African Review

of BUSINESS and TECHNOLOGY

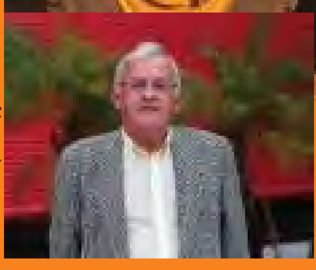
African Review of Business and Technology
December/January 2015
Volume 50 Number 4
www.africanreview.com

P32

Multi-modal transport, between South and West Africa

P26

Nigeria's new insurance industry



Power:
Himoinsa chairman Francisco Gracia speaks on energy in Africa and Europe **P46**

Construction:
How Africa produces and uses cement **P52**

Mining:
Opencast operations for emeralds **P60**


DOHA
FROM DECEMBER, 2014
A STAR ALLIANCE MEMBER
COME SHINE WITH US
Fly now to the capital of Qatar
www.ethiopianairlines.com
Ethiopian
የኢትዮጵያ
THE NEW SPIRIT OF AFRICA

Editor's Note

Following reports of news from around the continent, this issue of African Review of Business and Technology offers analysis of intra-African corporate investment on pages 22 and 23, and of security and insurance markets on pages 24 and 26. Cloud computing in Africa is addressed on page 30. Multi-modal transport is spotlighted on page 32. With respect to power generation and distribution, the use of alternators in Africa is addressed on page 37, preceding a special section on electrical equipment on pages 38-40. Following this are features on generators, including sevice to communications networks, on pages 42 and 43. Grid electricity in East Africa and modular power plant systems to serve the continent are assessed on pages 44 and 46. Technology for green energy management is featured on page 47. In the construction sector, significant harbour work in Cameroon is reported on page 48.Work undertaken on a mall project in South Africa is reported on pages 50-51. Following this, the cement industry is featured on pages 52 to 57. The construction section is completed with a profile of JCB's key point man in East Africa, on pages 58-59. Opencast mine management is covered on pages 60 and 61. Health and safety in mining is featured on page 62. The mining section closes, on pages 64 and 65, with observatons on project management and site services.

Andrew Croft, Editor

Cover picture: Caterpillar
Inset, top: SafmarineMPV
Inset, bottom left: Himoinsa

Contents

REGULARS

FEATURES

Audit Bureau of Circulations - Business Magazines

African Review
of BUSINESS and TECHNOLOGY

Editor: Andrew Croft
andrew.croft@alaincharles.com

Editorial and Design team: Bob Adams
Prashant AP, Hiriyti Bairu, Sindhuja Balaji
Thomas Davies, Ranganath GS , Rhonita Patnaik
Louise Quick, Prasad Shankarappa, Zsa Tebbit
Lee Telot, Louise Waters and Ben Watts

Publisher: Nick Fordham

Publishing Director: Pallavi Pandey

Advertising Sales Manager: Roman Zincenko
Tel: +44 114 262 1523 Fax: +44 7976 232791
Email: roman.zincenko@alaincharles.com

China: Ying Mathieson
Tel: +86 10 8472 1899 Fax: +86 10 8472 1900
Email: ying.mathieson@alaincharles.com

India: Tanmay Mishra
Tel: +91 80 65684483 Fax: +91 80 40600791
Email: tanmay.mishra@alaincharles.com

Nigeria: Bola Olowo
Tel: +234 80 34349299
Email: bola.olowo@alaincharles.com

South Africa: Annabel Marx
Tel: +27 218519017 Fax: +27 46 624 5931
Email: annabel.marx@alaincharles.com

UAE: Camilla Capece
Tel: +971 4 448 9260 Fax: +971 4 448 9261
Email: camilla.capece@alaincharles.com

UK: Steve Thomas
Tel: +44 20 7834 7676 Fax: +44 20 7973 0076
Email: stephen.thomas@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 215,
Loft No 2/A, PO Box 502207, Dubai Media City,
UAE, Tel: +971 4 448 9260, Fax: +971 4 448 9261

Production:
Nathanielle Kumar, Nikitha Jain
Donatella Moranelli, Namratha Prakash
Nick Salt and Sophia White
E-mail: production@alaincharles.com

Subscriptions: circulation@alaincharles.com

Chairman: Derek Fordham

Printed by: Paarl Media Paarl

US Mailing Agent:
African Review of Business & Technology, USPS.

No. 390-890 is published 11 times a year for US$140 per year by Alain Charles Publishing, University House, 11-13 Lower Grosvenor Place, London SW1W 0EX, UK. Peridicals postage paid at Rahway, New Jersey. Postmaster: send address corrections to Alain Charles Publishing Ltd, c/o Mercury Airfreight International Ltd, 365 Blair Rd, Avenel, NJ 07001.

ISSN: 0954 6782

Alain Charles Publishing
Serving the world of business

Agenda / North

Shantui SR32YR compactor shipped to Algeria

Recently, Chinese construction machine manufacturer **Shantui** racked up another successful export of one of its diversified product lines, as a SR32YR fully hydraulic trash compactor was shipped to a customer in Algeria. This particular model is performing well with customers in the market, due to its reliable performance and ease of maintenance, and this particular shipment is one of five that have been exported to the region over the past year.

The SR32YR is one of Shantui's more recently developed products, and is an example of Shantui's commitment to both diversification and improvement of core technology. The machine features a fully hydraulic drive from Rexroth, which combines with electronic controls in the cab for smooth and precise operation. Those electronic controls are also connected to the working device: an $11m^3$ blade ideal for leveling debris. So as to bring more power to bear, the SR32YR also boasts an energy-efficient imported 335-horsepower Cummins engine.

Further embodying the ease of use that has made the machine popular in Algeria, the compactor is designed so that the frame of the machine is enclosed, thus preventing solid materials from damaging key parts, and those key parts are designed in a modular fashion to ease maintenance if faults do occur. Additionally, the ROPS-equpped cab is enclosed, and fitted with an air filter and deodoriser, so as to provide a safe and comfortable environment for the operator.

In China, Shantui's name has long been synonymous with the word "bulldozer". Today, Shantui is not only the world's largest maker and seller of brand name dozers, but also offers a highly diversified line of construction, road, public utility vehicles and cement handling machinery, making everything from wheel loaders and road rollers to truck cranes and motor graders, to forklifts and excavators. Shantui is a distinguished brand and a leading Chinese multinational corporation with sales in more than 150 countries and regions worldwide. The company is publicly listed on the Shanghai-Shenzhen 300 Index, and is headquartered in Jining, Shandong Province. Shantui prides itself as provider of value in the construction machinery industry, offering a unique balance of high performance and great value.

Shantui SR32YR trash compaction machine Algeria

Volvo's vocational training in Morocco

Together with **UNIDO**, **USAID**, and the **OCP Foundation**, the **Volvo Group** has established a vocational training school for mechanics in Morocco. The school is managed in collaboration with local authorities to train 150 students per year from Morocco, the Ivory Coast and Senegal.

"Trained mechanics will have the opportunity to gain work in countries with high unemployment, while Volvo will gain access to the trained personnel that is required in order to expand in Africa. By training local manpower, we will contribute to sustainable growth in the countries in which Volvo operates," said Niklas Gustavsson, Volvo Group executive vice president for corporate sustainability & public affairs.

