of inorganic and biodegradable elements present in waste. It goes without saying that mismanagement of waste can cause water contamination, soil erosion and air contamination, which are hazardous to the environment.

In many African cities, a significant proportion of waste is dumped in the open. Much of it is burned, sending plumes of noxious pollutants into homes, lungs and the environment, thus causing a health hazard.

180 million tons of waste, about 9% of the global total, was generated in sub-Saharan Africa in 2016 and only about 11% of this waste was disposed of in properly designed and managed landfills.

Better waste management points to huge economic opportunities. Up to an estimated 80% of solid waste generated in African cities is recyclable, with an approximate value of US\$8bn per annum. However, only about 11% is currently recycled, mostly by the informal sector. Thus, there is need to integrate informal waste recyclers into African economies.

African governments showed leadership in September 2022 when environmental ministers met in Dakar, Senegal, to discuss effective and efficient waste management on the continent, laying a foundation to end the open dumping and burning of waste.

The African Ministerial Conference on Environment (AMCEN) was a platform that consolidated

Africa's negotiating position at COP27 in Egypt, resulting in a bold commitment to 'eliminate open dumping and burning of waste in Africa by 2050'.

Needless to say, activating this decision translates into multiple economic, environmental and social implications. Obviously, there is a close link between waste management, the UN SDGs and the AU's Agenda 2063, and its impact on climate change, biodiversity, human health, food systems, resource scarcity, and social and economic development.

Underlying challenges in waste management revolve around lack of public awareness, weak legislation and enforcement, insufficient budgets for waste collection and disposal, inadequate and malfunctioning equipment, lack of public participation, and inadequate waste management governance.

## Zambian example

The Lusaka City Council (LCC) has a Waste Management Unit (WМУ) which regulates waste management and is mandated to plan, organise, execute and supervise waste management.

The Unit offers advice to residents on ways of avoiding and reducing waste, recycling and material recovery for both residents and emerging entrepreneurs.

With an ever-expanding population, Zambia's capital churns out about 1,200 tonnes of waste daily, with generation rate per person estimated at 0.5 kg.

According to the latest report on the status of waste management in Lusaka, the city's biggest waste

disposal site, Chunga Dumpsite, only receives about 40% of this waste daily.

LCC public health director, Christopher Mtonga, says the local authority has accelerated its waste management sensitisation programmes with intensified inspections of premises in the central business district.

The council has placed skip bins along busy roads such as Freedom Way and Lumumba to contain and properly store waste generated by stakeholders and vendors.

"The Chunga disposal site receives about 40% of waste daily. This waste is collected and transported by the LCC, franchise contractors and those transporting their own waste. The remainder is left in the environment to decompose or is burnt, with a small fraction going for recycling," Mtonga elaborated.

"The Council collects and transports about 70% of the waste disposed at the landfill, while the remainder is handled by the private sector," he added.

To effectively implement the solid waste collection system, Lusaka has been broadly divided into areas: the conventional housing areas and the peri-urban areas.

The conventional housing areas are those found in planned areas and are generally low-densely populated, while the peri-urban areas are unplanned in nature and are usually densely populated.

The Zambia Environmental Management Agency (ZEMA), a statutory body, has underscored the need to create awareness among the public on the importance of sound waste management systems and

their effect on human health and the environment.

"Zambia can effectively address waste management through building capacity for the recovery and recycling of various types of waste streams such as garbage, plastics, insecticides containers, obsolete pesticide stocks, electrical and electronic equipment," noted a management official at the agency.

ZEMA has called on stakeholders to join hands in championing the eradication of waste and promotion of recycling systems.

## Initiatives for change

Currently, Zambia is implementing the 'Keep Zambia Clean and Health' campaign with a view to strengthening information dissemination and awareness creation among the public.

The private sector has also come on board with Lafarge Zambia introducing 'Geocycle', an innovative solution for sustainable waste management. It aims at managing stakeholders waste and meet their environmental goals. This waste management solution covers industries, companies, municipalities and the agricultural sector.

Zambian Breweries is also implementing 'Manja Pamodzi' (meaning working together), in conjunction with LCC and ZEMA. This programme has so far recruited over 800 collectors who collect over 12,000 tonnes of recyclable waste from communities in Lusaka.

With support from stakeholders in the waste management chain and all-round team work, green, clean and health cities are achievable in the medium to long-term. ■

## Masdar to develop 5GW of renewable energy projects in Angola, Uganda and Zambia

Masdar, the UAE's clean energy champion, has signed agreements at Abu Dhabi Sustainability Week (ADSW) 2023 with Angola, Uganda and Zambia to develop renewable energy projects with a combined capacity of up to 5GW.

The agreements were signed under the umbrella of the Etihad 7 initiative, a UAE-led initiative that aims to raise public- and private-sector funds to invest in the development of Africa's renewable energy sector.

The aim is to achieve 20GW capacity to supply 100 million people across the continent with clean electricity by 2035. The agreements are:

- An agreement with Angola's Ministry of Energy and Water for the development of renewable energy projects with a total capacity of 2 GW.
  - An agreement with Uganda's Ministry of Energy and Mineral Development for the development of greenfield renewable projects with a total installed capacity of 1 GW.
  - An agreement with Zambia's Ministry of Energy, and Zambian national utility ZESCO Limited for the joint development of develop solar, wind, and hydroelectricity projects with a total capacity of 2GW.
- HE Dr Sultan Al Jaber, UAE Minister of Industry and Advanced Technology, COP28 president designate, and chairman of Masdar, said, "These landmark agreements, which aim to deliver up to 5GW of energy to Angola, Uganda, and Zambia, follow last year's signing of a 2GW agreement for renewable energy projects in Tanzania. These further agreements will be transformative to local communities and will help African nations to drive economic growth for their people while still meeting net-zero objectives."

Masdar has already established a considerable presence in Africa, having formed its Infinity Power Holding joint venture with Egypt's Infinity to target opportunities on the continent.



The Angola agreement signing.

Image Credit: Masdar

## MOU SIGNED FOR GREEN HYDROGEN AND AMMONIA

OMNIA GROUP and WKN Windcurrent have signed a memorandum of understanding (MoU) to evaluate the onsite production of green hydrogen and ammonia at Omnia's Sasolburg plant in South Africa.

A positive result from this collaboration would make Omnia less dependent on ammonia imports, which are presently constrained by challenges with rail logistics, and will assist Omnia in achieving its decarbonisation targets by replacing CO<sub>2</sub>-intensive, conventionally produced ammonia with green ammonia.

The envisioned new ammonia production plant will be powered by renewable energy from hybrid sources, namely wind and solar power developed by WKN. The objective is to produce competitively priced green ammonia at a capacity of up to 100,000 tonnes per annum, which would result in a reduction of CO<sub>2</sub> emissions.

The collaboration supports the implementation of the South African Government's strategy to develop a green hydrogen economy by harnessing South Africa's abundant natural resources of sun and wind to generate renewable energy.

The Government's 'Just Energy Transition Programme' with Germany and other countries has mobilised around US\$8.5bn to accelerate the country's transition to enhanced renewable energy sources.

"Onsite production of green ammonia will significantly reduce our CO<sub>2</sub> emissions, embed sustainability into our products, and support the country's green energy transition," said Seelan Gobalsamy, CEO of Omnia.

"Working alongside partners like WKN means that we can develop technology solutions together that reduce industry risk, improve operational safety, and create a lower environmental footprint."

## LNG PRE-TREATMENT FACILITY FOR CONGO

Energy services provider Expro has announced a long-term production solutions contract with Eni Congo S.A. for a liquefied natural gas (LNG) pre-treatment facility in Congo.

Expro will design, construct, operate and maintain a fast-track onshore LNG pre-treatment facility (OPT), part of the Marine XII development offshore Congo. The facility will be built near to the Litchendjili gas plant - which supplies gas to the adjacent Centrale Electrique du Congo (CEC) Pointe-Noire Power Plant - and will enable the production of LNG to significantly increase from the West Africa area.

The facility is designed to allow incremental gas production for low carbon electricity generation. It will link to Eni Congo's offshore floating LNG (FLNG) operations, supporting both the local energy market and increased global demands for LNG to support secure energy supplies.

The facility is designed to process approximately 80m cubic feet of gas a day.

## ► BRIEFS



The partners are currently completing a 370MW solar PV power plant across seven sites in Angola.

### Solar project collaboration

Hitachi Energy has signed an MoU with Sun Africa and its sister company, UGT Renewables, to collaborate on utility-scale solar photovoltaic power generation projects that will accelerate the energy transition and provide access to energy in emerging and developing markets worldwide. They will jointly engage with local and international stakeholders, and provide solar power solutions that will enable developing nations to take significant steps towards electrification.



Frederic Castrec, CEO of CRC Evans.

### CRC Evans announces merger

CRC Evans has announced the creation of a world-leading welding and coating services provider following a merger between Pipeline Technique, CRC-Evans Pipeline International, Pipeline Induction Heat and Global Project Services under the CRC Evans banner. This accelerates the company's ambition to be the leading provider of welding and coating services for the energy and wider infrastructure sectors, including emerging energies, as the global transition gathers pace.



## PCM starts natural gas power generation in Chad

PetroChad Mangara (PCM), Perenco's wholly owned Chad subsidiary, has announced the start-up of natural gas-generated power at the Moundou Power Station in Chad.

Seven months after independent hydrocarbon producer Perenco entered Chad as operator of the Badila and Mangara fields in the Doba Basin in southern Chad, PCM is now successfully generating electricity from natural gas for Chad's second city, which previously had limited electricity generation and relied on diesel fuel generators. This is as a result of successfully increasing production from the Badila and Mangara fields towards their combined potential of approximately 16,000 bopd.

PCM worked closely with Perenco's technical department to deliver this outcome, as well as in close coordination with Société des Hydrocarbures du Tchad (SHT) and Chad's Minister of Hydrocarbons. In addition to its role in helping provide Moundou with electricity, PCM has also been involved in the repair of a number of water wells close to its operations.



The Moundou Power Station.

Speaking to *African Review*, Eric Josseron, general manager of PetroChad Mangara, commented, "As a group, and in keeping with our gas strategy, we are always looking for the best use for associated gas, in order to ensure the most sustainable approach to our operations. Using gas for power generation not only makes sense from an environmental perspective but in the case of Moundou, Chad's second city, it brings much needed power to homes and industry. This is therefore extremely positive for the local community and reflects our commitment to making a positive impact in Chad.

"Work on this facility had begun some years prior to Perenco's entry into Chad, but it had never been completed. We quickly identified it as a project which would have a positive impact in Moundou, as well as giving us an outlet for the gas which meets our plans to have a reduced carbon footprint."

The project was not without its challenges, however. As Josseron explained, "Since the project had been initiated eight years ago, key pieces of equipment (such as the generator itself) had suffered as a result of the long storage time. In addition, the electrical network of Moundou city had changed a lot. A thorough electrical study was therefore necessary in order to properly calculate the safety parameters."

Commenting on the project's progress and future prospects, Josseron said, "We have quickly brought the Badila field back into production and Mangara is now in the final stages of restarting production. These are important steps in achieving our near-term goal of 16k bopd. Further out, we also look forward to progressing the work programme at the Krim field, an undeveloped discovery also in the Doba basin."

DEMANDING APPLICATIONS  
OUR MOTORS - YOUR SUCCESS  
POWER OF EXPERIENCE  
DEMANDING APPLICATIONS  
CHALLENGING SITUATIONS  
IDEAS THAT DRIVE ENERGY

**CANTONI** MOTOR

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

POWER OF EXPERIENCE  
OUR MOTORS - YOUR SUCCESS  
DRIVING MOST DEMANDING  
INTO YOUR ENERGY GLOBAL  
ENERGY BUSINESS POWER  
WWW.CANTONIGROUP.COM

# Power rentals underpin African energy market

While there are many unique and new solutions entering Africa's energy mix, there remains a strong case for rental equipment to meet much of the continent's power requirements.

**A**frica's patchwork and erratic power coverage has meant that it has long been fertile ground for genset suppliers who have thrived in the supply of temporary rental packages, both short- and long-term.

In some cases, these rental solutions have supported entire utilities and national grids, with major power stations deployed – often at short notice – by the likes of Aggreko, GE Energy and Caterpillar. Sometimes, these installations are of huge strategic significance. This year, for example, Aggreko will support the conversion of the 108MW Bois-Rouge cogeneration power plant in Reunion Island from coal to biomass without halting production, on behalf of operator EDF La Réunion.

It will supply 24 generators to be installed on four different sites around the area in Le Gol, Saint Leu, Saline and Saint Marie, in what is a flagship environmental undertaking. The conversion will cut greenhouse gas emissions by approximately 640,000 tonnes of CO<sub>2</sub> equivalent per year. Delivery of the generators began in January, with all operations planned to be fully converted to biomass by the end of this year.

"This contract is a testament to our expert team's ability to meet the needs of a quick installation deadline and demonstrates the capabilities of our advanced power solutions," said Serge Mevo, head of utilities Africa at Aggreko.

"This project excites us, and is an important one to our team, as here we are able to support our client in navigating the energy transition, whilst keeping the lights on."

## Traditional wins out

While there are plenty of grand plans afoot to displace thermal



Image Credit: Himoinsa Southern Africa

The Himoinsa team installed and commissioned a fully functioning power plant within three weeks of the site being ready.

power with renewables and other innovative energy solutions, it seems unlikely that the market for traditional rental solutions will dry up anytime soon.

Indeed, as the Reunion example shows, there is a good case for traditional gensets underpinning efforts to move away to cleaner, alternative energy sources.

In the industrial sector as well, the case for a stable energy supply underpinned by traditional diesel gensets remains as strong as ever. Himoinsa Southern Africa recently supplied 8MW of rental power equipment for a groundbreaking liquefied natural gas (LNG) and helium plant in South Africa's Free State, on behalf of Tetra4, a wholly-owned subsidiary of Renegen.

The power plant at the Virginia gas project comprises eight fully synchronised gensets, transformers, fuel tanks and a control room. The Himoinsa team were able to install and commission the fully

functioning power plant within three weeks of the site being ready, despite multiple challenges.

During the construction process, no electrical connection was available, necessitating Renegen to proceed with a self-built electrical connection to the Eskom grid infrastructure and, in the interim, ensure they had a temporary, prime power solution to ensure timely commissioning of the first phase of the project.

Its power solution will play a key role in the evolution of the region's industry too; it marks the first helium facility in sub-Saharan Africa, which, among other applications, can be used to make semi-conductors and fibre optic cabling.

Even in the in the small-scale residential market, there remains healthy demand for rental power solutions. Nigeria currently leads Africa as the highest importer of generators and is among the biggest importers worldwide and power

rentals form an integral part in the supply of this market.

While there are moves to phase out genset adoption, it could be a long time before households are ready to part company with trusted solutions.

In a January report on Nigeria, the International Renewable Energy Agency stated that micro-finance initiatives will help in the substitution of diesel gensets by solar home kits and mini-grids, which, it claims, have a higher upfront cost but significantly lower operation cost.

Today, it estimates that around 84% of urban households use back-up power supply systems – either diesel or gasoline gensets and/or solar-based systems – while about 86% of companies in Nigeria own or share a generator.