The Volvo Group's presence in Morocco dates back to the 1950s. The Group's high share of the truck market in combination with the country's investments in infrastructure makes Morocco a country where the Volvo Group can grow. Morocco is a country with high unemployment among young people, and where the existing education system places focus on theoretical education, which does not reflect the needs of industry. The consequence is that the shortage of adequate competency is impeding growth in the country.

"The distinctive feature of this training academy lies within its ability to produce skills and expertise that can directly be employed in the economic sectors that use heavy duty equipment and that work on the big projects that are undertaken by Morocco", said Mr Jamaleddine El Aloua, general secretary of the **Moroccan Department of Vocational Training**.

Agenda / East

Rwanda seeks investors in beans

The **Rwanda Agriculture Board** has been inviting investor interest in exploiting the market potential for canned beans, as regional demand soars. Approximately 700,000 tons of beans are produced annually, grown on 350,000 hectares in Rwanda. Current investment has been heavily focused on climbing beans, which can produce about three times more food on the same area of land than bush beans. Projections indicate canned beans could fetch around US$85mn by 2017.

"We have a wide market that requires value addition on bean...this includes **East Africa Commodities Exchange**, **Rwanda Grains and Cereals Corporation** and the government itself..." said Tony Nsanganira, the Rwandan Agriculture State Minister.

"Africa consumes the most beans world-wide. Rwanda's annual per capita consumption is over 60kg," said Minister Nsanganira at the second **African Union** Private Sector and Agribusiness forum held recently in Kigali, adding that there are also abundant business opportunities in dairy, honey processing, horticulture and poultry. Agriculture contributes 35 per cent of Rwandan GDP and employs 85 per cent of the nation's population, attracting over US$514mn private investment over the last decade.

IBM helps Kenya Power perform

East African power distributor **Kenya Power** has selected **IBM** for an automated system that will provide a real time status of all business processes. This will enable Kenya Power to implement its strategic expansion plans.

Kenya Power is counting on technology to expand its current 2.6mn client base by another one million clients and to push its current electricity generation capacity from 2025 megawatts to 5,000 plus megawatts by 2015. The company plans to roll out electricity distribution services across more areas of Kenya as its drives a comprehensive strategy to capture more demand from under-served regions.

The new system will consolidate data from ten key operational sources to provide a single view of enterprise data. This new infrastructure will use advanced IBM analytics to enable Kenya Power to study and compare real time and historical data to better monitor business operations and trends, and anticipate future electrical needs. KP teams can now access data on demand on one dashboard compared to 10 different dashboards. The real-time analytics can be accessed through cloud computing, allowing executives working remotely to use mobile devices to view data.

AfDB renews geothermal backing

Over the course of the 5th African Rift Valley Geothermal Conference (ARGeo C-5), the **African Development Bank (AfDB)** clearly reaffirmed its on-going support to the development of geothermal power in the East Africa Rift Valley region.

The ARGeo conference was held to further regional cooperation in the development and utilisation of geothermal resources in East Africa. It brought together approximately 400 policy, technical and development experts to network and interface with both local and international geothermal companies to explore how to reduce project lead times, leverage financing and effectively manage geothermal power plants. Thierno Bah, a principal energy specialist at the AfDB, said, "The bank has worked hard to mobilise various instruments and sources of financing, including the Partial Risk Garantee instrument as well as highly concessional financing from the Climate Investment Funds (CIF), to support geothermal growth."

Ormat set for Menengai geothermal project

A vertically-integrated company engaged in geothermal and recovered energy generation (REG), **Ormat Technologies**' majority-owned Kenyan subsidiary - held by Ormat (51 per cent), **Symbion Power LLC** (24.5 per cent) and **Civicon Ltd** (24.5 per cent) - has signed a 25-year power purchase agreement (PPA) with **Kenya Power and Lighting Co Ltd (KPLC)** and a project implementation and steam supply agreement (PISSA) with **Geothermal Development Company (GDC)** for the 35MW Menengai geothermal project in Kenya.

Ormat is a vertically-integrated provider - designing, developing, building and manufacturing most of its own plant equipment. Under the PISSA agreement, Ormat will finance, design, construct, install, operate and maintain the Menengai steam plant on a build-own-operate (BOO) basis for 25 years. GDC, which is wholly owned by the Government of Kenya, will develop the geothermal resource, supply the steam for conversion to electricity and maintain the geothermal field through the term of the agreement. Under the PPA, KPLC will purchase all the energy generated by the project.

The Menengai project is expected to benefit from the Partial Risk Guarantee (PRG) arrangement to be provided by the **African Development Bank**.

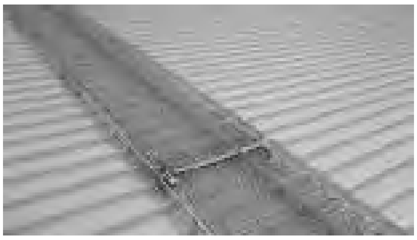
Isaac Angel, Ormat's chief executive officer, said, "We are extremely excited to contribute from Ormat's expertise in the geothermal industry in building and operating this project. This will be our fifth plant in Kenya and once it is operational, we will supply 145MW to the Kenyan grid. Upon completion of the Menengai project, more households in Kenya will gain access to cost-effective and clean power from their nation's geothermal resources."

Agenda / South

Cape Town roof gets grip by Alifab

Alifab recently completed the installation of Roof Grip access walkways onto a newly-refurbished roof at Pepkor in Parow, Cape Town, South Africa.

After years of use, the roof sheets needed to be replaced and as future accessing of the ventilation system mounted on the roof, had not helped to maintain the integrity of the sheeting it was decided to install Roof Grip onto the roof. The ability of Roof Grip to control access over the roof sheeting to specific areas will ensure there is no damage to the sheeting by maintenance teams.



Roof Grip has a non-slip ridging that ensures the safety of workers

The Ampligrip expanded aluminium floor grating incorporated into the Roof Grip product has a non-slip ridging that ensures the safety of the workmen. The product is manufactured from aluminium extrusions that are rust free and not affected by UV, ensuring no maintenance is required on the walkway. Its light weight makes sure no excess dead load is imposed on the roof structure.

Sesa Sterlite set to work with zinc

Diversified natural resources company **Sesa Sterlite** has confirmed plans to develop the **Gamsberg-Skorpion Integrated Zinc Project** in South Africa and Namibia at a cost of US$782mn over a three-year period, to develop an open-pit zinc mine in Gamsberg, South Africa, and to undertake the conversion of the **Skorpion Zinc Refinery** in Namibia.

The majority of the investment, approximately US$630mn, will go towards developing an open-pit zinc mine, concentrator plant and associated infrastructure at Gamsberg, one of world's largest undeveloped zinc deposits. The balance of the investment will be used to convert the refinery at the Skorpion Mine in Rosh Pinah, Namibia, thereby enabling it to refine zinc concentrates from the Gamsberg mine into special high-grade zinc metal.

"The Gamsberg-Skorpion Integrated Zinc Project is central to Vedanta's long term aspirations for Southern Africa," said Mr Tom Albanese, CEO of Sesa Sterlite. He confirmed that this will also allow the diversified natural resources company **Vedanta Resources** to make a significant contribution to enabling the SA government achieve its goal of using the country's mineral wealth to fight poverty through the creation of sustainable, long-term employment opportunities.

SA sees rise in water treatment

Declining water quality and rising costs are compelling industries in South Africa to recycle water, in turn lending momentum to the industrial water and wastewater treatment chemicals market in the country.

Although the market is experiencing challenges, due to an uncertain economic climate, the combination of stricter legislations and greater environmental awareness among end users is boosting the treatment and reuse of effluents.

Analysis from **Frost & Sullivan**, entitled 'Overview of the Industrial Water and Wastewater Treatment Chemicals Market in South Africa', indicates that the market earned revenues of US$148.9mn in 2013 and estimates this to reach US$176.4mn in 2018.

The study covers key chemicals, including coagulants and flocculants, corrosion and scaling chemicals, disinfectants and biocides, and pH adjustment chemicals.

Flying now, Proflight Zambia's 50-seat plane

Scheduled airline **Proflight Zambia** began flights on its new 50-seater jet aircraft, following Zambia's Golden Jubilee in October 2014. As the **Bombardier** CRJ-100 plane is in operation, the airline is assessing market demand with a view to extending its lease on the aircraft.

The jet primarily operates on the Lusaka-Ndola morning and evening flights, but where demand is high it is also used on the Solwezi, Mfuwe and Livingstone routes. It has been proving popular with passengers from the outset, according to Proflight's director of government and industry affairs, Captain Philip Lemba.

"We have already seen strong take-up of seats on the new plane and the feedback we are getting from passengers is that the larger, more spacious cabin is very much appreciated," Captain Lemba said.

Proflight's new jet adds a newer, modern plane to its fleet and the larger size will enable service to be provided by two cabin attendants, rather than the usual individual attendant employed on its existing aircraft. It has 50 seats, compared with the 29-seats on Proflight's largest other aircraft, the Jetstream 41, enabling more passengers to be accommodated, in more comfort. It is 26.77m long and has a wingspan of 21.21m. It has a basic cruising speed of 785km and a maximum range of 3,045km.

Proflight flies from its base in Lusaka to Livingstone, Ndola, Kasama, Chipata, Mansa, Mfuwe, Solwezi and Lower Zambezi, to Lilongwe in Malawi - and from Ndola to Lubumbashi in the Democratic Republic of Congo. It will begin flights to Kafue National Park in 2015.

Nawa Mutumweno

Agenda / West

Eutelsat and Isocel Telecom connect Benin tax authorities

Satellite operator **Eutelsat Communications** is working with **Isocel Telecom**, an Internet service provider in Benin, on a multi-year lease for C-band capacity on the Eutelsat 3B satellite to support the country's tax collection system - to enable a secure private network for Benin's tax authorities.

The capacity booked on Eutelsat 3B supports a secure private network, raising efficiency by transmitting citizen tax data gathered from collection centres across the country to the central administration in Cotonou.

This new data transmission network, using robust C-band capacity, has been specially designed to operate in a country whose tropical climate is characterised by the monsoon period running from April to November. Collection centres beyond range of terrestrial infrastructure, from Ouidah in the South to Malanville in the North, can now be directly linked to the country's central administration.

Robert Aouad, CEO of Isocel Telecom, said, "Through this first collaboration with Eutelsat we are expanding our portfolio of services with satellite communications and extending our coverage to the whole country, including to the most isolated regions. We have placed our trust in a leading satellite operator in the West African region and can now benefit from the resources of the new Eutelsat 3B satellite."

Rodney Benn, Eutelsat's Regional Vice President for Africa, added, "Launched in May 2014, the Eutelsat 3B satellite is designed to diversify and increase our resources and footprint at the 3° East position. Together with Eutelsat 7B, we are now exceptionally well positioned to meet customer demand for data transmission and site interconnection services across West Africa. We are proud to be selected for this new service by a major operator in Benin whose development is redefining the telecoms sector in the country."

The Eutelsat 3B satellite supports

Shantui's Angola agent holds open day, wins big

ANGOBEST, the local dealer of **Shantui** equipment in Angola, recently held an open day showcasing the Shantui brand in the capital city of Luanda. On display were Shantui bulldozers, road rollers, loaders, and six types of motor graders. The open day was attended by more than 180 guests, including media representatives, government officials, customers, and other notable figures. The event was a major opportunity to promote the Shantui brand in the region, one which ANGOBEST capitalised on, with dozens of machines sold in contracts worth nearly US$1.6mn. Included in the orders were 220-horsepower SD22 and SD22F bulldozers, SG18-3 motor graders, and SR20MP vibratory rollers.

At the open day, Shantui worked with ANGOBEST to effectively promote the Shantui brand. To this end, the ANGOBEST staff gave a presentation to the assembled guests communicating Shantui's corporate vision, operational support, sales and service policy, and product information, with VIPs and large customer groups seated prominently. So as to round out the comprehensive promotional effort, the dealer invited the local media to cover the event, including the influential television broadcaster **TPA**. Already a popular brand for bulldozers and a preferred supplier of equipment to a majority of Angola's engineering projects, Shantui and ANGOBEST hope this open day will help further solidify Shantui's position in the Angola market.

Shantui is not only the world's largest maker and seller of brand name dozers; it also offers a highly diversified line of construction, road, public utility vehicles and cement handling machinery, making everything from wheel loaders and road rollers to truck cranes and motor graders, to forklifts and excavators.


CAPABLE ACROSS THE BOARD
landrover.guavauk.com
LAND ROVER
ABOVE & BEYOND

Events / 2015

January

20-22
IBC Content Everywhere MENA
Dubai, UAE
www.ibcce.org

18-20
Intersec
Dubai, UAE
www.intersecexpo.com

20-22
Offshore West Africa
Lagos, Nigeria
www.offshorewestafrica.com

22-23
Indian Ocean Ports & Logistics
Maputo, Mozambique
www.transportevents.com

27-28
Africa Oil & Gas
London, UK
www.africaoilandgassummit.com

28-29
AgriBusiness East Africa
Dar es Salaam, Tanzania
www.agri-eastafrica.com

February

2-5
Nigeria Oil & Gas
Abuja, Nigeria
www.cwcnog.com

9-12
Investing in African Mining Indaba
Cape Town, South Africa
www.miningindaba.com

10-12
WACEE
Accra, Ghana
www.wacee.net

17-18
Africa Energy Indaba
Johannesburg, South Africa
www.africaenergyindaba.com

24-26
Re-Energy
Cairo, Egypt
www.reenergy-eg.com

25-27
Air Cargo Africa
Johannesburg, South Africa
www.stattimes.com

26-28
CIBEX East Africa
Nairobi, Kenya
www.cibexeastafrica.com

CNH Industrial hosts 'Born in South Africa' event at Iveco facility

CNH Industrial N.V. held a three-day event at its first event series at the new Iveco South Africa Works facility in Rosslyn, Pretoria, Gauteng province.

The event's three day agenda (19-21 November) welecomed visitors who were invited to a 360-degree CNH Industrial experience.

Also in attendence were South African dignitaries, rmembers of the Italian Embassy, the French Ambassador to South Africa, local media, customers and dealers. The Mayor of Pretoria, Councillor Kgosientso Ramokgopa was also at the event and gave a speech.