From the biggest of utilities to the smallest of households, rental power solutions are here to stay for the foreseeable future, at least. ■



# How to capitalise on plant optimisation and hybridisation

Luca Ceschinelli, project development principal at Aggreko Africa, Middle East, and Asia, explains how plant optimisation and hybridisation can bring greater power quality and resilience for mining projects.

**E**nergising a mining operation is a huge expense, but it presents the biggest opportunity to optimise costs and help meet ESG goals. Energy costs have a huge impact on a mine's total operating costs, therefore it is critical for mining companies to optimise their power infrastructure to optimise their profits.

Aggreko has been working as a long-term energy partner with mining operations across the globe and in Africa, guiding them on the right energy mix to achieve their energy transition aspirations and reducing their energy expenditures. The company works alongside the mining companies to provide a tailored solution that is designed for the actual location, load profile, power constraints and project specific requirements, as well as energy transition targets. These partnerships are driven by Aggreko's commitment to creating better energy solutions in collaboration with its clients.

With mining companies in all corners of the world facing capital expenditure constraints, the idea of updating or decarbonising their systems can seem like a distant and complex goal.

Aggreko works with its customers to accelerate their energy transition visions and journey, by assisting them to optimise their current power infrastructure and set-up and upgrade their generation technology to the most efficient available on the market. Aggreko further helps mining companies transition to lower-impact carbon fuels such as gas through LNG or LPG virtual pipelines or hybridising their thermal plants by adding renewables and energy storage solutions.



Image Credit: Alan Charles Publishing @ Mining Indaba

Aggreko discussed its services with attendees of Investing in African Mining Indaba 2023.

## Improving power performance

The implementation of hybrid power is one way in which miners can drastically improve efficiency and their energy costs, as well as improve site performance and power quality of their sites. As mines

are going deeper and more remote than ever before, finding innovative ways to keep costs and emissions in check is an ongoing challenge.

Hybrid power plants combine the advantages of renewable energy and battery storage with the reliability of thermal generators. The integration

of different components comes with some complexities but is needed to ensure a reliable supply of energy, particularly in industries such as mining, where downtime is not only costly but poses a health risks. This is where it is critical to work with a long-term energy partner such as Aggreko to navigate the complexities and ensure that the integration is optimised to implement successfully the best, most reliable and cost-effective solution.

Aggreko's Hybrid Energy Solution gives greater power quality and resilience and delivers savings to projects by improving the overall plant efficiency, thereby reducing fuel consumption and carbon emissions. ■

“ The implementation of hybrid power is one way in which miners can drastically improve efficiency and their energy costs, as well as improve site performance and power quality of their sites.”

# Kenya's geothermal guarantee

Mwangi Mumero explores the continued development of geothermal power in Kenya which is boosting the country's renewable base.

As part of its Vision 2030 national development strategy, Kenya has set an ambitious target of increasing geothermal power capacity from 660MW, the capacity in 2017, to 5,000MW by 2030.

According to Kenya's Energy Regulatory Commission (ERP) this would represent about a quarter of Kenya's total installed power capacity, which is projected to grow to 19,200MW by 2030.

Geothermal power development is centred around Kenya's Rift Valley area, with the Olkaria plants, located in Hell's Gate National Park, taking the lead. Smaller geothermal power plants dot the Rift Valley – all the way from the Ethiopia border in the North to Tanzania border in the South. Already, a new additional Olkaria VI geothermal plant is under construction and, when fully delivered, is expected to add 86MW. "Upon completion, the Olkaria VI will be the largest single geothermal plant in the world," observed Cyrus Karingithi, a geologist and manager with the Kenya Electricity Generating Company (Kengen), a government owned firm behind the project and most of the Olkaria plants.

For over 70 years, KenGen has drilled more than 310 wells around Olkaria, 125 of them still in operation today. Two bigger power plants became operational in the 2014-15 period. With its wide experience in managing geothermal plants, Kengen has also secured US\$5.8mn contract to drill 12 geothermal wells in neighbouring Ethiopia as well as a US\$6.6mn contract to drill wells in Djibouti.

Last year, Kenya commissioned two geothermal power plants in Olkaria namely, the 165MW Olkaria V Units 1 & 2 and 83.3MW Olkaria I Additional Unit 6. The two plants



KenGen completed the construction of the 83.3MW Olkaria I, Additional Unit (AU) 6 Geothermal Power Plant in March 2022.

were financed by the Japanese Government through the Japan International Cooperation Agency.

Two firms, Toyota Tsusho of Japan and Hyundai Engineering Co., Ltd. of Korea have jointly been part of the Olkaria geothermal project supplying equipment to the site.

In collaboration with Toshiba Corporation, the two firms have been involved in the construction of the steam turbine generators in the Olkaria power plants.

Another government firm, the Geothermal Development Company (GDC), is involved in drilling wells in the Menengai geothermal field, just outside Nakuru City for its private partners. Among these partners is Sosian Menengai Geothermal Power, an Independent Power Producer (IPP). GDC has also been involved in appraisal drilling in Baring-Silali

geothermal site, further north of the Rift Valley.

## On the world stage

Kenya is the eighth largest producer of geothermal energy in the world, behind nations such as the United States, the Philippines, Indonesia, Turkey and New Zealand.

A study by the African Development Bank (AfDB) indicates that for Kenya to attain its geothermal development targets, private investment is critical in exploration and field development. Experts say the country has some 10,000MW of untapped geothermal power resources, and are calling for future expansion and investment. Already, global firms have increasingly shown interest in exploiting geothermal development in Kenya.



Construction of Olkaria I AU 6 commenced in December 2018.

Among the recent entrants is Globeleq, a British-owned private power firm that recently signed a US\$72mn debt financing agreement with AfDB for the development of 35MW Menengai geothermal project in Nakuru County.

Globeleq, which is owned 70% by British International Investment and 30% by Norfund, is providing equity, project development, and construction management experience.

"Our focus is on quality investments which utilise renewable energy sources to create clean, reliable and cost-effective energy for the country and be an active part of the solution to the climate crisis. We are very excited to collaborate with our partner GDC in bringing this important project to fruition and look forward to further developing the Menengai geothermal complex," observed Mike Scholey, Globeleq chief executive officer.

The Climate Investment Funds and the African Development Bank has provided resources to support the first phase of the Menengai project.

"AfDB has provided US\$29.5mn as senior debt and mobilised US\$22.4mn co-financing, having earlier invested US\$145mn to develop the Menengai steam field," observed Kevin Kariuki, vice-president, power, energy, climate and green growth at AfDB commenting on the Globeleq deal.

Kenya's new President, William Ruto, emphasised the need to continue on this path to 100% renewables during his inaugural address a few months ago. Together with wind, hydro, and solar, the country was able to produce around 90% of electricity last year through renewables and the continued development of geothermal will ensure this rate remains as high and get closer to the 100% objective. ■



# The time for nuclear power?

While never a swift solution, serious interest in nuclear power is forcing the resource into the discussion of Africa’s future energy mix.

**W**ithin the world of energy, there are few topics more divisive than nuclear power. The process of splitting atoms into smaller nuclei has been revised since its theoretical discovery in the 1930’s so that, across the globe today, there are around 450 nuclear reactors in operation, representing approximately 30% of low-emissions power. Due to its trait of producing little greenhouse gas emissions during operations – nuclear produces the same amount of CO<sub>2</sub> emissions per unit of electric as wind across its life-cycle according to the World Nuclear Association – it is increasingly being touted as a key component of the energy transition, and will help the world wean itself of off fossil fuels.

In 2022 the European parliament backed a proposal by the European Commission to classify the resource as climate-friendly which, if holds, will allow investors to label and market investments into nuclear as green. Subsequently, the Commission has faced multiple legal challenges from environmental groups (as well as formal complaints by national governments) around the decision, who have labelled the it as a form of ‘greenwashing’ because, ultimately, it is not a renewable energy resource (its fuel source, uranium, has to be mined). Other criticisms around the energy form are that it produces radioactive waste which must be securely stored to not pollute the environment; accidents, if they occur, can be extreme and progressing projects is limited by financial and expertise barriers.

However, despite the drawbacks, it cannot be denied that nuclear power has the capacity to inject some serious power into a region’s energy mix.



The Koeberg nuclear power station in South Africa.

Image Credit: Eskom



The Koeberg station is edging ever-closer to the end of its life-expectancy.

Image Credit: Eskom

Just look at some of the world’s most impressive stations such as Gravelines, France (c.5,460MW); Hanul, South Korea (c.5,880MW); Bruce, Canada (c.6,400MW); and Kashiwazaki-Kariwa, Japan (c.7,960MW).

For Africa’s relationship with the energy source, there is only one station to show for it – the Koeberg nuclear power station in South Africa, located 30 km from Cape Town. Owned and operated by Eskom, the station has two

pressurised water reactors (built by Framatome) and was synchronised with the grid in 1984. Eskom has commented that the combined output of the two generators (1,840MW) is enough to supply the whole of the Western Cape with

electricity in the summer. After serving the country's grid for many years, the station is edging closer to the end of its life-expectancy (originally 40 years) but, in light of the energy issues plaguing the country, plans have been set in motion to extend its lifespan, potentially for another 20 years.

Now, under ever-increasing pressure to meet the continent's energy needs without tightening the embrace around fossil fuels, more African eyes are turning to nuclear.

### Momentum builds

At the end of last year, the United States and Kenya signed a memorandum of understanding to improve cooperation on energy security alongside the reaffirming of diplomatic and economic relations. Included under the agreement was a nod to cooperation around science,

technology and nuclear energy.

Around the same time, the country's Nuclear Power and Energy Agency (NuPEA) also courted a delegation from South Korea to discuss cooperation and achievements towards nuclear energy development.

According to media reports, NuPEA has now signed an agreement with China, Russia, South Korea and Slovakia with an aim to build the country's first nuclear power plant by 2038. While some way off, this marks an enormous leap forward for both the country and the continent in its relationship with the resource, something that may prove pivotal in diversifying its energy mix.

Other marked progress in this field has come further North and has centred around the Egyptian Nuclear and Radiological Regulatory Authority (ENRRA). According to the

“ The Africans have said themselves ‘we need to contribute, and we need our own specific analysis of how this nuclear jewel is going to be used for African economies’.”

IAEA DIRECTOR GENERAL, RAFAEL MARIANO GROSSI

World Nuclear Association, the country has flirted with establishing nuclear power since the 1960s, and came close to establishing a plant in the 1980s when KWU, Framatome and Westinghouse were tendered to provide reactors for the El Dabaa site. Plans were abruptly scrapped following the Chernobyl disaster but interest was renewed around the arrival of the new millennium. The establishment of subsequent feasibility studies and contract awards with the likes of WorleyParsons has reinvigorated the project. After overcoming Covid-19 delays, ENRRA approved the construction permit for unit one at the El Dabaa site in 2022 and construction commenced later that year. The Authority has subsequently followed this by conducting a comprehensive inspection in October

at the readiness of the site for the second unit and has granted permission for this to go ahead. The development of nuclear power in the country is part of the Egyptian state's vision for 2030 for sustainable development, part of which is for nuclear power to make up 9% of electricity production in the country. Commissioning for the site is expected in 2026 with a capacity of 4.8GW when it comes online.

In light of these developments, it is clear that while the continent's ties to nuclear are currently fragile, there is some determined activity being undertaken to bind the two inexorably together. And, as players on the continent make progress here, they can be assured that international assistance is available. As part of the International Atomic Energy Agency's publication on climate change and nuclear power, released late last year, a chapter was dedicated to Africa with the organisation ready to support newcomers in their efforts to develop the necessary infrastructure for nuclear power programmes.

Speaking on the subject, IAEA director general, Rafael Mariano Grossi, remarked, “Everywhere I am hearing this global conversation about energy security, climate change and nuclear power, and whether by virtue of changes in circumstance, climate or security needs, it is quite clear that nuclear now has a place at the table. What I like about this discussion, is that there is no discussion without Africa. The Africans have said themselves ‘we need to contribute, and we need our own specific analysis of how this nuclear jewel is going to be used for African economies’.” ■

“ Everywhere I am hearing this global conversation about energy security... and it is quite clear that nuclear now has a place at the table.”

IAEA DIRECTOR GENERAL, RAFAEL MARIANO GROSSI



Image Credit: Adobe Stock

The International Atomic Energy Agency has stated its readiness to support newcomers in their efforts to develop the necessary infrastructure for nuclear power programmes.



## ROLLS-ROYCE SUCCESSFULLY TESTS MTU ENGINES WITH PURE HYDROGEN

Rolls-Royce has conducted successful tests of a 12-cylinder gas variant of the mtu Series 4000 L64 engine running on 100% hydrogen fuel. The tests, carried out by the Power Systems business unit, showed very good characteristics in terms of efficiency, performance, emissions and combustion. These tests mark another important step towards the commercial introduction of hydrogen solutions to meet the demand of customers for more sustainable energy supply.

Due to the different combustion behaviour of hydrogen compared to natural gas, some engine components including fuel injection, turbocharging, piston design and control, were modified in the test engine.

However, by using proven technologies within the Power Systems' portfolio, such as mtu turbochargers, injection valves, and engine electronics and control, the development of the engine to use hydrogen was advanced quickly and efficiently.

Tobias Ostermaier, president – stationary power solutions, Rolls-Royce business unit Power Systems, explained, "This engine will serve the market demand for hydrogen solutions in the energy transition and will be available to our customers as a reliable and clean power source for gensets and combined heat and power plants."

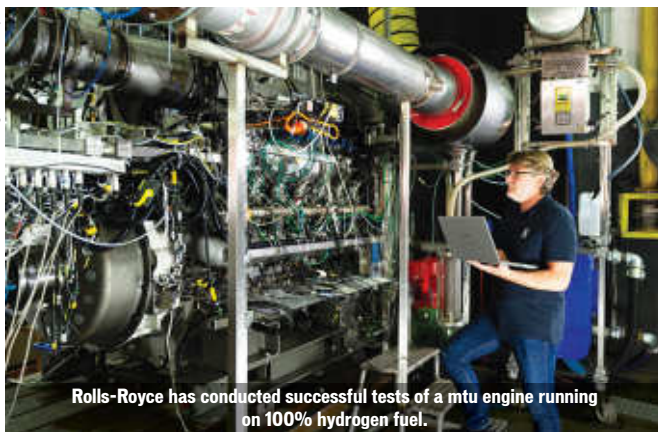
The first installation of mtu engines running on 100% hydrogen is planned for the enerPort II lighthouse project in the German inland port of Duisburg, as part of the development of a climate-neutral energy supply for a new container terminal.

Dr Jörg Stratmann, CEO of Rolls-Royce Power Systems, added, "We see hydrogen as one of the central elements of the energy transition. It can be used for both storage of excess energy and as a fuel, not only for engines but fuel cells and cogeneration plants to generate climate-neutral electricity and heat."

In times of low demand and high renewable energy generation from wind or solar, for example, the excess energy can be channelled through an electrolyser to convert water to hydrogen, which can later be used as fuel in any number of applications.

As part of its sustainability programme, Rolls-Royce is realigning the product portfolio of Power Systems towards more sustainable fuels and new technologies that can further reduce greenhouse gas emissions.

Image Credit: Rolls-Royce



Rolls-Royce has conducted successful tests of a mtu engine running on 100% hydrogen fuel.