CNH Industrial gave guests the opportunity to drive 4x4 "Tested by Dakar" vehicles: a Daily from the light range, a Eurocargo from the medium range and a Trakker from the heavy, off-road range.

A '507 Dakar Replica' Trakker, a vehicle which competes in the off-road Dakar rally, where Iveco has been a long-time sponsor of one of its most popular teams: Petronas De Rooy Iveco.

The Iveco and Iveco Bus brands have launched production assembly lines for medium, heavy duty and extra heavy trucks

Around 1,000 South African employees are set to be recruited for this new facility where the Iveco and Iveco Bus brands have launched production assembly lines for medium, heavy duty and extra heavy trucks as well as front engined and low floor city buses. Many of these vehicles will be designed for the local South African market and 20 per cent of them will be exported. The facility also includes a training centre for technicians and a product quality assurance department.

Bulletin / Events

An agricultural agenda

Launched at the Forum for Agricultural Research in Africa (FARA), recently held in Johannesburg, South Africa, the Science Agenda for Agriculture in Africa identifies a suite of issues and options for increasing and deepening the contributions of science at the local, national, regional, and continental levels; the report, completed by researchers of the Agricultural Science and Technology Indicators (ASTI) programme at the International **Food Policy Research Institute (IFPRI)**, identifies underinvestment, inadequate human resource capacity, poor research infrastructure, and a lack of coherent policies as factors that continue to constrain the quantity and quality of agricultural research outputs in many countries.

African Halaal set to be big business at AB7

The Halaal sector is set for strong growth in Africa, as a report from the **Dubai Chamber of Commerce** in the UAE estimates that the global Halaal market will reach US$1.6 trillion by 2018, and with Africa generating US$160bn in Halal business during 2014; Africa's Big Seven (AB7), the African food and beverage expo, will again host a Halaal World Pavilion showcasing Halaal products to the African market, from 21 to 23 June 2015 in Johannesburg, South Africa.

Hatch Goba chairman acknowledged for achievement

The prestigious Lifetime Achievement Award for Excellence in Engineering has been presented to **Hatch Goba** chairman Trueman Goba at the inaugural South African Professional Services Awards (SAPSA) ceremony held recently in Johannesburg,

Hatch Goba chairman, Trueman Goba

South Africa; Mr Goba said, "Pursuing a professional career entails important responsibilities", adding that he felt honoured to be counted alongside "achievers from legal, accounting and finance professions", and that he hoped the award inspired "young people aspiring to become engineers"

Turkish pumps for Africa, promoted at PVPA 2015

Renowned for superior quality, high performance and competitive pricing, the Turkish pump industry enjoys considerable success, with 135 Turkish pump manufacturers exporting to over 200 countries. Several Turkish companies are set to exhibit at Pumps, Valves and Pipes Africa 2015 Expo for the first time. The massive trade show, now in its ninth year, forms part of The SA Industry & Technology Fair (INDUTEC), and takes place from 20-22 May 2015 at Gallagher Convention Centre, Midrand, South Africa.

Turkish company **Ferat Dis Ticaret** specialises in the manufacture of submersible and deep well pumps for agriculture and water supply projects, and will be exhibiting a range of cast iron pumps, stainless steel pumps and submersible motors and at the show.

"We decided to exhibit at Pumps Valves and Pipes Africa 2015 because the long-running exhibition is specifically focused on our sector, and is certainly the most professional pump industry event in South Africa," said Halil Ibrahim Dogan, Ferat Dis Ticaret export manager.

Software that adds value to African mining operations

A comprehensive range of **Micromine Africa** solutions will be on display at the 2015 Mining Indaba, being hosted in Cape Town from 9 to 12 February. These include:

<u>Micromine 2014:</u> A comprehensive and easy-to-use exploration and mine design solution that offers integrated tools for modelling, estimation, design, optimisation and scheduling.

<u>Geobank:</u> Micromine's flexible, reliable and secure data management solution captures, validates, stores and manages data from diverse sources.

<u>Geobank Mobile 2:</u> A new solution, enabling easy collection and manipulation of geological field data. The software ensures accurate data capture with real-time validation and rich data input controls to minimise errors at point of entry - and to

maximise efficiency with customisable calculated fields, in-built data approval and transfer mechanisms.

<u>Coal Measure:</u> An integrated software solution for coal data management and coal data processing with 3D seam modelling, resource categorisation, resource reporting, pit optimisation, pit design and scheduling.

<u>Pitram:</u> A mine operations system that records, manages and processes mine site data in real-time, helping operations to increase productivity, decrease costs and improve safety.

Bulletin / IT

VFS TasHeel International to process Saudi visas in Nigeria

Saudi Arabia's Ministry of Foreign Affairs has mandated **VFS TasHeel International** with managing and administrating the its visa application process from Nigeria, including the mandatory enrolment process of fingerprint collection and photo capture for all applicants; Madhan Gopalakrishnan, CEO of VFS TasHeel International, said, "The new Visa Services Centre is packed with convenience and comes with dedicated service counters and a reception area, all to enhance the experience and add value to the process of visa application."

T-Systems extends ESD to KZN with Vumela IT Services

In South Africa, network solutions provider **T-Systems** has launched the next phase of its Enterprise Supplier Development (ESD) initiative, which is aimed at promoting skills development and job creation through improbed procurement; the programme is now active in the Kwa-Zulu Natal (KZN) region, with a variety of field services being outsourced to local technology firm Vumela IT Services.

Teams at T-Systems and Vumela IT Services are workign together to enhance procurement in Kwa-Zulu Natal

South Africa needs smarter cities

As the global urbanisation trend picks up, smart cities are emerging, making use of IT to harness the resources needed to operate optimally, and use resources sustainably. In South Africa, smart cities are likely to be a reality within three to five years - to build them and to leverage the benefits they offer, we need smart buildings. Smart cities make use of IT and Big Data – data from devices, sensors and meters, equipment, transport systems, smart energy grids, social platforms, government and industry databases - to regulate and conserve use of resources, optimise operation of critical systems, improve the lives of inhabitants, and drive sustainability agendas. "On-grid" buildings, organisations and individuals that support its objectives are likely to be rewarded though rebates and preferential pricing.

Neil Cameron, GM, **Johnson Controls Building Efficiency**

Smedan works with CWG on tech for SMEs

To ensure the growth of micro small and medium enterprises (MSMEs) in Nigeria, the **Small and Medium Enterprises Development Agency of Nigeria (SMEDAN)** recently signed a Memorandum of Understanding (MoU) with **Computer Warehouse Group (CWG)** at SMEDAN's corporate headquarters in Abuja, to provide a technology platform for the use of MSMEs at very little cost, incorporating an enterprise resource planning (ERP) tool called Small and Medium Enterprise Resource Planning (SMERP), which allows MSMEs to manage business operations and provides functionalities such as accounting management, inventory management, and sales and order tracking.

Alhaji Bature Umar, director-general of SMEDAN (L) and Mr. Austin Okere, founder and CEO of CWG

Bulletin / Aviation

Austrian flies to Mauritius

Austrian Airlines has commenced flight services to Mauritius, adding the new destination to its winter 2015/16 flight schedule, non-stop from Vienna to Sir Seewoosagur Ramgoolam International Airport every Thursday, and back to Vienna on Fridays; the airline's passengers travel in the new cabin of the its Boeing 767.

Egyptair connects Sharm El-Sheikh and Luxor

In line with its commitment to encourage traffic between Egypt's top leisure and touristic destinations, **Egyptair Express** is operating two weekly flights between Sharm El- Sheikh and Luxor from December 2014; the flights will be operated on Tuesdays and Thursdays.

Ethiopian adds fourth Boeing 777 Freighter to its fleet

African cargo operator **Ethiopian Airlines** has taken delivery of a fourth **Boeing** B777-200 LR freighter. The airline was the first in Africa to receive and operate the B777-200 LR freighter, in September 2012, and it is still the only African operator of this modern aircraft, which has exceptional uplift, range and fuel efficiency, and is well-adapted to handle Africa's growing import and export freight requirements.

In line with the airline's vision of growth, set out in its 2025 strategic road map, Ethiopian is not only expanding its fleet capacity and cargo terminal but is also replacing its old aircraft with the most latest and environmentally friendly airplanes with large capacity.

The Boeing 777 freighter is equipped with GE90 series of engines, which are fitted with first ever composite fan blade in commercial aviation on the GE90.

This uniquely curved blade design is lighter, more aerodynamic and larger than traditional titanium blades. The lighter blades reduce the weight of the engine and help lower fuel burn which in turn increases capacity contributing to the performance and efficiency of the aircraft.

"Our operation of new-generation, high performance aircraft and building one of the largest cargo terminals in the world reflects our commitment in expanding and improving our cargo service to support the exponentially growing imports and exports of our country in particular and the continent in general," said Mr Tewolde Gebremariam, CEO of Ethiopian.

Bulletin / Packaging

Krones' future labelling tech

A new system from **Krones** has incorporated the increasingly stringent requirements clients now stipulate for labelling technology; the Ergomatic and Ergomodul machines are

The Ergomatic has permanently installed stations for cold-glue labelling

based on an expandable concept, which is so versatile that with permanently installed stations there's an option for subsequent change-over to replaceable stations.

Smart PE packaging's potential

A report published by **IDTechEx**, entitled 'Smart Packaging Comes To Market: Brand Enhancement with Electronics 2014-2024', indicates that the electronic smart packaging market will remain primarily in consumer packaged goods and will account for 14.5bn units worth US$1.45bn globally within 10 years; recent examples include aerosols that emit electrically-charged insecticide to chase bugs, and electronic medication packs which record how much is taken and when and prompts the user.

Shower steriliser cost savings

With a patented energy recovery concept for hot water shower sterilisers, **Bosch Packaging Technology** enables significant energy savings in heating and cooling during the sterilisation process - using a concept which was developed by **Schoeller-Bleckmann Medizintechnik (SBM)**, a Bosch Packaging Technology company; Isa Alkan, head of sales at SBM, explained, "By re-using heating and cooling energy, the system lowers the total cost of ownership (TCO)."

The self-contained, independent system consists of a multilayer storage tank, which is divided into several temperature zones and firmly piped to the steriliser via a heat exchanger

Ucima renews focus on processing and packaging

The 50th edition of Cibus Tec - Food Pack, the international trade show for food processing & packaging technologies, held in Parma, Italy, was attended a record 30.000 attendees coming to a show hosting 1,000 companies, which had been repositioned to address the international market demands for a highly vertical and specialised showcase. The event's new format was developed by the joint efforts of **Ucima**, the Italian Packaging Machinery Manufacturers Association, and to the strategic alliance with **Koelnmesse**, to offer innovative synergies and business opportunities in processing and packaging. Paolo Gambuli, director of Ucima, said, "The integration of packaging technologies with the mainstream sectors of Cibus Tec confirmed that our choice was right on the money and above expectations. The international buyers confirmed us the validity of the formula and at the same time confirms have been expressed by the exhibitors that have already confirmed their intention to take part and increase their presence in the 2016 edition."

There has been extraordinary success for the new Food Pack section created by Ucima, the Italian Packaging Machinery Manufacturers Association

Propak prepares to grow in the East

The organiser of Propak East Africa expects a 25 per cent increase in visitor and exhibitor numbers for the 2015 edition of this event, taking place in 17-19 March in Nairobi, Kenya. The last event attracted over 2,000 visitors, 89 per cent of which were qualified decision makers. There were 65 companies exhibiting from 15 countries, with products and services presented for a variety of industries - including working machinery, raw materials, food processing equipment and printing. Propak East Africa has become the biggest gathering of industry leaders in East Africa.

The 2015 Propak Conference is expected to feature over 100 delegates from Tanzania, Uganda, Zambia, South Africa, Kenya and elsewhere to discuss and gain further insights into the burgeoning manufacturing industry in East Africa. Topics include trends within the market as well as a panel discussion featuring top international and local speakers. Exhibition director Alexander Angus said, "After a fantastic first year, we are delighted with the huge amount of interest for the 2015 exhibition."

Returning exhibitor Keith Dilkes, export sales manager at **Polyoak Packaging**, said, "The first Propak East Africa exhibition was extremely positive for Polyoak Packaging as experts in offset printing and in-mould labelling on rigid plastic packaging. The show generated substantial interest amongst potential East African customers in Polyoak's extensive range."

We have learnt that Africa can help us. **GROWING TOGETHER.**

Heineken has had a close relationship with Africa for more than one hundred years. In this time, we've learnt the importance of partnering for growth. To this end, we are committed to sourcing 60% of our agricultural raw materials from farmers in Africa by 2020. Today, collaborative projects are flourishing in the Democratic Republic of Congo (DRC), Nigeria, Sierra-Leone, Egypt, Rwanda, Burundi, South Africa and Ethiopia. We launched our barley project in Ethiopia in 2013 together with the Dutch Government, our NGO partner EUCORD, Ethiopia's Agricultural Transformation Agency (ATA) and the Ethiopian Institute of Agricultural Research (EIAR). An extensive programme has been put in place: from testing, then selecting the most appropriate barley varieties for the Ethiopian soil and climate, to training smallholder barley farmers. Today, improved seeds are already being used to deliver better quality barley, higher yields and increased household income. So far, more than 6,000 farmers have already reaped the benefits of our project; and there will be 20,000 in 2017. This successful collaboration between community and our company is also beneficial for us. It is helping to create a sustainable source of raw material, a shorter supply chain, a reduction in transport and importation costs and a lower carbon footprint. We truly are *growing together.*

Many people still believe that Africa needs help. We have learnt that Africa can help us.

HEINEKEN

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

Maersk-owned container firm signs deal to expand Ghana port


The expansion of Tema Port will increase capacity to 3.5mn TEUs (PHOTO: WorldBank/Flickr)

APM Terminals has signed a US$1bn deal with the government of Ghana to expand Tema Port.

APM Terminals, an international terminal container operating unit that functions independently within the Danish shipping major Maersk, said the deal was signed through Meridian Port Services (MPS) – a JV between APM Terminals and Bollore Africa Logistics – and the Ghana Ports and Harbours Authority (GPHA).