## Boost for BASEC as cable testing facility comes online

Following a Phase 2 investment of UK£1.2mn (approx. US\$1.4\$mn), BASEC, a global leader in product testing and certification services for the cable industry across numerous sectors, has announced that its fully-equipped medium voltage cable testing facility in a new regional lab in Dubai is now fully operational. The new medium voltage testing laboratory will significantly increase BASEC's scope of testing to further complement the recent investments made in solar, EV, data communication and compound analytics testing and support manufacturers in the competitive MV cable market to verify competitive designs and raw materials to ensure that quality is not compromised.

This facility continues BASEC's roadmap in becoming the preferred testing and certification partner to the worldwide cable industry and builds upon other recent investments to add capability, technology, and global reach. It is the first Middle East specialised MV laboratory for cable testing.

Tony Lioveri, BASEC's CEO, stated, "BASEC has been working in partnership with cable manufacturers for more than 50 years and has a strong brand and heritage of being the mark of quality & safety. Phase 2 investment and extension into medium voltage testing is another milestone on this journey. The Dubai facility is strategically located to support the global market, as seen from the opening of the LV lab in 2021. We continue to push our roadmap to establish BASEC as a worldwide partner delivered through our regional offices of dedicated teams of technical experts and superior customer care. Our goal is to give end users and manufacturers confidence that by using the BASEC mark, they can be assured of guaranteed quality and safety throughout the supply chain. When quality matters, use BASEC."

Akram Abdelwahab, BASEC's group technical manager and medium voltage expert, commented, "With the increase in demand for manufacturing higher volumes of MV cable, BASEC MV laboratory will



BASEC offers a full testing solution for the MV cable industry by bringing European quality and cable testing speciality to the Middle East.

Image Credit: BASEC

enhance the quality of the MV cable industry by helping both cable manufacturers and stakeholders. BASEC offers a full testing solution for the MV cable industry by bringing European quality and cable testing speciality to the Middle East. The unique location will make it easier for all cable manufacturers worldwide, especially those in the Middle East, to send their heavy MV cable samples to Dubai; It will save time and money."

BASEC purpose-built the lab to achieve its objective of the highest quality testing in its new MV facility with four earth electrodes to get a low PD sensitivity in the presence of background noise (< 1 pC). The construction is one of many enhancements to ensure the labs' wiring layout is optimised with power isolation. Improved grounding provides effective noise suppression with market-leading lab equipment to improve its offering.

## Volvo CE introduces Collision Mitigation System for jobsite safety

Delivering on its vision for zero accidents, Volvo Construction Equipment (Volvo CE) has launched its Collision Mitigation System for Volvo wheel loaders – an automatic braking feature that supports operator response and helps reduce the risk or consequences of collision.

The first system of its kind from any original equipment manufacturer (OEM), it assists operators while working in reverse and automatically applies service brakes when the wheel loader approaches any obstacle, alerting the operator to take further action. With wheel loaders spending an average of 40-50% of their time being driven in reverse, the Collision Mitigation System is a valuable solution for operators and site managers. While not designed to ever replace safe operator behaviour, it is a smart tool to further enhance jobsite safety – a central focus and core value for Volvo CE since the company's inception. As part of the Volvo Group, the company is committed to safety with its 'Zero Accident Vision' which is delivered not only through its products, but also its operations.

It works by identifying when there is a risk of collision and responding by automatically activating the brakes for 2-3 seconds to slow the machine down prior to impact or bring it to a stop to avoid it. This initiation of the braking alerts the operator to intervene.

To enable seamless stockpiling operations, the system will remember the last slope the machine climbed, allowing operators to reverse down a pile without activating it. Moreover, it can also be temporarily deactivated for specific site conditions. Functioning only when the wheel loader is in reverse and driving at speeds of between 3-15 kmp, no matter what gear it is in, it serves as a facilitator to jobsite safety. Even assistance systems like this cannot totally eliminate accidents however, which is why Volvo CE always advocates for safe operator driving behaviour.

"We at Volvo CE continue to proactively develop intelligent solutions which not only mitigate the consequences of accidents but strive to avoid them altogether. This new Collision Mitigation System is one important part of our work to reduce the risk of accidents and help fulfil our commitment towards zero accidents," said Lars Eriksson, global product manager for wheel loaders at Volvo CE.



The system serves as a facilitator to jobsite safety.

Image Credit: Volvo CE

## CEMENT PRODUCERS WARNED OF DIFFICULT YEAR AHEAD

Following the Sixth General Assembly of the World Cement Association (WCA), WCA director, Emir Adiguzel provided a presentation on the outlook for 2023.

Reflecting on the past two years of post-covid high demand, Adiguzel emphasised how 2023 will be a difficult year for the cement industry, as a number of issues such as tighter monetary policies, increased sea freight rates and high fluctuations in the cost of energy may result in cement producers being gradually pressured to establish higher cement prices.

Secondly, Adiguzel highlighted that major multinational cement companies will continue to divest cement assets in emerging markets, thus creating a unique opportunity for players in such markets, including China, to enlarge their portfolios in positive growth markets by acquiring the cheapest European cement assets. Additionally, mid-size European cement producers may also benefit from recent de-mentation policies of global multinational cement producers to enlarge their portfolio.

"While we do not expect global cement volumes to increase, we expect prices to surge to double digits in 2023, as higher energy prices will have a serious impact on cement production costs," said Adiguzel.

The International Cement Conference on Global Trade 2023 will be hosted by the World Cement Network (WCN), in association with WCA, and will take place from 23-24 May 2023, in person at the Hilton Bomonti in Istanbul, Turkey.

The conference will focus on many of the issues highlighted by Adiguzel and include presentations, round table discussions, power lunches, open contract negotiation bids for cement clinker, plenty of networking and a Gala Dinner Event.

## MOU TO INCREASE BRITISH INVOLVEMENT IN AFRICA

Hassan Allam Holding and the United Kingdom's Export Credit Agency have signed a memorandum of understanding (MoU) to increase cooperation in a number of projects across Egypt and Africa. The signing took place in the presence of Gareth Bayley, the British Ambassador of Egypt; Hassan Allam, CEO of Hassan Allam Holding; Mohamed El Dahshoury, CEO of Hassan Allam Construction; Mohamed Saad, head of export finance for UK Export Finance Egypt; his majesty's acting trade commissioner for Africa, Alastair Long; and Anisah Dathi, director of the department of international trade at the British Embassy in Cairo.

The CEO of Hassan Allam Holding said, "We are proud to have signed a MoU with UK Export Finance, which will foster a number of significant projects, promoting cooperation on financing projects and encouraging trade between the UK and the continent. Such strategic partnerships highlight our commitment to delivering mega projects across Africa."

Image Credit: Acciona



Digitunnel increases worker safety.

As part of its commitment to innovation, ACCIONA has started to use Digitunnel, a new real-time technology to provide better control and ensure progress in the tunnel's construction of its projects. This technology is a solution that collects and integrates enormous amounts of real-time information generated at the project site and transforms this data into meaningful information that is made available to all parties involved. It also provides increased safety for workers.

Image Credit: Adobe Stock



These awards will help boost the construction sector.

## SANRAL awards aid economic recovery

The South African National Roads Agency SOC Limited (SANRAL) has awarded four major construction tenders, collectively worth nearly US\$391mn, for projects in KwaZulu-Natal and the Eastern Cape. The awards will help boost the construction sector and is part of the broader national effort by government to invest in economic infrastructure. At least 30% of the contract value will be subcontracted to small, medium and micro enterprises (SMMEs).



A JOHN DEERE COMPANY


 **WIRTGEN GROUP**



**CLOSE TO OUR CUSTOMERS**

 **CONEXPO  
CON / AGG**  
Visit us at: Silver Lot S5020  
March 14-18, 2023 • Las Vegas  
[www.wirtgen-group.com/conexpo](http://www.wirtgen-group.com/conexpo)

**STAY UP TO DATE.** Read all about the latest machine technologies, innovative applications, and impressive infrastructure projects, see what fascinating things go on behind the scenes, and be one of the first to get exclusive news and inside information. The new WIRTGEN GROUP digital magazine for road construction is now online - with fascinating stories and exciting news from the world of the WIRTGEN GROUP.

 [THEROAD.wirtgen-group.com](http://THEROAD.wirtgen-group.com)

**WIRTGEN / VÖGELE / HAMM / KLEEMANN / BENNINGHOVEN**





Africa's construction sector is tipped to grow more than 7.5% annually over the next five years.

Image Credit: Adobe Stock

# Building more for less

The used equipment sector in Africa is giving contractors a lift during difficult times.

**A**gainst an uncertain economic backdrop, the market for used construction equipment in Africa is thriving, offering great value in comparison to new purchases.

With Africa's construction sector tipped to grow more than 7.5% annually over the course of the next five years, according to a recent research report, the market for used equipment is set to grow, helping contractors, large and small, get things done on the ground both faster and cheaper.

Ultimately, used equipment can save firms money – second-hand equipment in good condition is significantly cheaper than new machinery – and reduce overall business risk at a time of great economic squeeze.

It is also a way around supply chain issues if other selected new equipment is unavailable or delayed, offering tremendous flexibility to contractors, as and when required.

It is a marketplace that has been transformed in the digital age by online retail and auction

sites. Popular firms showcasing high-quality used equipment for sale include the likes of Mascus South Africa, Dura Equipment and VE Sales, among many others.

## Saving grace in second hand

The range on offer is as extensive as the models built, from excavators, compactors and hoisters, to transportation trucks and auxiliary machinery.

In-market dealerships are also active in the used equipment space too, such as Mantrac

Group, an authorised dealer representative for seven brands – including Caterpillar – across more than a dozen countries and three continents, with a particularly strong focus on the Africa market.

Its used construction offer includes machinery ranging from wheel loaders and excavators through to motor graders and articulated trucks.

As you'd expect from a high-quality brand, all of its used machinery is required to meet the strictest manufacturer and dealer standards and has gone through rigorous inspection.

## Growing industry

The used equipment sector is certainly a growing market as profit margins are squeezed by rising costs and tight budgets.

IronPlanet, set up in 1999 to transform the global used equipment market, now boasts a database of more than 1.8 million registered users worldwide, connecting buyers with sellers everywhere.

“It is a marketplace that has been transformed in the digital age by online retail and auction sites.”



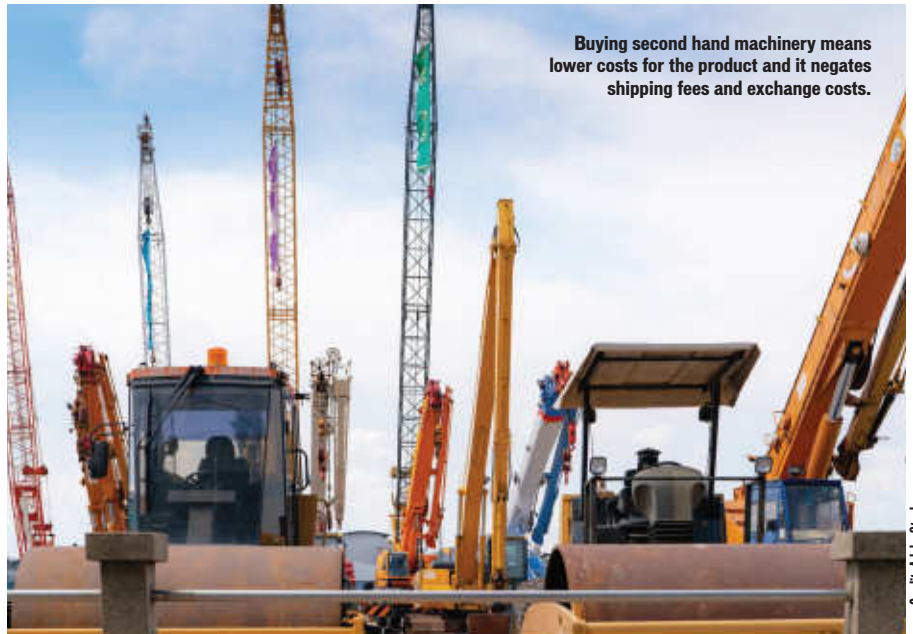
It's a part of the US-listed Ritchie Bros. empire, a global asset management and disposition company that specialises in offering customers end-to-end solutions for buying and selling used heavy equipment, trucks and other assets.

For the first time in its history, its Ritchie Bros. Financial Services branch surpassed US\$1bn in annual funded volume in 2022, helping tens of thousands of customers around the world purchase used equipment, vehicles, and other industrial items.

Flexible financing and leasing solutions have become an important thread in aiding the growth of the used equipment segment, and that's nowhere more important than in emerging African markets.

As well as the lower cost of buying second hand, there are other financial incentives too, given that the majority of new heavy construction equipment is imported from China, Europe or the USA.

Shipping costs, exchange rates and import taxes all mean that new equipment can end up costing considerably more in African countries than it might elsewhere.



Buying second hand machinery means lower costs for the product and it negates shipping fees and exchange costs.

Image Credit: Adobe Stock

With all indications suggesting that Africa's construction sector will expand over the next five years (and beyond), the market for used

equipment is set to grow, helping contractors, large and small, get things done on the ground both faster and cheaper. ■

 **Blumaq**  
www.blumaq.com

**Contact in Africa:**  
+27 11 966 5092 **Johannesburg**  
+26 096 0923 962 **Kitwe**  
+264 81 291 7539 **Windhoek**  
[john.beukes@blumaq.com](mailto:john.beukes@blumaq.com)

**Central Offices:**  
+34 902 118 000 **Headquarters**  
[blumaq@blumaq.com](mailto:blumaq@blumaq.com)

**WE ARE BERCO DEALER  
IN SOUTH AFRICA,  
NAMIBIA AND ZAMBIA**

Blumaq delivers replacement parts and maintenance products for Construction and Mining Equipment. With more than 100,000 part numbers in stock, Blumaq offers its customers the best possible service in the replacement parts industry.



Berco dealer in Spain, Zambia, Namibia, Turkey and South Africa



Follow us:



Caterpillar®, komatsu®, cummins®, volvo® and case® are trade brands registered by their owners and are only used for reference purpose of the application of our spare parts.

www.blumaq.com





# Construction community converges at CONEXPO-CON/AGG

The 2023 edition of CONEXPO-CON/AGG, running from 14-18 March in Las Vegas, is expected to be the biggest show in its history with more than 1,800 exhibitors ready to take part.

Image Credit: CONEXPO-CON/AGG

CONEXPO-CON/AGG is already a firmly established name in the global construction community and has persistently expanded over the last few editions. In 2023 it is expected to be 5% bigger than the record set in 2020, with more than 1,800 exhibitors ready to showcase their products across 2.8mn sq ft of demonstration area.

This year, the additions to the Las Vegas Convention Center (LVCC) will make it easy for attendees (who are expected to hail from around 130 countries across the globe) to navigate the conference – the underground Convention Center Loop, for instance, will transport visitors throughout the campus in under two minutes, free of charge.

In light of construction technology around sustainability considerably advancing in recent years, the show will have the biggest focus on sustainability since it began in 1948. This will be reflected in both the exhibitor booths and in more than 175 education sessions across the five-day event.

“The education offerings at CONEXPO-CON/AGG have always stood out for their focus on helping construction professionals build both their skillsets and their overall business acumen,” commented CONEXPO-CON/AGG show director Dana Wuesthoff.