Peder Sondergaard, regional head of APM Terminals for Africa and Middle East, said, "APM Terminals looks forward to take the next step to drive the development of a world-class port expansion which can serve the country of Ghana in the coming decades."

africanreview.com/transport-a-logistics

China to build US$12bn railroad in Nigeria

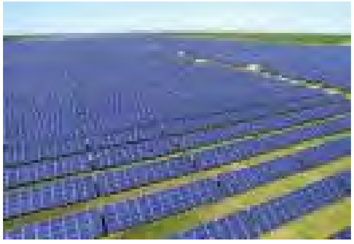
China Railway Construction Corporation (CRCC) has signed a deal worth US$12bn with Nigeria to construct a West African coastal railway.

The railway project, stretching about 1,402 km, will link Lagos in the west of Nigeria with Calabar in the southeast of the country.

The construction company said the project would create close to 200,000 jobs on the project that will link two of Nigeria's most important commercial hubs.

africanreview.com/transport-a-logistics

University of Zambia to establish solar laboratories


The university will spend US$750,000 to set up the laboratories (PHOTO: ActivSolar)

The University of Zambia has planned to establish solar applied energy laboratories to meet the growing demand for electricity in the southern African nation.

According to Prem Jain, head of energy, environment and research at the university, the institution will spend US$750,000 to set up the laboratories.

In addition to handling the demand for clean energy, the labs would also help offload graduates that are qualified to work in the field of solar technology.

africanreview.com/energy-a-power

Coal India to begin mining operations in Mozambique

Mining company Coal India (CIL) has said it would begin mining coal in central Mozambique's Tete Province in order to increase supplies to India.

CIL officials said that India would start receiving coal from the Mozambican mine within the next three to four years.

"The final phase of exploration for CIL's A1 and A2 mining blocks at Tete Province is complete," said a senior official of CIL. "Coal sampling is in progress. A geological report and detailed project report will be prepared. We hope to start mining within next six months to a year."

africanreview.com/construction-a-mining

Etihad Airways to begin daily flights to Dar es Salaam


Etihad began flights between Abu Dhabi and Dar es Salaam on 1 December 2014 (PHOTO: yakusa77/flickr.com)

Etihad Airways has launched a daily service to Dar es Salaam in Tanzania from Abu Dhabi, as part of a move to expand its African route network.

Flights between Abu Dhabi and Dar es Salaam officially began on 1 December 2014, with Dar es Salaam becoming Etihad's 110th destination globally and its 11th destination in Africa and the Indian Ocean.

Moris Pholeli, vice-president of Etihad Airways, said, "Dar es Salaam is one of the first growing cities in the world and we have decided to enter into the market by starting operating with Airbus A320 aircraft, with 16 business class and 120 economy class seats."

africanreview.com/transport-a-logistics

ARM Cement to increase investments in East Africa

East African cement maker ARM Cement has announced an increase in investments across the region as demand for cement continues to rise.

A statement from the company revealed that ARM Cement would complete a number of pending projects in 2014, with begin new projects set to begin in 2015.

The company, which has plants in Kaloleni and Athi River in Kenya, as well as Dar es Salaam and Tanga in Tanzania, will complete one more grinding plant in Tanga in 2015. The Tanzanian plant has the capacity to produce 2,500 tonnes of cement daily.

africanreview.com/construction-a-mining

Increasing intra-African corporate investment

Recent economic analysis indicates that more African conglomerates are operating in their own backyard

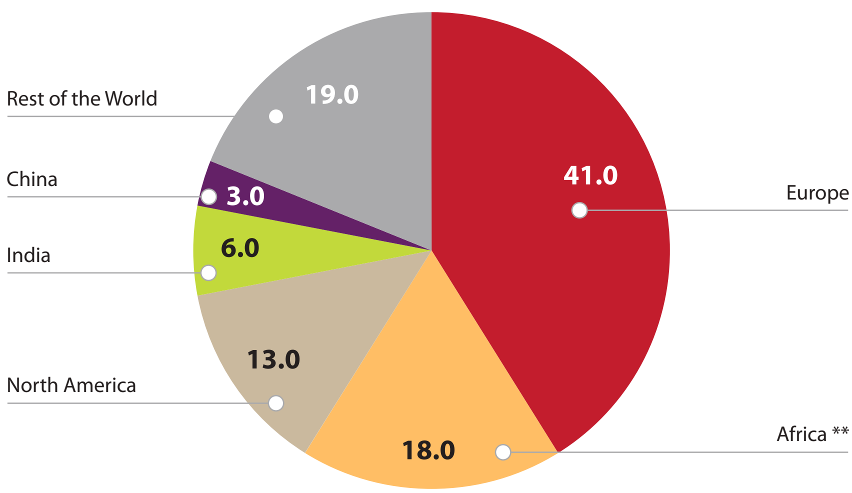
Intra-African investment is finally gaining momentum, as South African, Kenyan, and Nigerian trans-national corporations (TNCs) tap into new opportunities in neighbouring countries. Increasing intra-African foreign direct investment (FDI) will help to deepen regional integration. For many smaller, often landlocked or non-mineral rich countries, intraregional FDI is a critical source of capital funding because they are 'over-looked' by foreign-based TNCs.

Between 2009 and 2013, the share of cross-border Greenfield projects - the major investment type in Africa - originating within the region rose to 18 per cent, from about 10 per cent during 2003-08, according to Geneva-based United Nations Conference on Trade & Development (UNCTAD). The gross value of cross-border intra-African acquisitions also grew from just three per cent of total investments in 2003-2008 to more than nine per cent in the next five years. Fast-expanding consumer markets have underpinned these trends, given that an increasing amount of FDI into Africa - from abroad and by region - goes to consumer-oriented industries, led mainly by banking and telecommunications.

Data from fDi Intelligence showed that African investors nearly tripled their share of FDI projects in the past decade, from eight per cent in 2003 to 22.8% by 2013. The rate of intra-African investment, too, expanded even faster in value, from 4.4 per cent in 2003 to 22 per cent in 2013. Intra-African investment has boosted much-needed job creation on the continent. It is now the second-largest source of jobs behind Western Europe, jumping from fourth position in 2012.

This growth is driven by the need for improved regional value chains and promoting regional integration. The milestone decision by the Common Market for Eastern and Southern Africa (COMESA), Southern African Development Community (SADC) and the East Africa Community (EAC-5) to establish the 'Tripartite' single free trade area (FTA) is an important development. Another growth factor is the indigenous investors' better appreciation of potential market opportunities and challenges within their resourceful continent.

Geographical Distribution of Sources of Greenfield Investment in Africa by number of Projects, 2009-13



***Of which, three largest intra-regional investors are South Africa (7%); Kenya (3%); and Nigeria (2%).*

Investing in labour-intensive sectors

Compared with other types of FDI, intra-African projects are concentrated in manufacturing and services rather than extractive industries. UNCTAD data indicated that only three per cent of the value of announced intraregional Greenfield projects over 2009-13 were channelled into primary sector, compared with 24 per cent for other-regional Greenfield projects during the same period.

Intra-African investments in the manufacturing sector target mostly agro-processing, building materials, electric/electronic equipment, and textiles/apparel, while in the services industry African TNCs are attracted to ICT, and retail businesses, especially in rapidly growing economies like those in Nigeria, Ghana, Angola and Kenya. Other popular industries for intraregional investments are financials, and business services, where investors from South Africa, Kenya, Togo and Nigeria are expanding in the neighbouring countries.