With the promise to provide unparalleled networking opportunities with equipment manufacturers and industry experts, this is certainly one industry trade show not to be missed. Find below some highlights that will no doubt be taking centre stage when the conference opens in March.

## HDI to unveil new brand

Hyundai Doosan Infracore (HDI) has announced it is changing its brand name on construction equipment to ‘DEVELON’ in order to convey the direction of HDI towards the future through innovation.

DEVELON, a combination of the words ‘develop’ and ‘onwards’ has been selected to highlight its intention to change the world with innovative products and solutions. In launching the new brand, HDI plans to take a leap forward to becoming a global top-tier player in the construction equipment industry and the new DEVELON decal will be used on HDI’s construction equipment.

“Our three construction equipment businesses have already solidified their status as one of the key business pillars of HD Hyundai and have built an unwavering foundation for achieving performance targets and creating synergistic effects among them, amid the rapidly changing global economic

environment,” said Cho Young-cheul, CEO of HDI. “DEVELON will lead the future market of electrification and automation to spur growth and continue to be a brand of choice for our customers.”

AT CONEXPO-CON/AGG 2020, HDI will unveil equipment with the new brand name.

## Faymonville reaches for new levels

Faymonville Group has identified CONEXPO-CON/AGG, which will attract members from all segments of the specialised transportation industry, as the perfect environment to present its unique strengths in product quality and market-oriented innovation.



Image Credit: Faymonville

Among the range of trailer solutions it will showcase, will be the world premiere of the HighwayMAX All-In-One. The unique concept allows operators to configure different trailers from one single modular kit. It allows use as a 3+6 double drop combination, as an extendable single drop trailer with nine axles or – with additional nitro booster – as a 12-axle vehicle. A configuration as a tower adapter vehicle is also possible, and the entire range such as excavator decks, transformer decks, perimeter decks etc. can be integrated in the double drop version.



### Cat goes large in Las Vegas

Caterpillar is matching the sustained growth of CONEXPO-CON/AGG 2023 by mounting its largest exhibition to date in order to highlight its latest products, services and technologies while paying tribute to those who build the world's infrastructure.

More than 30 Cat machines will be on display in the Festival Lot, including model unveilings and battery-electric model prototypes with charging stations. Visitors will see two main equipment demonstrations each day; one focused on the latest Cat Technology, and one that will spotlight the company's full equipment line up. Additionally, Caterpillar will be providing unique daily spotlight demonstrations that will take a deep dive into key industry topics.

Among the lineup, the new Cat 950 medium wheel loader, which offers premium performance and simple-to-use technologies to help boost operator efficiency and increase productivity, will be on display. Visitors will also be treated to a preview of the Next Generation Cat 926, 930 and 938 small wheel loaders – slated for production in late 2023.

Elsewhere, Caterpillar Industrial Power Systems Division will exhibit in booth S84329 in the South Hall a wide and rapidly growing portfolio of high-efficiency Cat industrial power solutions and the Services Hub will include Caterpillar subject matter experts to help guide attendees through several maintenance options for Cat equipment. Team members from Cat Financial will be available to discuss the latest leasing and financing programmes, including Cat Card, as well as extended protection packages to help secure customers' investments.

Its centerpiece exhibit, the 'Looking Glass' cube, will display and interactively showcase the five key capabilities of the new Cat VisionLink application – Geofence & Location, Fuel Theft Alerts, Diagnostics, Idle Time/Fuel Burn, and Maintenance. An interactive wall will invite visitors to explore the full suite of VisionLink capabilities for both Cat and non-Cat equipment and non-machine assets.

Attendees should also keep an eye out for the conclusion of Cat's Global Operator Challenge where nine finalists will have their skills put to the test in three identical challenges (excavating, loading, and hauling/maneuvering equipment through a variety of obstacles). After more than 10,000 operators from 32 countries around the world registered to compete, the champion will finally be crowned on the afternoon of 14 March.

### Doka to connect contractors with innovations

At its 3,000 sq ft outdoor booth in Las Vegas, Doka will showcase to visitors innovations for improving productivity, efficiency, and sustainability in formwork, concrete and digital services.



Image Credit: Doka

Making its inaugural appearance at CONEXPO, Doka's SiteLight will introduce visitors to a new spectrum of construction site advertising opportunities.

Under the motto, 'Doka Connects', the company has promised to offer opportunities to discover more about its products, innovations and trends and allow attendees to experience hands-on wall and slave formwork, safety, scaffolding and digital services that will connect contractors with successful solutions.

As of the beginning of 2023, Doka has acquired 100% of the scaffolding company in which it has held a stake since 2020. Customers at the conference in Las Vegas will be able to view first-hand the advantages of this alliance through a 'one-stop-shop' for formwork and scaffolding, offering customers everything from a single source, scaffolding both for rent and sale globally, an outstanding price-performance ratio, and a product meeting all safety criteria and standards for highly developed markets. In addition to a worldwide network and a high-quality design, customers will also benefit from the scaffolding management software HiVis as well as further services and software applications.

A 50' high Scaffolding Tower will invite visitors to explore the Doka exhibits and will make abundantly clear that Doka now stands for formwork, shoring, and scaffolding. Those brave enough will be able to climb to the visitor platform at the top of the Scaffolding Tower, enjoy the view of the CONEXPO exhibition center, and explore Doka's Digital services for higher productivity.

### JCB debuts hydrogen technology

For the first time ever on the international stage, the wraps will come off JCB's new hydrogen combustion engine – the company's zero-carbon emissions solution for construction and agricultural equipment. This will be part of the International Fluid Power Exposition at CONEXPO-CON/AGG.

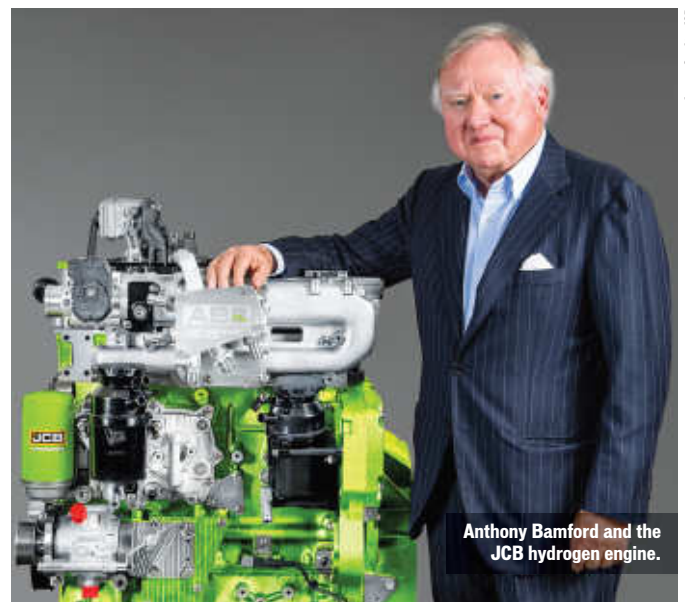


Image Credit: JCB

Anthony Bamford and the JCB hydrogen engine.

JCB chairman Anthony Bamford commented, "The JCB engineering team has made enormous strides in a short space of time to develop a hydrogen internal combustion engine and it already powers a JCB prototype backhoe loader and a loadall telescopic handler. As the first construction equipment company to develop a fully working combustion engine fuelled by hydrogen, I'm delighted we are now able to present this technology on the international stage."

JCB's commitment to reducing emissions goes back almost 25 years and its latest diesel engines have already delivered a 97% reduction in NOx emissions since 1999 and a 98% reduction in particulates. Today JCB's diesel-powered machines also emit 50% less CO<sub>2</sub> compared with those manufactured in 2010 and the company's clean diesel engine technology will also be showcased on the stand in Las Vegas. ■

# Deconstructing the glass ceiling

After receiving multiple awards at The Big 5 Construction Impact Awards 2022, Ghislaine Tessa Ketcha, CEO of Millenium Group, divulges her thoughts on the lack of female representation in Africa's construction sector.

On 5 December 2022 at Dubai World Trade Centre, UAE, Tessa Ketcha and her company Millenium Group were declared double-winners at The Big 5 Construction Impact Awards – a fiercely contested competition which recognises sustainable development, technology and digital achievements in the construction industry.

Against a formidable selection of nominees – which the judges noted reflected a huge influx of innovation and excellence – Millenium Group's MINDCA affordable green homes project was exulted as 'Carbon Net Zero Initiative of the Year' while Tessa Ketcha herself was named 'Sustainability Leader of the Year'.

These are remarkable achievements and reflect the hard work the company, and its CEO, have put into finding an alternative way of using construction materials and making Africa a sustainably developed region – as Tessa Ketcha remarked after the show. At times, this hard work has been undertaken in the face of adversity within the construction sector, a notoriously male-dominated sector despite the growing focus on diversity in recent years. Seemingly, however, this has only driven Tessa Ketcha and her colleagues onto new heights and even led her to found Women In Construction Africa, aimed at fostering a valuable support network for women in the industry and ensuring their talent is grown for its betterment.

Speaking to *African Review*, Tessa Ketcha explained more about her company's now award-winning environmental initiative and about her drive to change the current narrative around the role of women in Africa's construction industry.



Ghislaine Tessa Ketcha alongside Mebouogue Donancier, Cameroon's consul general in Dubai, and Sylvain Wambo, production manager at Millenium, at The Big 5 Construction Impact Awards.

**African Review (AR): Could you provide more detail around Millenium Group?**

**Ghislaine Tessa Ketcha (GTK):** Millenium Group is an integrated construction group of companies specialised in infrastructure and civil works, green buildings, eco-friendly affordable housing and sustainable materials production. It is a green one-stop shop which provides urban innovative sustainable and affordable solutions including technology in order to build more liveable and durable cities in Africa.

We use a systemic approach with adequate engineering work to offer an all-in-one customised service, yet with industrial efficiency, affordability and sustainability. We manufacture and implement structural and sustainable materials; build turnkey projects, mainly eco-friendly; and offer technical assistance. We are mainly active in Cameroon but we have a plan to target other West African countries in 2023.

There were two opposite consequences of the Covid-19 pandemic. First we suspended all activities with Covid-19 breakthrough. Customers would not pay for our services when everything was unknown and the world had entered into survival mode. We had to shut down for sometime and most of our staff was furloughed.

But Covid-19 also raised massive awareness regarding health, linked with quality of life. Sustainability (especially sustainability in construction) with eco-friendly homes became more popular which, in a way, drove attention to our services.

So I would say after Covid-19, we started back even better than before despite the financial issues we had to deal with. We are now on a growth path with a new plan in place.

**AR: Can you elaborate on your thoughts after receiving The Big 5 Awards?**

**GTK:** The newly added 'Carbon Net Zero Initiative of the Year' was

awarded to our green homes project named MINDCA – the french acronym for Sustainable Individual Homes On-Demand. It's an affordable eco-friendly housing concept in kits, available in a variety of models and finishes. Essentially made of soil-blocks with good thermal properties, MINDCA features ecological materials and other sustainable solutions in the areas of insulation, ventilation, and sanitation.

The homes have reduced carbon footprint, are energy-efficient with operational savings above 40%, and 70% of embodied materials efficiency measured through the EDGE software (a software developed by the World Bank). For each standard two-bedrooms house, around 400kg of CO<sub>2</sub> is saved each year, equivalent to planting ten trees each year throughout lifecycle.

There are several companies out there which are now offering green-homes made of earth-blocks which are becoming quite popular, especially since architect Francis Kéré won the Pritzker prize for his work with earth.

The main differentiation of our product is the business model. The kits proposed allow for efficient manufacturing in our self-designed factories. The homes, for which prices range from US\$15,000 to US\$100,000, are mainly offered 'ready-to-finish', and enable customers to customise and easily complete theirs on their own and at their pace on a 'Pay-as-You-Go' basis, using our expertise and supply chain to buy materials according to their preferences. This allows cut in the final cost with improved quality.

Receiving the award from peers was a great honour. This was beyond an award. It was also a powerful move in the sense that, not only one, but several meaningful messages and a huge power of

Image Credit: Ghislaine Tessa Ketcha



representation were embedded: an African female civil engineer and entrepreneur in this male-dominated industry being acknowledged for her contribution in the debate. That representation contributes to shift the narrative towards more inclusive dynamics. It's a message of courage sent to all those young people and women on the continent who have a lot to offer but whose voices are not heard, including my team, who hardly believed that we could win in front of major players of the industry. For them there was clearly a before and after prize. A sort of increased will and hunger to succeed.

I believe it's time for Africa to play their part in solving the world's most pressing issues. Africa has a lot to give to the world when it comes to sustainability simply because African lifestyle is generally a sustainable and inclusive one, perfectly stated in the Ubuntu philosophy: I am because we are. The message is we are bound to survive together.

So rather than receiving lessons, we can give insights and solutions to the world and this award passes that message just like the African proverb, 'until the Lion speaks the story of the hunting will always glorify the hunter'. Time has come for the Lion to speak.

**AR: Why is the environment such an important issue for your company ?**

**GTK:** Millenium was founded with the strong belief that to make the world a better place, construction and sustainability should not be dissociated. I set up the company's strategy and mission around sustainability, inclusivity and protection of the environment. Our solutions will enable us to:

- Address the housing challenge and its structural barriers to offer decent and affordable homes to more people
- Spread a low-carbon and more sustainable lifestyle allowing to improve people's comfort and well-being without jeopardising the integrity of our environment
- Develop Millenium communities

that are more inclusive, with higher standards and new technologies, favouring personal development.

When I founded the company and explained the vision there was always surprise and a questioning as to why focus on sustainability when, even in the West, green buildings are a difficult product to market. People said Africa needed decent homes not green homes. The eco-friendly offer was not perceived as a valuable solution.

It has made the journey challenging, with customers, banks, partners and generally stakeholders taking a lot of time to buy into the project. But Covid-19 and the recent awards are shifting everything.

Fortunately, we used these challenging times to build our product and experience which I believe are now a huge asset we have and on which we are leveraging to grow.

**AR: Why did you establish Women In Construction Africa?**

**GTK:** I was concerned with the fact that too few women evolve in the industry and decided to found Women In Construction Africa. This association is not only aimed at engineers, but at any woman working or willing to work in this field, in order to grow a valuable supportive network of women and enable them to also capture the benefits of this promising sector.

The industry especially here in Africa is, like many others, based on trust. So networking is essential especially when you are a business owner and need to know the right persons to partner with. In our male-dominated industry its even more important to network in order to gain visibility and access to opportunities. A woman-dominant network is key to unlock these benefits whether it be for a job, training, a partnership or a contract. It increases knowledge about people and their capabilities and hence confidence and trust.

After Cameroon we are working to identify women across the continent and we are preparing a summit in the coming months where our pan-African strategy will be unveiled.



Millenium's eco-friendly housing kits are available in a variety of models and finishes.

**AR: Why do you think women have been so under-represented in this industry?**

**GTK:** The underrepresentation comes from school and even later education. It is not exclusive to construction even though the issue is more obvious and concerning here.

Even when women study in this field, many end up pursuing careers elsewhere and surprisingly I noticed that they were often discouraged by their close circles. The job is perceived tougher and more physical, masculine and does not portray what a woman 'should look like' according to the society stereotype.

So changing the narrative by showcasing women pursuing a successful career in this field that they love, with a balanced personal life whatever their choice is, is very important for the younger and ultimately for a larger female representation.

**AR: Could you perhaps touch on your journey in construction?**

**GTK:** I commonly say I had (and still have to) cross the five layers-glass ceiling of Woman- Entrepreneur-Construction- Sustainability-Africa. Every word was a challenge per se in my industry.

The only solution which I still apply is hard-work, focus, rigor, competence and excellence. Much more than what a male counterpart in my position/skill would be asked for. Challenges come from all stakeholders. Even the customers who may not trust women first hand to handle a project.

Fortunately, my biggest support has always been women, who were even the very first to award me contracts. I practice the same and whenever I can, I choose female subcontractors and providers. If we don't, who will? That is also one reason behind the Women In Construction association: support.

Society is changing everywhere and while yes, the narrative is changing, in construction I believe it is doing so too slowly, because the imposter syndrome is very high among women themselves in this industry.

They feel they don't belong in there. Because the society declared it so. We are playing our part to deconstruct that.

In this sense, The Big 5 awards played a positive role. The power of representation I mentioned earlier. Such events should be encouraged and multiplied.

**AR: What advice would you give for women in the industry and for companies who have an underrepresentation of women?**

**GTK:** I am among those who believe that some quotas might be needed in companies, at least equivalent to the figures in engineering schools. It will induce a virtue circle from the beginning. If more women are there, there will be more trainees. More trainees will turn into even more aspiring young girls in high school.

To women, work hard and stay focused and disciplined. Don't let any one stop you, reach out to a female peer for mentoring advice etc., and hang in there. ■

Image Credit: Ghislaine Tessa Natcha

## Lithium pegmatites confirmed at Oriole's CLP Project

Oriole Resources, the AIM-quoted exploration company focused on West Africa, has provided an exploration update on its 90% owned Central Licence Package (CLP) project in Cameroon.

The district-scale CLP project comprises nine contiguous licences covering 4,091 square kilometres of previously unexplored Paleoproterozoic to pan-African age rocks that are highly prospective for a range of commodities, including orogenic-style gold mineralisation and lithium.

Since Q4 2022, the team has been undertaking early-stage exploration at two of these licences, Ndom and Gamboukou, to assess their potential to host lithium-bearing pegmatites. A number of pegmatite units have now been identified which help underpin the source of the approx. 9 km lithium-in-soil anomalies reported in Q4 2022. Mapping and sampling programmes are continuing at Gamboukou.

Oriole Resources CEO, Tim Livesey, said, "With the multi-element work flagging potential lithium anomalies during 2022, we are pleased to be progressing reconnaissance work on our licences as part of our CLP programme in 2023.

"Whilst lithium was not an original target for Oriole, the anomalies highlighted by the earlier programmes seem to be associated with the correct granitic host units and this has created a great opportunity for additional value add in this extensive package of ground.

"The addition of the Gamboukou licence in late 2022 further expanded our target area and is testimony to our teams continued focus on delivery of value in Cameroon through good, consistent, boots on the ground exploration.

"We look forward to updating the market as our teams complete their assessment of the area."



A number of pegmatite units have now been identified.

Image Credit: Oriole Resources

## IRONVELD MINING COLLABORATES WITH PACE

Ironveld has confirmed that its subsidiary, Ironveld Mining Limited, has entered into a joint venture agreement with Pace SA Limited, as equal partners to produce and sell Dense Media Separation (DMS) grade magnetite from Ironveld's mine in Limpopo, South Africa.

Martin Eales, CEO of Ironveld, said, "This is an exciting and value-additive transaction for Ironveld, which will utilise our existing mining infrastructure to supply extra quantities of ore, at multiples of the expected smelter requirements per month, to the JV from which we expect profitable cashflow within months. We would like to thank Pace for funding the initial capital contribution at a time when we are focusing our resources on the Rustenburg smelter ramp up, and we look forward to working with them."

Thabisa Hanise, CEO of Pace, stated, "This opportunity is a highly attractive legacy project in South Africa and forms an important part of the development of Pace's vision."

The JVA states that Ironveld Mining and Pace will establish a newly incorporated company to be called IPace Pty Limited (IPace) owned in equal 50% shares.

Pace will fund all necessary capital equipment and establishment costs of a beneficiation plant to produce the DMS grade magnetite, which will be sited on Ironveld's Lapon mining area.

Ironveld Mining will sell magnetite ore to the JV at a cost for processing into DMS grade magnetite and be responsible for operating the beneficiation plant, whilst Pace will be responsible for trading the DMS grade magnetite to end customers.

Ironveld and Pace will share all profits arising from the JV on a 50:50 basis, save for an initial period whereby Pace will recoup its capital funding on a 60:40 profit share basis.

## CALLS FOR COAL AROUND ENERGY UNCERTAINTY

The chairman of the World Coal Association (WCA) has said that the time has come for the world to accept that abated coal has a vital role to play in our long-term energy future.

Speaking at the Southern African Coal Conference in Cape Town, WCA chairman, July Ndlovu, said there has never been a more poignant time to speak about coal and its multiple attributes.

Ndlovu said that geopolitical issues in Ukraine, Russia, and China has added more uncertainty to the energy crisis, showing how essential it was for countries to have energy security.

"As the past year has demonstrated, coal can still be relied upon to deliver energy security in the face of turmoil. In reality, coal remains essential to electricity supply in more than 80 countries. So, we've got to get back to reality and common sense. We've got to push back against singular energy solutions, which are inadequate and unreliable. We must consider coal's multiple attributes and practicalities."

## ► BRIEFS

### South Africa takes tangible steps towards zero harm goal

Image Credit: Adobe Stock



The industry reported a total of 1,946 serious injuries in 2022, down from 2,123 in 2021.

According to the Minerals Council of South Africa, the South African Mining Industry has recorded its first fatality-free January

This announcement has been taken as a positive sign that the safety initiatives implemented by the Minerals Council and its members are gaining traction. The news also comes after the country recorded a record-low 49 fatalities in 2022, which is a notable reduction from the 74 fatalities the year before.

### High-speed connectivity for Kamo-Kakula

Image Credit: SES



Ivanhoe Mines and SES continue deploying low-latency satellite connectivity in Africa.

The Kamo-Kakula Copper Project in The Democratic Republic of Congo will continue to enjoy high-speed satellite-based connectivity services as part of a new agreement between Ivanhoe Mines and SES.

The enhanced partnership builds on a successful five-year relationship between SES and Ivanhoe Mines and comes at a time of significant investment in low-latency, high-capacity solutions in the region.



## Anglo American unveils first LNG dual-fuelled vessel

Anglo American has announced that its newly launched LNG dual-fuelled Capesize+ vessel, the Ubuntu Harmony, has loaded its first cargo of iron ore from its Kumba operations in South Africa.

The vessel is the first of ten LNG dual-fuelled new-build ships that Anglo American will introduce to its chartered fleet during the course of 2023 and 2024, delivering an estimated 35% reduction in CO<sub>2</sub> emissions compared to ships fuelled by conventional marine oil fuel. The use of LNG will also lead to a significant reduction of nitrogen oxides and particulate matter from vessel exhausts, while new technology also eliminates the release of unburnt methane.

The Ubuntu fleet is a key component of Anglo American's ambition to achieve carbon-neutrality for its controlled ocean freight by 2040 – with an interim target to reduce emissions from these activities by 30% by 2030 – all forms part of Anglo American's wider ambition to halve Scope 3 emissions by 2040.

Peter Whitcutt, CEO of Anglo American's marketing business, commented, "We are proud to see the Ubuntu Harmony begin its voyage transporting future-enabling products from our mines to our customers around the world. This milestone cements our vision to be a leader in low carbon shipping, a natural extension of our commitment to achieve carbon neutrality across our operations by 2040."

Nolitha Fakude, group director of Anglo American for South Africa, said, "The metals and minerals we provide play an important role in helping key industries decarbonise. Transporting them in a sustainable way is a key part of this effort and the introduction of the Ubuntu fleet – named after the Zulu word meaning 'humanity to others' – helps us accelerate our transition to sustainable ocean freight."



Image Credit: Anglo American

The vessel is the first of ten LNG dual-fuelled new-build ships that Anglo American will introduce to its chartered fleet during the course of 2023 and 2024.

### IMDEX TO ACQUIRE DEVICO

Global mining-tech company IMDEX has entered a binding agreement to acquire its main competitor in a deal that will reinforce its market-leading position in mining technology and deliver increased market penetration.

The proposed acquisition of Norwegian-based Devico AS, a leading provider of advanced sensors and the leader in directional drilling technologies, is expected to be completed by late February.

IMDEX CEO Paul House said the proposed acquisition was a highly significant investment that extended IMDEX's core business in both geographical reach and technology capability.

The addition of Devico would strengthen IMDEX's position as the leading provider of advanced rock knowledge sensors and establish the business as the number one directional drilling technology company globally.

Devico's portfolio of rock knowledge sensors complements IMDEX's existing technology. Through increased scale and market penetration, particularly in Europe and South America, IMDEX would further expand its presence on mine sites, opening further opportunities for its solutions to be delivered to established customers.

Under details announced today, IMDEX will acquire 100% of the issued and outstanding shares in Devico, and Devico's select minority interests in subsidiaries and joint ventures.

It intends to raise funds through an underwritten institutional placement, entitlement offer and conditional placement.

House commented, "Devico's flagship facility in Trondheim will become a key asset for IMDEX - providing us a new innovation and manufacturing hub for the European market. Devico's expertise, professionalism and their relentless customer focus matches our own and we are excited about what our teams can achieve together for the mining industry. We have commenced integration workstreams and are confident in a smooth transition."

**condra** 20 ton ca

**THESE CRANES HAVE BEEN ENGINEERED TO ENDURE**

WORLDWIDE

Condra cranes and hoists are without equal in their quality, performance, reliability and overall lifetime cost. The endurance of all Condra products has been proven around the globe in highly corrosive and abrasive environments, and under wide extremes of temperature, humidity and altitude. Technical support and service are guaranteed worldwide.

**condra**  
Cranes & Hoists

11 Indianapolis Boulevard, Raceway Industrial Park, Gosforth Park, Ext 4, Germiston, Gauteng, P.O. Box 752639, Gardenvue, 2047, South Africa  
Tel: +27 11 776-6000 | Fax: +27 86 669 2372  
e-mail: sales@condra.co.za | [www.condra.co.za](http://www.condra.co.za)

portal cranes | bridge cranes  
cantilever cranes | hoists  
end-carriages | single & double-girder overhead travelling cranes | crane components

CONDRA V-042019

# ESG at the fore at Mining Indaba

From 6-9 February 2023, the mining community's attention was firmly fixed on Investing in African Mining Indaba as attendees, speakers and exhibitors alike converged under the key theme of 'Unlocking African Mining Investment: Stability, Security and Supply'.

After marking its appearance in May last year, attendees welcomed the return of Mining Indaba to its usual February spot, enjoying the warmer climate and the more relaxed Covid-19 travel restrictions.

Immediately, the tone was set by a rousing opening speech from Frans Baleni, chair of the advisory board at Investing in African Mining Indaba, who exclaimed, "We have endured a global pandemic and are still grappling with its lingering effects. Today we gather in the midst of turbulent times due to global food and labour supply shortages, climate change and geopolitical conflicts. We have every reason to resign ourselves to fear and hopelessness."

However, in the face of such adversity, Baleni remarked we dare not succumb to such feelings because, as history has taught us, it is not in the still calm of life that great characters are formed. He quoted Abigail Adams in stating, 'The habits of a vigorous mind are formed in contending with difficulties.'

He continued by highlighting that the spirit of Mining Indaba has always been positive and forward-looking, and it was no different this year. "All of us have a role to play. As shareholders, investors, producers, political leaders, employees, women, youth and innovators gather here not just to network but to foster meaningful partnerships and make impactful investments. They gather here, fully committed to finding creative ways of addressing our challenges."

Following this rally cry, a number of keynote speakers graced the main stage of the CTICC, seeking to unfurl the challenges facing the industry



Frans Baleni gave a rousing speech on the opening day of the conference.

and identify the opportunities.

Notably, South African Minister of Energy & Mineral Resources, Gwede Mantashe, explained that 2022 had been a difficult year for the world and Africa, which negatively affected mining production and minerals sales. On top of this, international factors including soaring energy prices due to the geopolitical dynamics had posed the industry with more robust challenges around power supply alongside bottlenecks in railways and ports.

However, despite these problems, South Africa is beginning to rally. Mantashe explained that Transnet has accelerated the improvements of its rail network to support the return to service of locomotives to enable the export of bulk commodities. He welcomed the establishment of joint structures by Transnet and the Minerals Council South Africa (MCS) to ensure that all possible actions are being speedily taken to stabilise and improve South Africa's operational efficiencies at the ports.

He also paid tribute to Gold

Fields, which was the first mining company to take advantage of the government's reforms around embedded generation licencing (which was increased from 1MW to 100MW before being ultimately removed).

Addressing the delegates later in the conference, South African President Cyril Ramaphosa said, "We have a responsibility as governments, industry, labour and communities to ensure that our mining industry is able to grow, to become more globally competitive and to be a pioneer in the global drive towards sustainable development.

"To realise these objectives, we need to achieve a secure supply of electricity, accelerate economic reforms to improve the operating environment, tackle illegal mining and damage to infrastructure, and improve the regulatory environment."

As the Government and other bodies work to address these issues, Ramaphosa added that investors will find South Africa an attractive

destination for miners and associated sectors. This is particularly the case for companies looking to leverage the opportunities presented by the global green energy transition and the African Continental Free Trade Area.

Indeed, the exploitation and supply of key minerals for the energy transition took its place alongside ESG as a key consideration currently gripping the continent's sector and driving debate at Mining Indaba. It was under this theme that Jose Fernandez, Under Secretary for Economic Growth, Energy & the Environment, US Department of State, took to the stage, commenting that last year at Mining Indaba there was increasing focus on the growing demand for critical minerals and the need for diversification here. He quoted the IEA which has predicted that demand for most minerals essential to the clean energy transition will increase by approximately 4-6 times and some exponentially. To meet this blossoming demand for critical minerals, Fernandez added, keeping ESG in view will be paramount.

"This is not altruistic. Sustainable growth requires sustainable projects. Investors demand this and consumers insist on it. Economic development to benefit a few is not sustainable."

Fernandez moved on to his work with the Minerals Security Partnership (MSP), an organisation created in response to the growing demand of critical minerals to ensure that they are being 'produced, processed and recycled in a manner that supports the ability of countries to realise the full economic development benefit of their geological endowments.'

Since its establishment in June



2022, Fernandez said that MSP and its partners have been working to create a framework which prioritises transparency and environmental protection and aims to include communities that are affected by mining work – there has been too many instances of profitable mines shut down due to community opposition, according to Fernandez. “In our meetings with the private sector we have found that companies will not engage with a race to the bottom. They won’t do it as their shareholders won’t allow it and their customers won’t accept it. That is why we must care.”

### Key announcements

The delegates attending the show, representing a wide array of organisations associated with Africa’s mining industry, wasted little time networking, sharing ideas and confirming partnerships that will mould the continent’s future – the latter of which manifested in the announcement in a number of key deals.