The high shares of intra-African investment going into manufacturing sector accord with evidence from recent trade statistics showing that the industry products, which are most traded intra-regionally are manufactured goods - especially those entailing low and medium levels of processing. These industries stand to benefit the most from regional integration initiatives. Hence, an enlarged market provides companies enough scope (i.e. economics of scale) to grow and create incentives for region-wide business expansion.

In financials, low-technology consumer products and wood furniture, intra-African investments accounted for two-fifths of all Greenfield investments by number of projects. In residential construction and hospitality, TNCs from South Africa, Kenya and Egypt are major investors in Africa by number of cross-border acquisitions deals.

The share of intra-African FDI in the manufacturing and services sectors varies significantly across regional economic cooperation (RECs) or sub regional-groupings. In some RECs, such as Economic Community of West African States (ECOWAS) and EAC-five, intraregional FDI in these sectors represents over one-third of all investments; in others, such as the Arab Maghreb Union (UMA) in North Africa, it is marginal compared with peer sub-regions.

Developing greater expertise

Intraregional investment can help build local capacities - prerequisite for participating in global value chains (GVCs), which in Africa is still mostly limited to downstream processing of raw materials in the exports of developed countries. Intraregional FDI is one of the most important mechanisms through which Africa's growing consumer demand can be met by a better utilisation of its own resources. Moreover, intra-African investment helps major African firms enhance their competitiveness by increasing their scale, developing their technical know-how and providing access to better and cheaper inputs.

Smaller economies like The Gambia, Guinea-Bissau, Benin, Togo, Rwanda, Malawi, Lesotho and Swaziland depend heavily on regional FDI - which comprise around one-third of their FDI stocks, according to UNCTAD figures.

Similarly, Mozambique, Namibia, Uganda and Tanzania have also received a hefty amount of their FDI stock from within the region. By contrast, intra-investments in North African countries such as Morocco and Tunisia are minimal; the bulk of investments there come from Southern Europe and the Middle East - especially the UAE, Qatar, Kuwait and Saudi Arabia.

African multinationals

The rising dynamism of African blue chips on the continent, in terms of both trade and foreign investment symbolizes Africa's rapid sustained growth of the last decade. Among regional TNCs, South African-based companies are among the most active in sub-Saharan Africa. One such prominent investor with extensive regional reach is South African retailer Shoprite, which now plans to open 47 new outlets across the continent, focusing on lucrative consumer markets of Nigeria and Angola. Similarly, Standard Bank Group (Africa's No.1 bank by Tier-one capital and total assets) opened a representative office in Côte d'Ivoire in 2013, expanding its African coverage to 19 countries.

Other South African- conglomerates that are expanding across the continent include Coca-Cola Sabco (a Coca-Cola bottler), MTN Group (telecoms), Nampak (professional services and consulting), Naspers (media), Sanlam (insurance) and Tiger Brands (consumer goods), Anglo Gold Ashanti, Pick'n'Pay Stores (retail/general trading), Aspen Pharmacare (pharmaceuticals).

During 2007-2013, South Africa was the 4th largest investor in the African continent by FDI projects. South African projects in other African countries have grown at a massive compound annual growth rate (CAGR) of 44.2 per cent since 2007. In fact, excluding FDI projects from other countries into South Africa itself, South Africa emerges as the second-largest investor in the rest of Africa over 2012-13. Several of prominent African TNCs that have gone global, notably Anglo American and SABMiller, were assisted in developing their international competitiveness through first expanding in their own backyard.

Kenyan and Nigerian companies have also been opening new businesses, especially since 2010 - evidence of the increasing balance sheet strength of companies headquartered in these countries. Nigeria outflows are mostly concentrated in building materials and financial services. First Bank of Nigeria, Access Bank, Zenith Bank, Diamond Bank and United Bank for Africa (UBA) have opened full-fledged banking subsidiaries in West/Central and East Africa in recent years

Dangote Group (Nigeria's largest company by market capitalisation) is now planning mega-regional investments, including cement factories in Zambia, Cameroon and South Africa. In 2013, the company also began construction of a new US$500mn cement facility in Mtwara, Tanzania. Sameer Group (Kenya) is active in agriculture, manufacturing, distribution, high-tech, construction, transport and finance businesses in neighbouring countries.

A few emerging TNCs from North Africa have expanded their reach over the continent. Sonatrach (Algerian hydrocarbons giant) is present in the energy sector of some African countries. It is Africa's largest company, with a consolidated turnover of around US$100bn in 2013. The Camerounaise des eaux (CDE), Cameroon's national water utility is managed by a Moroccan Company. Compagnie Cherifienne (Morocco's leading chocolate-maker) is also building a 40,000 tonnes a year chocolate factory in Cameroon. Orascom Construction Industries (Egypt), active in the building materials and chemicals industries, is extending its presence in North African countries.

In sum, intra-African investments are trending up, driven by a continuous rise in South African FDI into the continent, along with increased inflows since 2009 from Kenya, Nigeria, and Northern African countries. Cross-border FDI in Africa is projected to accelerate further, as local blue chips seek new growth markets. External investors provide long-term capital, managerial skills and technology, and intra-African flows create a virtuous circle that will encourage more foreign investments across sub-regions in the coming years. Intraregional FDI could help integrate most countries into global production processes.

Referring to cross-border trade, Obiageli Ezekwesili, former World Bank's vice president for Africa, said, "Promoting intra-African trade has emerged as a top priority, in recognition that the African market of one billion consumers can be a powerful engine for growth and employment."

Moin Siddiqi, economist

Table: Announced Value of FDI Greenfield Projects in Manufacturing and Services, cumulative 2009-13

Host Region	Total value US$ billion	Share of investment from Africa (percent)
ECOWAS	58	37.0
EAC-five	31	36.0
ECCAS	23	18.0
SADC	83	17.0
COMESA	106	15.0
UMA	43	1.0
Grand Total	344	17.0

Source: Data from fDi Markets (Financial Times).

ECOWAS - Economic Community of West African States.
EAC-5 - East Africa Community: Burundi, Kenya, Rwanda, Tanzania and Uganda.
ECCAS - Economic Community of Central African States.
SADC - Southern African Development Community.
COMESA - Common Market for Eastern & Southern Africa.
UMA - The Arab Maghreb Union.

Safeguarding industry partners at Intersec

Key security event tracks double-digit growth as Middle East and Africa's appetite for protective equipment surges

Taking place at the Dubai International Convention and Exhibition Centre in the United Arab Emirates (UAE) over 18-20 January, Intersec 2015 delivers a comprehensive showcase of solutions, to meet the double-digit growth of Middle Eastern and African security and safety markets.

Intersec has played a major role in the last 16 years in reflecting the security industry worldwide. The exhibition combines a strong international profile, with a huge regional impact. Intersec 2014 featured 1,213 exhibitors from 54 countries and welcomed 24,615 visitors from 130 countries. For the Middle East and Africa in 2015 this key security and safety trade fair is set to feature 300 debut exhibitors, with top ten global security companies on board.