With the speeches centring around the energy transition firmly ringing in its ears, Wood Mackenzie, a leading provider of decision intelligence for the world’s natural resources, made use of the Mining Indaba platform to launch the Electric Vehicles and Battery Supply Chain Service (EVBSC).

The new product will provide end-to-end detailed analysis and forecasts of the electric transportation value chain including quarterly long-term outlooks to 2050 and 10-year forecasts, and monthly short-term reports and data for EV, Li-ion battery and raw materials markets.

At a separate signing ceremony held at the event, Africa Finance Corporation (AFC) a leading infrastructure solutions provider in Africa, and Xcalibur Multiphysics, a worldwide leader in airborne geophysics, announced their intention to partner on mapping, developing and co-financing natural resource projects that will spur minerals and critical raw materials beneficiation in Africa.

AFC and Xcalibur, through their partnership, will prioritise projects to locate and identify AFC’s focus minerals, including precious, base and critical raw materials. As a result, African countries will have access to improved geological data, which will de-risk investments in the sector, create local jobs, unlock mineral resource wealth and ultimately support a more just energy transition on the continent.

In addition to celebrations around the business transactions being confirmed across the CTICC, there was also time to commemorate some of the outstanding work that had been conducted within the sector over the last year. In addition to the packed agenda of panel session discussions and keynote speeches, a number of awards were presented to standout performers. Most notably, the winners of the 2023 ESG Forum Awards were declared to the Indaba audience. The recipients included:

- Climate Award – Robox Resources
- Water Award – Gem Diamonds
- Nature Award – Akobo Minerals
- Transparency Award – Base Resources
- Circularity Award – Homestead
- Economy Award – Lucara Diamond
- Community Engagement Award – Bannerman Energy
- Labor Award – Base Resources
- Diversity, Equality & Inclusion Award – Copper 360

### On display at Indaba

With panel discussions and award ceremonies taking place around the CTICC, undoubtedly the core of the conference centred in the main hall, where a vast display of mining equipment, solutions and services was laid out at the exhibitor stands. Ranging in size, those who had taken a stand were eager to speak to any passer-by and, across the exhibitor hall, the full range of the mining industry was in attendance, ensuring there was something of interest for every attendee.

One of the standouts from this sea of innovation was Magna Tyres, whose suspended MA60 tyre, a



Magna Tyres had an eye-catching booth this year.

specially developed tyre for heavy articulated dump trucks (ADTs) operating in a verity of demanding mining and quarry applications, was impossible to miss.

At their stand, company representatives were happy to explain its goal of ‘keeping companies on the move’ with the best tyre solutions available and noted that regardless of where a customer is in the world, Magna Tyres can be relied on for its superior service and knowledge about off-the-road (OTR) tyres. With the goal of strengthening its position in the world as the largest 2<sup>nd</sup>-tier supplier of OTR tyres, the company was showcasing its range of equipment from tyres designed for wheel loaders, from rigid dump trucks, ADTs, graders and scrapers.

A short distance from Magna’s stand sat that of SEW Eurodrive which was showcasing for just the second time following its debut in 2022. Ready to discuss its array of motors, industrial gear units, gear motors and automation technology, the company arrived buoyed off its newly built and expanded facility in Aeroton, Johannesburg.

Among its sturdy and power solutions on display was the DRS/DRE/DRP Series offering simple configuration of all motor variants from one single series. The company noted it saves space and costs due to the company design and complies with worldwide standards.

Further on still, Spectrometer

Technologies occupied a prominent position at the main hall entrance, and was proudly showcasing its high integrity and reliable handheld XRF and scientific analytical equipment which was ready to continue serving sub-Saharan Africa’s mining and mineral industry.

One such solution was the company’s Thermo Scientific Niton XL5 handheld XRF analyser which can be utilised for a range of applications including the verification of metal alloys in manufacturing operations, non-destructive field inspections for positive material identification, point-and-shoot sorting at scrap recycling operations, precious metal assay of bullion and jewellery, on-site heavy metal screening of polluted soils and real-time geochemical analysis for mining exploration. Designed to return lab quality results, the Niton XL5 low limits of detection allow operators to scan a broad range of materials for diverse applications and generates fast and accurate results, displayed in real-time.

In another case of innovative technology ready to support Africa’s mining industry, Seequent, a Bentley subsurface company, was on hand to showcase its exploration software. On its stand the company was ready to discuss new solutions such as Imago for high-quality core sample imagery and drill data collection tool MX Deposit.

Providing his thoughts on the

conference, Seequent's head of customer solutions, Marc Delpont, said at the show, "Mining Indaba 2023 has been really great for our company. It has been fantastic to showcase our products to the industry, connect with existing customers, make new relationships and build on existing ones. Overall, the quality of the event has been great, the presentations have been fantastic and we have had a lot of engagements at our stand, looking at our newer products with a lot of interest around how we can add value in the data management and collaboration space."

Delpont was not the only one impressed by the quality of the show this year, as William Zylberman, geologist and project manager for African projects at Beak Consultants, also provided a glowing review on the side of his stand. He said, "We participate at Indaba every year and it is always really great as a place where we can meet all our clients, keep in touch with them and develop new relationships. We have been really busy, active the entire event and next year we will probably return with more people as we wanted to participate even more."

Beak Consultants offers consulting services in the field of applied geology, environmental managements, GIS and information technology. This year, among its range of software products, the

company highlighted its advanced prediction software which allows customers to dig deeper into their data and make more value of it through artificial neural networks and GIS.

Zylberman continued, "Data in general on the continent is a really important point for private actors, companies and governments as there are so many different kinds of data sources. We speak with so many different people and have realised that there is a real issue around data management. So at Beak we propose solutions for that and have data management software advanced and we see that the demand is really huge. This is really a software that can help with data management in an efficient way and synchronise everything in one place."

### Manufacturers make an impact

Making up a large part of the exhibition floor was the wide selection of equipment manufacturers serving the African continent. Elphinstone, for instance, an established Caterpillar original equipment manufacturer with more than 45 years' experience in the mining industry, was present and open to discussions around its range of underground mining support vehicles that combine practical



Standard Bank were located opposite the CTICC entrance.

design, the latest technology advancements and quality manufacturing to ensure reliable performance.

Within its product portfolio on display was the range of WR810 underground support vehicles which have been designed to thrive in the harshest underground hard rock mining environments. The WR810 is a highly configurable, 10-tonne nominal base platform which comprises of a delivery with crane, scissor lift, six sq m agitator, fuel and lube truck, water cannon and others.

Also representing this side of the industry was Komatsu which, with an imposing stand designed to catch the eye, had a multitude of solutions which were ready to be discussed from the company's rock breakers, dozers, reclaim feeders, draglines, haul trucks, HAC systems and more. Certainly, there is little the company was not ready to supply for those looking to bolster equipment on site.

Zeroing in on one aspect here, the company's range of P&H blasthole drills are ready to deliver consistent performance when working in the toughest rock conditions – wherever the mine is located. Whether dealing with weak power grids, extreme temperatures or high altitudes, in the range there is a solution for whatever conditions and with the company's long history in platform-type drills, it guarantees to enhance the capabilities of its customers.

### Heavy hitters

Dotted around the CTICC, both inside and out, were larger exhibits, most often manned by veterans of Mining Indaba, reprising their stands for another year. One of the stand-outs this year was Orica whose representatives arrived at the show determined to continue its proud history of serving the mining industry since 1874.

Among the wide selection of mining solutions on display was the recently released OREPro 3D Predict modelling software, a near real-time blast movement simulator and grade control polygon optimiser. Using readily available mine data as inputs, including blast designs and in-situ block models, sophisticated physics-based algorithms predict movement dynamics throughout the entire blast volume to create a swelled post-blast grade control block model. The polygon optimisation tools will then suggest delineations that can help achieve the highest value possible. No longer are blast designers relying on simple rules of thumb or luck to optimise blasting for grade control as the OREPro 3D Predict opens the door to iterative designs and the quantification of value in each blast design.

Guarding the entrance of the CTICC was Standard Bank, providing a welcoming stop-off point for attendees preparing to enter the conference, departing after a full day or wishing to pay a visit at any point in-between. Across their booth, members of the team were



Country stands were dotted around the exhibition floor.

Image Credit: Alain Charles Publishing @ Mining Indaba

Image Credit: Alain Charles Publishing @ Mining Indaba



consistently engaged in conversations to provide support to clients across the value chain with their growth ambitions while encouraging them to embrace more sustainable ways of operating. As a leading African bank, it stands ready to provide innovative financing solutions for clients in the mining sector including transactional solutions and services; advisory; equity capital markets; debt primary markets; project and export finance; securitisation; structured debt solutions; structured trade and commodity finance and global markets solutions and services.

### Power comes to play

Owing to the continued electrification battle that the continent is engaged with – and exacerbated by the energy challenges South Africa is grappling with – there was a notably large presence of power companies at Mining Indaba this year, ready to help mining organisations maintain energy security wherever their sites are located.

Aggreko was one such company which offered the opportunity for mining companies to fundamentally change their power portfolio and the costs associated with energy management by investing in alternative solutions that allow them to optimise and refine their energy usage and production. Showcasing their flexible energy solutions to meet and power demand, location or ESG restrictions, the company representatives assured visitors that a partnership would meet the long-term power supply requirements, no matter the priority. As proudly outlined at their stand, for one mining company in Mali, Aggreko effectively supported the optimisation and hybridisation of their power plant which ultimately resulted in a 40% reduction in total cost of energy and a 20% reduction in CO<sub>2</sub> emissions.

Other organisations working within this sphere at the show included Red Rocket which arrived boasting a portfolio of more than

1,000MW of plants currently in operation, under construction or awarded as a preferred bidder. The company is on a mission to create clean energy across the continent and was seeking to show to the industry exactly how it could meet its energy requirements.

### A strong year for AspenTech

As Mining Indaba drew to a close on the final day, Jeannette McGill, VP and GM, metals & mining at AspenTech, spoke to *African Review* at the company's booth to provide her thoughts on this year's conference and how AspenTech's growing presence at the show is indicative of its ambitions on the continent.

"AspenTech has a large product suite which is applicable in the metals and mining space, where we're seeing the current uptake is very much around performance management and asset reliability. The notion that you can now reliably predict when failure is going to occur is the game changer, especially in the African sector, where spares and especially critical spares are hard to come by. I think is also a hangover from Covid-19 and the lack of adequate sparing is a constraint.

"What our software provides is the opportunity to efficiently understand and predict when breakdowns are going to occur, especially on large capital intensive pieces and that can really make a difference from a planning perspective. Recently, through this, we actually saved one of the tier one miners US\$20mn in potential failures by them being able to structure this sparing schedule in advance."

Last year at Mining Indaba, McGill told *African Review* that there was still a bit of a reluctance from much of Africa's mining industry to embrace new technology and advancement such as artificial intelligence, but, not even a year on, change is already in the air.

"There is a recognition that tech is going nowhere. Tech is here to support efficiency and reliability



Jeannette McGill at AspenTech's stand.

and support the dual challenge. How do we procure the minerals needed to meet the global demand but do so sustainably? We can't do it without the support of AI and new advancements. So I think that, before, African companies on the tech continuum were either all in or on the opposite book and didn't want any tech at all. And what I'm seeing is that the 'no tech corner' has moved a little bit further along to what I call 'the as little as possible'. But they've moved in the right direction and at least trying to understand what is the correct piece of tech that they are going to use."

Much of this change in perception has been driven by the critical minerals imperative and the growing awareness of ESG which, McGill noted, have been really buoyed at this year's Mining Indaba.

"ESG has been critical to the change in narrative. I think we used to, as a sector, do lip service, to ESG. There were programmes that started through organisations where this was done but there was a lack of awareness.

"But now companies are embracing it and from a broad perspective, ESG is very significant. I think the industry gets the importance of being able to secure our future. It is about securing minerals for our future, but not at the cost of nature, diversity, and the communities around those sites."

Playing into this, new technology

(such as that provided by AspenTech) can make a real difference. McGill explained, "We have a strong sustainability footprint and we have supported, for instance, in the circular economy, plastics. So we are able to take solid waste in the plastic cycle through pyrolysis and turn that into liquid input for different forms of plastic. Another of our sustainability aspects is from an emissions perspective. On an annual basis, through the deployment of our software, we are able to reduce 16 million metric tons of carbon emissions in the global refining space."

McGill concluded, "I think that for me, this narrative is reflective year-on-year reflection about AspenTech's presence here at the Mining Indaba. We are mounting a concerted drive around supporting the sustainability narrative, the dual challenge, etc. and perhaps in previous years our brand maybe wasn't that recognised in the African market. But we have had very strong and favourable support this year.

"We are on a growth trajectory in this market. And so the key takeaway for me this year is that our messaging is landing. We are a company that is supporting that dual challenge be it in performance management, emissions controls, etc. Our right to play in this market is exceptionally strong right now because of the best in class software we provide." ■



FLSmidth's devices help customers reduce energy and resource consumption.

# Sustainable solutions through digitalisation

In an interview with Sania Aziz, FLSmidth regional heads, Deon de Kock and Alistair McKay, spoke about the importance of digitalisation and sustainability in the mining industry.

**A**listair McKay, vice president of site and service sales, sub-Saharan Africa, Middle East and South Asia, explained the type of digital solutions customers are currently looking for. “There is a lot of development on the technology side, but it takes a period of time to get past pilot testing and to get these types of technologies widely implemented into the mining environment.”

How can the existing installed base be optimised? How do we look at the existing equipment, existing technologies and then start utilising all the aspects of artificial intelligence? Can they be brought together in terms of a platform that improves the efficiency of the technology? But then over and above that, how do we start bringing together the entire flow sheet?

These are the questions McKay

often asks while looking at the digital space, adding that the mining industry has, for too long, focused on specific items of equipment rather than on the holistic approach in terms of what makes a processing plant work. Moreover, linking digitalisation with expert services for FLSmidth’s mining customers to help them reduce energy consumption, lower resource consumption, and improve efficiencies are also major

factors in driving digitalisation.

On-site safety is also important, said McKay, adding, “I think it is important to have improved safety on site and improved skills transfer. Online training to access the equipment remotely to be able to give guidance remotely when there’s a shutdown, even when there’s an emergency problem on the site and to bring in experts around the world specific to that.”

With regards to technology, McKay said that “the PerformanceIQ Services is something we believe to be the future... because it’s all encompassing from data to all the way through to the training of personnel on site.”

Meanwhile, FLSmidth is also heavily focused on sustainability efforts for its customers. Deon de Kock, president of sub-Saharan Africa, Middle East and South Asia region, explained that sustainability targets also need to be linked to digitalisation in a way that services are all integrated.

“I think the sustainability agenda is more than lowering the carbon emissions, reducing water waste and reducing energy consumption. The technology already exists to monitor, to analyse, to do remote conditioning, remote monitoring or even running remote diagnostics.

**“The sustainability agenda is more than lowering the carbon emissions, reducing water waste and reducing energy consumption.”**

**DEON DE KOCK, PRESIDENT OF SUB-SAHARAN AFRICA, MIDDLE EAST AND SOUTH ASIA**



But if you combine all of those technologies in the flow sheet with digitalisation as the enabler, that's when you can optimise it to really take in the marginal improvements of energy."

de Kock also explains that digitalisation is linked to PerformanceIQ Services. "It's not rocket science, but it's just about how to integrate that, and how to extract the information, so that you can optimise the plant. I don't think there's one silver bullet for optimising a plant. It's the sum of many small things. But the enabler to put it all together is digitalisation."

### Away from the traditional

Speaking of innovation in technology, de Kock explained that nowadays, digitalisation is built into the equipment.

"If we talk about a dry grinding as opposed to a wet milling circuit or the REFLUX flotation technology, digital solutions are built into the equipment. The way we monitor it, control it and the way we analyse the data links in with remote diagnostics and monitoring.



Image Credit: FLSmidth

Digital solutions are being increasingly incorporated into new equipment.

"Whereas in the past if you had a piece of analog technology, it couldn't communicate in the digital space. It was basically a piece of hardware and you had to monitor it."

Adding to the conversation, McKay said that there is a shift away from traditional technology. "New technology now comes with a digital platform that's already established."

**“New technology now comes with a digital platform that's already established.”**

**ALISTAIR MCKAY, VICE PRESIDENT OF SITE AND SERVICE SALES, SUB-SAHARAN AFRICA, MIDDLE EAST AND SOUTH ASIA**

Giving an example of KREBS SmartCyclone, FLSmidth's cyclone sensor technology, McKay said that "It is an optimisation and condition monitoring solution that we have developed which is really a digital application onto a standard cyclone."

These sensors can report the wear status of the cyclone components, allowing for more precise planning of part purchases and maintenance operations.

### A growing business

With regards to business expansion outside of Africa, the company is focused on growing in the UAE and Saudi Arabia. "In the past four years, we've done significant transactions with our customers here, which means that our installed base has grown and we have to support that installed base," explained McKay.

"So we are certainly expanding into Saudi Arabia. Besides, we are also strengthening our position in Ghana and West Africa. And we will

do the same now, but on a smaller scale in Zambia and Central Africa. We are already well established in South Africa and in India.

"But our focus would certainly be in Saudi Arabia and the Middle East to support our fast growing install base, which is predominantly in copper, gold and phosphate."

Both McKay and de Kock confirmed that the company has continually added value to its existing customer base in the Middle East, which requires local expertise, understanding of the operating conditions and the nature of the customers.

"It is because the value that we've demonstrated was not on greenfield projects; it was on existing brownfield projects, where as a technology partner, we could optimise that operation," said de Kock. "Step one in the sustainable operation and green transition is to just use your asset better," he concluded. ■



Image Credit: FLSmidth

KREBS SmartCyclone is an optimisation and condition monitoring solution.

# Overhead cranes move towards full automation

Marc Kleiner, managing director of crane manufacturer Condra, said the growing awareness of the benefits of full crane automation is currently the most noticeable trend in Africa’s overhead crane industry.

**K**leiner, commenting on market characteristics emerging during the previous year, explained there is a significant increase in the number of tender documents specifying provisions for crane automation post-installation. Although Condra received no orders for fully automated cranes during 2022, the number of enquiries for such machines was up year-on-year.

“Repetitive crane operations such as those in refinery operations offer clear potential for increased productivity through automation,” said Kleiner. “South Africa has the technology and local manufacturing capability to deliver it, and now the market is becoming increasingly aware. I don’t think we will have to wait long before automation gains a foothold.”

Full automation implies zero involvement by machine operators. It is the ultimate step beyond an overhead crane in which the machine executes a limited number of pre-programmed, automated operations, but still needs an operator to control the crane during randomised, non-repetitive lifting functions (semi-automation).

Condra has offered full automation across its product range since 2020, the culmination of continuous development since the company’s first semi-automated crane installation at a Durban spice company in 2003. That machine comprised a grabbing crane installed to pick spices and transport them to specific points for release over hoppers servicing blending and packing operations.

## Advancement indicators

Pointing to the motor industry for indicators of anticipated advances in overhead crane technology, Kleiner said that motor vehicles often led technological development in crane manufacture by several years, but that in the case of automation these roles had been reversed, with overhead cranes currently leading the way forward.

“Vehicle manufacturers were first to use computers to monitor certain mechanical functions,” Kleiner surmised. “Crane manufacturers lagged in this development, and it was a similar case with the control and smoothing out of lifting and lateral movement. It took time for crane manufacturers to introduce variable speed drives, whereas comparable control technologies had been present in motor vehicles for decades.

“This is not the case with automation, however.



Marc Kleiner is the managing director of Condra.

Image Credit: Condra

“The autonomous crane exists and is already performing useful work, whereas the autonomous motor car is still in the experimental phase.”

**MARC KLEINER, MANAGING DIRECTOR OF CONDR**

With automation, the crane companies are in the lead. The autonomous crane exists and is already performing useful work, whereas the autonomous motor car is still in the experimental phase.”

Kleiner noted that about one in five enquiries received by Condra now includes specified provision for future automation and provision of fitment and wiring points for the future attachment of cameras with cognitive movement control ability, the main requirements for automation.

## A solid base for growth

Kleiner concluded, “Condra is in a good position going into 2023. We have a solid order book which includes contracts recently signed with steel companies and mines across Africa both above and below ground. Locally, our factories in Cape Town and Johannesburg are busy.

“The market is aware that Condra represents more than just crane manufacture and commissioning, offering design and engineering skills that dovetail with those of architects and structural engineers. We have considerable experience of working with these disciplines to deliver world-class, best possible lifting solutions within tight lead times. This is a strong foundation on which to build a successful 2023.” ■



Image Credit: Condra

The number of enquiries Condra received for autonomous cranes was up in 2022.



# Washing away the waste

New innovations around washing systems are ensuring less material in landfills, and more quality products available for commercial use.

Ensuring that crushed and screened products such as sand and aggregates are cleaned can really serve to boost the quality and ultimately revenue. By investing in washing equipment, companies can make the best use of material that is extracted from their site (with the added environmental benefits) and will be well placed to meet stricter aggregate specifications when they come.

In this space, the industry is well served by an array of equipment providers, vying to design and deliver the most efficient systems to meet customer requirements. This includes the likes of CDE which, last year at bauma, celebrated its 30th year of providing sand and aggregate wet processing solutions for the natural materials processing and waste recycling sectors. When it did so, the company revealed that CDE solutions have, over the past three decades, facilitated the diversion of more than 100 million tonnes of construction, demolition and excavation (CD&E) waste from landfills globally. It also referenced the milestone that the company has successfully delivered more than 2,000 proven solutions in more than 100 countries, marking its credibility across the globe.

## A break with tradition

Terex Washing Systems (TWS) presence in southern Africa has been fostered through a 30-year partnership with multi-brand distributor ELB Equipment. The latter is one of the few South African companies who can offer a broad range of earthmoving, construction, mining and quarrying equipment from a single supplier and has established itself as a respected name within the industry in recent years.

The company notes that, since



The FM Pentium is ideal for restricted locations.

Image Credit: Terex Washing Systems

South Africa closely follows global standards, customers can rest assured that the products they supply meet local safety standards and will be sure to meet client satisfaction. With a vision to be alert and ready to meet the requirements of its customers, the company has maintained the relationship with Terex Washing Systems to provide clients with some of the highest quality washed sand and aggregates for their projects.

Many of these customers will no doubt be taking note of TWS' latest piece of equipment, the FM Pentium, which was launched at Hillhead in 2022 and is soon to be introduced to the North American market at CONEXPO-CON/AGG in March. This solution has the unique capability to wash one grade of sand and one aggregate on a single chassis and is expected to make a big impact in the quarrying and recycling sectors.

The design of the FM Pentium departs from the traditional. In the conventional screening process, size

fractions are taken off from smallest to largest by feeding all the material on the top and the smaller size fractions come out from underneath. But with the FM Pentium, larger material is fed from the bottom and then sand is pumped up and taken off from the top deck.

The static sand and aggregate washing unit is the latest in TWS' FinesMaster range. Combining a collection tank, centrifugal slurry pump, hydrocyclone(s) and a dewatering screen, it boasts a feed rate of up to 150 tph of pre-screened material and can produce up to 120 tph washed sand.

In addition, TWS has stated that due to its small footprint, it can be easily transported on a 40 ft container making it ideal for restricted quarry sites and other areas with similar constraints.

Contractor Paddy Woods, with his company P. Woods & Son Ltd operating from Country Tyrone in Northern Ireland, is already the proud owner of the FM Pentium and has explained how it has helped

achieve their sustainability goals and opened new commercial opportunities by creating a sellable product.

"There's an ever increasing need to maximise efficiency in every way possible, which is why we were initially attracted to the FM Pentium when I saw it at Hillhead. It can turn out big volumes of both aggregate and washed sand which has become one of our best selling products. It is ideal for our operation."

TWS area sales manager Conor Maxwell, commented, "We are a company that is primarily customer driven. We are already getting enquiries about the FM Pentium from across the UK and Ireland, and we see great potential for it on a more global scale; we're looking forward to launching and showcasing it to our US market during CONEXPO as there is nothing quite like it in the marketplace. We see the FM Pentium as the future – and it can also lend itself to a recycling application, demonstrating its versatility." ■

# Providing mining solutions through the Middle East

In an interview with Sania Aziz, Sakala Muyikwa Adolph, general manager, Christina Trading SARL, revealed the company is looking to establish itself in the Middle East, using Dubai as a gateway into multiple regions.

Specialised in supplying industrial equipment spare parts, logistics, and civil engineering, Christina Trading is headquartered in the Democratic Republic of Congo. The company also provides services such as the development of mining scheme and excavation works related to the mining sector and others.

“We need to have greater representation in the UAE, because it is a trade hub for different continents,” said Adolph. The company has operations in Congo, Angola, Tanzania, and South Africa.

“We are most interested in building a brand name for ourselves in Tanzania and Zambia,” said Adolph, adding that these two markets have the most potential to bring in business for the DRC as they are its immediate neighbours.

The company was launched in 2011 when it began supplying spare parts for different brands. In the last 12 years, Christina Trading has gained clients including Frontier SA, Société d'exploitation de Kipoi (SEK), Kipushi Corporation and Ruashi Mining apart from others. Recently, the company became the exclusive and authorised distributor of permatex GmbH & Co. KG products in the Democratic Republic of Congo, Angola, Tanzania and Zambia as well.

Most of the clients are involved in cobalt mining, said Adolph, stressing that his country is rich in natural resources, with an abundance of natural wealth, including a multitude of minerals such as diamonds, gold, copper, cobalt, cassiterite (tin ore) and coltan, as well as timber, coffee and oil.

“We [DRC] have a lot of resources which means that we have big opportunities in the mining sector. We already have a growing mining sector, and our company is looking



Image Credit: Christina Trading

The company is looking at establishing operations in the Middle East.

to develop easy solutions for the mining sector in the region.”

However, facing supply issues has caused Christina Trading to look towards the Middle East, explained Adolph. For example, he said that if the company needed to order spare parts to the DRC, it would be quicker to do so via Dubai.

“It can take less than three weeks, maybe one month, if you bring spare parts to the DRC from Dubai. But if you were to order it from say,

South Africa, it can take up to two or three months.”

With regards to digitalisation, Adolph revealed that his company is always finding solutions before any issue comes up.

“We are always looking for problems that can come up and as soon as we identify the problem, we seek digital tools to solve the issue, because we cannot wait until a project begins to start finding or developing a programme. We are

usually prepared two or three months in advance.”

The company also has a deep commitment to safety, said Adolph, adding that ‘zero danger’ is the company’s motto. It protects all its agents on site, ensuring the safety of its clients.

Finally, Adolph spoke about the future of Christina Trading. “We have a few contacts, but not all partners can support our projects. So we need to have a lot of representation outside of Africa as well, because we have plenty of mining opportunities here. We hope that if we are based in Dubai we can get more contacts for our Africa projects. We also hope that we can start providing mining solutions to clients in Europe and Asia as well, not just for the DRC.” ■

“ We hope that if we are based in Dubai we can get more contacts for our Africa projects.”

SAKALA MUYIKWA ADOLPH, GENERAL MANAGER, CHRISTINA TRADING SARL



# Achieving maximum screening performance

Steve Fair, Tyler engineered media manager, Haver & Boecker Niagara, provides expert advice for blending screen media for maximum performance in all phases of screening.

**P**roducing the most tons per hour, ensuring product meets specifications and maximising the wear life of screen media can be difficult to achieve using only one type of media. Finding the perfect balance of high wear and maximum longevity isn't always an easy task. The feed end may wear out before the discharge end, or using a full deck of a more durable type of screen media may reduce tonnage.

Many times, the solution lies not in a single 'screen-all' product, but in the ideal mix of screen media types to ensure all phases of screening work correctly. The process of choosing that mix is best accomplished through careful analysis – including diagnostic analysis – an inspection of screen media and the vibrating screen itself, followed by a recommendation from an expert. To help find the best media for each phase, here are a few checkpoints to increase screening productivity:

- **Vibration analysis:** Vibration analysis systems can provide real-time, 24/7 monitoring of machine performance. The resulting data can help producers spot abnormalities the human eye cannot detect before they become costly, such as a hairline crack in the side plate or a twisting motion that will affect both screening efficiency and the wear life of equipment. This helps minimise downtime and maintenance costs, improving overall profitability.
- **Inspection:** A visual inspection of the vibrating screen and screen media is necessary to better understand areas for improvement. The discarded screen media pile is one of the first places to look for problem areas, such as broken wires, wear areas, pegging or blinding. Premature wear often occurs with screen media that can't handle heavy material or excessive abrasive fines. Screen media openings should be a focus when looking for wear. For example, wear is apparent if the square openings in engineered media begin to round. Types of media unsuited for the application can also result in blinding, pegging or carryover, leading to the added cost and time commitment of rescreening. Additionally, broken screens mean costly, unscheduled change-outs.
- **Phases of Screening:** Screen media manufacturers can help evaluate how material moves through the three phases of screening to give recommendations on the best screen



Image Credit: Haver & Boecker Niagara

Careful selection and the correct blend of screen media can mean thousands of dollars in savings.

media for an application. Producers can alter the screen deck by choosing screen media that maximises productivity for each phase by blending the optimal combination of open area and wear life.

The material begins its path down the screen deck during the first phase – layered screening – where the screen media should be able to handle a deep bed depth, high impact and a mix of coarse and fine particles. Heavy-duty options, such as those using polyurethane, rubber or perforated plate, can excel in withstanding high top sizes and abrasion. Screen media with the ideal combination of wear life and open area is best for the next phase – basic screening – where most of the screening action takes place. Hybrid screen media, for example, pairs polyurethane's durability with an open area similar to woven wire and is often a good choice for the middle of the deck. Sharp screening takes place at the discharge end and requires maximum open area to allow any remaining undersized particles to fall through and for near-sized material to pass,

preventing contamination. Woven wire or self-cleaning media provide the best open area in this phase.

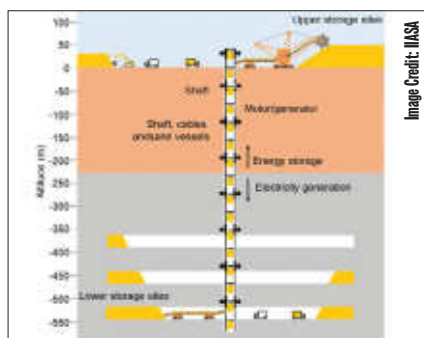
- **Screen Media Selection:** Screen media inspections provide the information required to recommend the best type of media for each phase of screening. A certified screen media representative will work with you to decide what combination of media will provide the most efficient solution for each phase. This often means using a blend of different types of screen media to achieve the best combination of wear life with open area.
- **Implementation:** The last step is to start switching out screen media. Changing out one section at a time – such as beginning at the feed end of the top deck – helps pinpoint where performance improvements are being made. Careful selection and the correct blend of screen media can mean thousands of dollars in savings for a mining or aggregates operation. For best results, it is recommended to work with a reputable screen media manufacturer or certified dealer for informed advice. ■

## UTILISING ABANDONED MINES FOR LONG-TERM ENERGY STORAGE

A IIASA-led study has discovered a new technique to combat the lack of methods surrounding a cost-effective long-term solution to efficiently storing energy amid the global energy transition.

The technique called Underground Gravity Energy Storage (UGES) proposes an effective storage solution while also making use of decommissioned mining sites, which are likely to number in the millions globally. UGES works by lowering sand into an underground mine and converting the potential energy of the sand into electricity via regenerative braking, and then lifting the sand from the mine to an upper reservoir using electric motors.

The main components of UGES are the shaft, motor and generator, upper and lower storage sites, and mining equipment. The deeper and



Due to sand being the storage medium, UGES offers an ultra-long storage solution.

broader the mineshaft, the more power can be extracted from the plant, and the larger the mine, the higher the plant's energy storage capacity.

“To decarbonise the economy, we need to rethink the energy system based on innovative solutions using existing resources,” said Behnam Zakeri, study co-author and researcher, IIASA Energy, Climate and Environment Programme.

“Turning abandoned mines into energy storage is one example of many solutions that exist around us, and we only need to change the way we deploy them.”

Other energy storage methods, such as batteries, can lose energy via self-discharge over long periods of time. The energy storage medium of UGES is sand, enabling ultra-long time energy storage, which can range from weeks to several years. The technology is estimated to have a global potential of 7 to 70TWh, mostly concentrated in China, India, Russia and the US.

### WEIR RELEASES SIXTH EDITION OF WARMAN HANDBOOK

Weir Minerals has released the latest edition of its coveted Warman Slurry Pumping Handbook. The sixth edition of the book features detailed engineering data that is required for most slurry pumping applications.

After drawing on decades of Weir Mineral's expertise in innovative engineering and slurry pumping technology, the handbook has updated reference material for new learning opportunities, improved understanding and technological developments within the mining industry.

Across every edition of the handbook, Weir Minerals aims to keep customers at the forefront of its mindset and create a product for them. The goal is to empower engineers to achieve optimal performance from their Warman slurry pumps, with emphasis on increasing their global focus on the environment, energy consumption and water conservation which will influence pump design and considerations.

Marcus Lane, director, Slurry Pumping Technology Group, said, “Pumping slurry has many challenges and I'm excited to publish our latest handbook, packed with fundamental theory, application advice, standard practices and latest Warman learnings from the field; all aimed to help our customers, present and future, deliver with excellence.”

Continually striving to shape the next generation of smart, efficient and sustainable solutions, Weir has included more than 140 pages of detailed information on its cutting-edge science and innovations, including performance charts, impeller design, part configuration, assembly and slurry considerations.

## SEA Electric and MEVCO to electrify the mining industry

SEA Electric has signed a memorandum of understanding (MoU) with MEVCO, a leading systems integrator for exclusively electric light commercial vehicles in the mining industry, in a bid to continue on its journey to electrify the world's commercial vehicle fleet.

The partnership will see specialist all-electric Hilux and Landcruiser models made available for the mining sector, with MEVCO making a commitment to order 8,500 units over the next five years in a deal with a total value of approximately US\$690mn.

At the time of the launch, more than half of the 2023 allocations of the battery-electric vehicles have been pre-sold, with demonstration models available in Melbourne, Brisbane and Perth.

At the heart of the arrangement is SEA Electric's proprietary SEA-Drive power-system which provides leading all-electric range, driving performance, and environmental credentials with zero local emissions of carbon dioxide, methane or nitrous oxide. Due to its medium-voltage architecture and no need for thermal management, SEA Electric's solution is light, cost-effective and efficient. The vehicles are available in various mining-specific designs for 4x4 and 4x2 configurations, the vehicles can be specified with two SEA-Drive options, namely an 88kWh battery which provides 380 km of range, or a 60kWh battery delivering up to 260 km of use.

“This is a pivotal partnership for the mining industry,” said Matt Cahir, MEVCO CEO. “It enables the world's leading EV technology for heavy and light commercial trucks to be commercialised on a scale that makes sense for the bespoke needs of the mining industry. SEA Electric's unique architecture is perfectly suited for the task, with the system's high-torque characteristics ideally fit for purpose.”



Image Credit: SEA Electric



## SANDVIK LAUNCHES GROUND MOVEMENT CONVERGENCE SYSTEM

Sandvik is launching its convergence system, xCell Cyclops, for ground support in underground mining projects which provides wireless, continuous, remote and real-time measurement of ground movements. The system also features built-in notifications and alarms to support a safer and more sustainable work environment.

Underground mining can lead to more difficult and complex ground conditions for mine operators to manage, especially as squeezing ground and seismic events can have a major impact on both the safety and productivity of a mining operation. The xCell Cyclops system enables remote assessment of rock mass behaviour, leading to safer, more efficient and cost-effective ground support and optimised ground rehabilitation.

“The new xCell Cyclops convergence system is a major technological leap forward to achieve a safer, more sustainable way of digitally monitoring convergence in underground mining,” said Peter Young, product manager for bolting, ground support division, Sandvik.

“Through the wireless and connected devices and a user-friendly online platform, customers can easily adapt their individual setup and track any changes in the mine’s ground conditions.”

The xCell Cyclops system is available as a subscription service with three levels; Basic, Silver and Gold. The number of users at a site and devices in



Image Credit: Sandvik

The retrofitable design of xCell Cyclops sensors makes them very easy to install directly onto existing rock bolts.

remote mode vary across levels, and local service is included in all three levels, with remote service included in the Gold package.

## Epiroc finalises acquisition of MERNOK

Epiroc, a leading productivity and sustainability partner for the mining and infrastructure industries, has officially acquired South African company, Mernok Elektronik, in a bid to strengthen its position as a world-leading provider of automation and safety solutions for mining operations.

Mernok Elektronik, headquartered in Pretoria, South Africa, designs and produces proximity detection technologies and collision avoidance systems at a EMESRT Level 9 scale, all of which are applicable for either single machines or an entire mixed fleet regardless of the manufacturer or type of equipment.

The systems significantly reduce the risk of vehicle accidents, while strengthening operator safety and productivity. Epiroc announced in December 2022 that it had agreed to acquire the company.



Image Credit: Epiroc

The acquisition strengthens Epiroc’s presence in the global stage as a safety and automation solutions provider.

## Advertiser’s Index

Balkrishna Industries Ltd .....	52
BASEC .....	7
Blumaq S.A.....	31
Cantoni Motor S.A.....	21
Condra Cranes and Hoists.....	37
Informa Middle East Limited (Dubai Branch) .....	5
Perkins Engines Company Limited .....	51
Wirtgen International GmbH.....	29

# Leading the charge in tackling battery waste

Amrit Chandan, CEO and co-founder of cleantech firm Aceleron, explores how Africa is becoming a guiding example when it comes to tackling battery waste.



Image Credit: Adobe Stock

It is well understood that reducing waste is one of the key routes to avoiding an environmental crisis, but as the world transitions to clean energy sources, batteries and energy storage systems are increasingly in demand – and the issue of battery waste runs the risk of negating the positive effects of the clean energy transition.

Chandan explains that the number of batteries that will need to be disposed of going forward is rapidly increasing. “The world has a lot to learn from Africa on this subject, as the continent has adopted a number of initiatives that tackle the issue of battery waste while increasing access to a reliable, renewable power supply that also helps to improve prospects for entire communities.”

Aceleron has designed and built a unique circular economy battery technology that enables their batteries to be taken apart, down to a single cell, for repair, maintenance and upgrade. In comparison to traditional batteries, where, if one part fails, the entire product goes to waste, this new approach means that a single part can be swapped out for a working or updated replacement and the battery in its entirety can continue to fulfil its purpose.

This serviceable battery model has the power to reduce battery waste, as well as ensure that the maintenance, servicing and upgrade can be carried out locally, creating jobs and reducing travel emissions at the same time.

## Project BATLAB

The BATLAB, a joint project between Venture Engineering, Total Group, The Shell Foundation

and Aceleron is a self-sustaining battery servicing container, powered entirely by solar PV.

It allows for products containing batteries that no longer work to be safely repurposed by trained local labour into battery packs that can be used by the local population to meet their energy needs. The BATLAB has all the components to build, repair, upgrade and, in some cases, monitor every battery in one place throughout its entire lifecycle.

Once the battery finally reaches the end of its useful life, it can be returned to the BATLAB for repurposing or recycling.

The first BATLAB has been deployed in Bidibidi refugee settlement in Uganda, which is run by the International Organisation for Migration (IOM), where local staff have been fully trained and supported to handle the batteries safely.

Chandan adds, “We can see this BATLAB blueprint project becoming a crucial piece of the wider battery puzzle – particularly in emerging markets, where easy access to hi-tech facilities and equipment is limited. This gives it the potential to play a key role in underpinning a wider net zero transition.”

## Mobile mini-grids in Kenya

Last year, off-grid communities in Kenya benefitted from the successful development and trial of mobile mini-grids.

The mini-grid project consists of a portable trailer with 10kW of rapidly deployable solar panels and 20kWh of lithium-ion battery storage which can be serviced and maintained on the

ground. The project is being delivered jointly by Kenyan social enterprise Chemolex, clean technology company Aceleron and Smart Villages Research Group (SVRG) and has been funded by Innovate UK’s Energy Catalyst programme.

## Scalable mini-grids in Sierra Leone

In order to consistently and reliably deliver power to Kukuna Health Centre in Sierra Leone, a new battery bank works with a solar PV system to deliver power no matter the time of day or night.

The scalable system allows for more batteries to be added over time so, as the community thrives and demand for power naturally increases, it will simply be a matter of adding more batteries to expand the amount of power available at any given time.

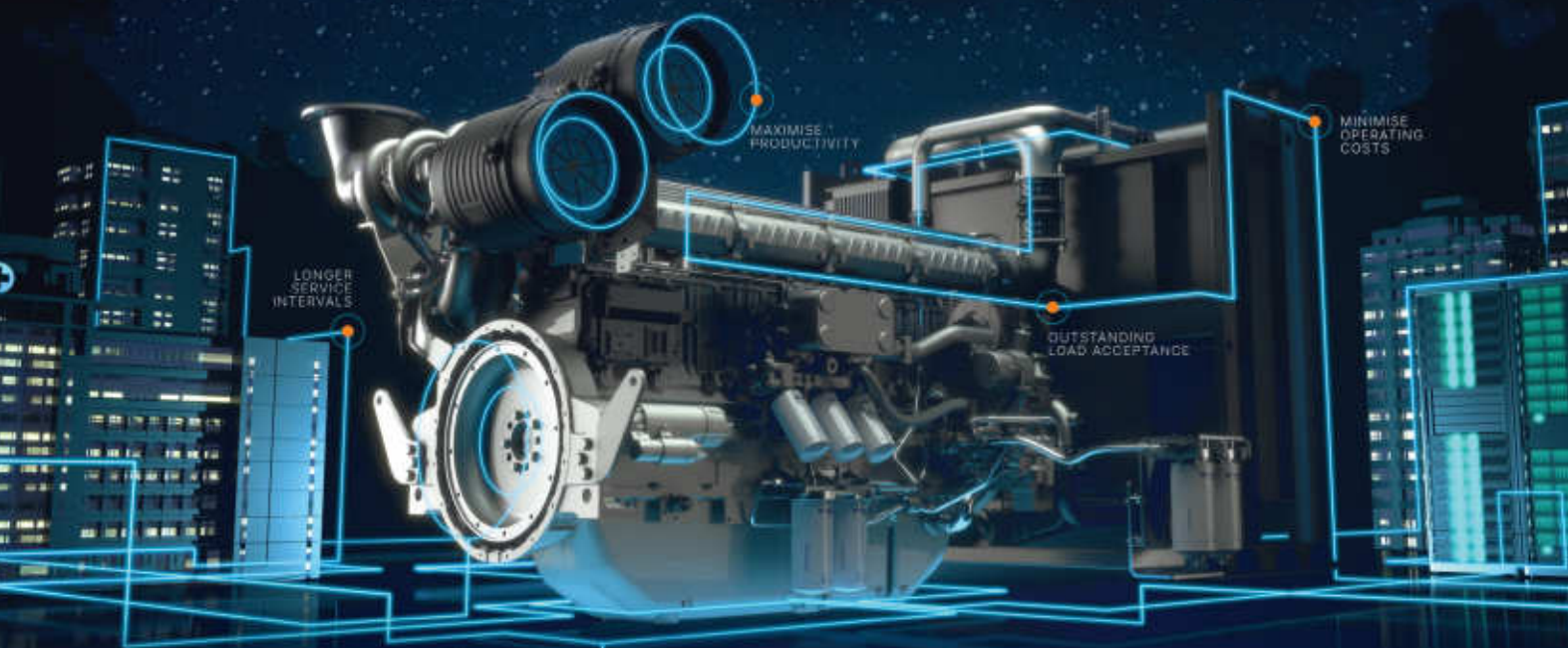
Chandan surmises, “Africa has a large off-grid population and an abundance of solar energy, so it makes sense that innovations in battery energy storage are rapidly developing across the continent. Projects such as these not only increase access to energy, they also increase access to genuinely sustainable, renewable power sources that can work flexibly to meet the different needs of a community, whether that’s to get crops to market before they spoil, provide life-saving treatment or improve transport links in rural areas. The rest of the world will undoubtedly learn a lot from Africa as it reduces waste and increases access to renewable energy in order to empower communities to prosper and thrive without relying on outdated and expensive fossil fuels.” ■



POWER

On

WITH CONFIDENCE



 Perkins®

*When it comes to the electric power that keeps your critical operations running strong, there is no other option.*

With a full power node range of dependable performance, lower total cost of ownership, and expert global support, Perkins electric power solutions help you power ON with confidence.

Visit us at **stand S2.A30** at MEE

*Together, we power ahead.*

[perkins.com/electricpower](http://perkins.com/electricpower)



# A LONG WAY TOGETHER



## EARTHMAX SR 41

No matter how challenging your needs, EARTHMAX SR 41 is your best ally when it comes to operations that require extraordinary traction. Thanks to its All Steel radial structure and the special block pattern, EARTHMAX SR 41 provides excellent resistance against punctures and an extended service life. In addition to long working hours without downtime, the tyre ensures extraordinary comfort.

EARTHMAX SR 41 is BKT's response to withstand the toughest operating conditions in haulage, loading and dozing applications.



# BKT

**GROWING TOGETHER**

[in](#) [f](#) [t](#) [v](#) [o](#) [d](#)  
[bkt-tires.com](http://bkt-tires.com)

For info:  
[africa@bkt-tires.com](mailto:africa@bkt-tires.com)