Expectations at the event

The global demand for security equipment is estimated to grow seven per cent annually, reaching US$117bn by 2016,* with the underdeveloped Asian, Eastern European, and Middle East & African markets leading the charge. The 17th edition of Intersec is also setting the pace for market, meeting demands for development, as organiser Epoc Messe Frankfurt said it expects the event to register at least 15 per cent growth in exhibition space year-on-year. In january 2015 Intersec features more than 1,300 exhibitors from over 50 countries, including 300 newcomers.

> **"Intersec underlines the Middle East and Africa's fast-growing security market - which has seen double digit growth of in security, safety, and fire protection**

The three-day event focuses on the five core areas of Commercial Security:

- Information Security
- Fire & Rescue
- Safety & Health
- Homeland Security
- Policing

Ahmed Pauwels, CEO of Epoc Messe Frankfurt, said, "The Middle East and Africa region continues to emerge as a key security market, and Intersec functions as the bellwether event that showcases the current trends prevailing across the globe, while presenting vital indicators of future developments in the industry.

"With a footprint that spans the entire region and active participation from leading international players, Intersec is today a must-attend event for the global security, safety, and fire protection communities."

International interest

Intersec 2015 features 13 country pavilions - including Canada, China, France, Germany, Hong Kong, India, Italy, Korea, Pakistan, Singapore, Taiwan, UK and USA.

Held under the patronage of His Highness Sheikh Mansoor bin Mohammed bin Rashid Al Maktoum, Intersec is the largest and most international trade fair of Messe Frankfurt's global network of security and safety exhibitions, which includes:

- Secutech India
- Secutech Taiwan
- Secutech Thailand
- Intersec Buenos Aires
- Secutech Vietnam
- Seguriexpo Buenos Aires ■

Visit www.intersecexpo.com

Products on show at Intersec include personal protection equipment

Intersec brings global industry partners to local markets in the Middle East and Africa

Innovations at the event help to manage the five core areas of commercial security

A revival in African reinsurance

Dr Femi Oyetunji, managing director of Continental Reinsurance, talks to African Review about prospects for the insurance industry in Nigeria and elsewhere on the continent

African Review: Could you give us a profile of the current situation with regard to insurance in Africa?

Dr Femi Oyetunji: Insurance in Africa is still in its infancy. Across Africa insurance penetration, for both life and non-life products, I believe, is less than two per cent, except in South Africa. In South Africa, insurance penetration is about 15 per cent. The global average is about eight per cent. So there is opportunity for growth - and I think there has been a lot of interest in both insurance and reinsurance companies in Africa. One problem that we do have in Africa is a proliferation of insurance companies. In Nigeria we have around 50 insurance companies.

AR: And what is the situation in other African countries?

FO: In some countries, proliferation is even greater. Take the example of Liberia, with a population of less than three million. That country has 20 insurance companies. And that is replicated elsewhere, in many countries in Africa. We don't have obvious market leaders as the market is so fragmented, which has led to stiff competition, hence it's tough for people to underwrite new business. But as Africa develops and we see a huge emerging middle-class that creates demand, they will have assets to insure, and therefore potential for the insurance industry is very promising.

In South Africa alone, insurance premiums run to US$10bn a year. So it's not an insignificant industry.

Just imagine, if we were able to get insurance penetration in the rest of sub-Saharan Africa up from one or two per cent to six per cent, it would create a very attractive market.

Continental Reinsurance is the largest privately owned reinsurance company in Africa, outside South Africa, but including North Africa - but in North Africa the bigger institutions are state-owned companies

Dr Femi Oyetunji, managing director of Continental Reinsurance

AR: Can you give some idea of the value of your business?

FO: We have the balance sheet of US$150mn. We have been growing at about 25 per cent annually for the past three years in terms of the premiums we collect. We have similar growth in profit before tax. It is currently about 15 per cent.

We reported an increase of 28 per cent in Gross Premium Income to NGN15.86bn (US97mn) in 2013, compared to US$75.5mn in 2012. The non-Life and Life businesses grew by 32 per cent and 11 per cent respectively.

We have investment income as well. Typically in Europe and US, the combined ratio [the ration between premiums and claims] is 98, 99 or 100 per cent or over 100 per cent sometimes. So that is why

CWG boss backs Nigerian business

Austin Okere, founder of CWG Plc and entrepreneur in residence at Columbia Business School (CBS), promoted Nigeria' s business competitiveness at the most recent CBS Entrepreneurs in Residence Week in New York, in the USA. Addressing a group of graduate students in the Private Equity and Entrepreneurship in Africa Course with Professor Murray Low of the Eugene Lang Entrepreneurship Centre, Mr Okere highlighted Nigeria as one of the top three investor destinations in Africa. Quoting figures from the United Nations Conference on Trade and Development (UNCTAD), Austin reiterated that of the US$57bn foreign direct investment (FDI) that Africa attracted in 2013-14, Nigeria took US$5.6bn, and noted that only six other countries attracted investments above US$3bn. Mr Okere's speech is taken in the context of Nigeria's rise of five places in the latest release of the World Bank Doing Business Report - well above the average improvement of two positions by the other MINT countries (Mexico, Indonesia, Nigeria and Turkey). More importantly, the 'Starting a Business' and 'Getting Credit' pillars saw the most significant changes, moving up nine and 73 places respectively, indicating better engagement with small and medium enterprises (SMEs), which tend to be the engine of growth in most developing economies.

ESSENTIAL FOR GROWING
GROWING BUSINESSES
Fidelity Small Business Account (FSBA)
• Zero COT
• Zero service charge for small beginners
• Interest on current account balance
• Easy access to loans
Visit any of our branches or call
01- 4485252 or
0800fidelity (toll free)
for more details
FIDELITY
Fidelity Bank Plc
We're Fidelity - we keep our word
www.facebook.com/fidelitybankplc

investment and asset management is a very important matter in insurance and in insurance companies.

AR: I understand that you are also highly rated amongst the industry's regulators.

FO: Yes, we have the second-highest rating of any privately owned reinsurance company in Africa. There is one insurance company rated 'A' and one of the state-owned Maghreb companies is rated B++, and we are rated B+.

We believe that we are in a strategically important situation. If I can take you back some 30 years ago, African nations were very worried about insurance premiums being taken overseas, so what most countries did was to create an reinsurance company and make it compulsory for all insurance companies to give a percentage of every premium to that company.

We in Nigeria didn't have that type of legislation, which I think was fortunate for us because it meant that we had to be innovative, we had to be more aggressive and we had to be more creative.

We started this business some 30 years ago in Lagos then we opened the first branch office in Douala, Cameroon in 2003. In 2008 we opened a branch office in Nairobi, Kenya. Now we have converted the Nairobi office to a subsidiary

Continental Reinsurance opened offices in Abidjan, Côte d'Ivoire, in 2012, and in Tunisia last year - and we created a subsidiary in Botswana earlier this year.

AR: Can reinsurance be described as a wholesale insurance product, allowing insurance companies to hedge their business?

FO: It is. We insure the insurance companies, it is business to business, and we also, in turn, have our own insurance programmes.

AR: How big a problem is the issue of fraud in Nigeria?

FO: Unfortunately, we do have this problem. It is something that has plagued the insurance industry. We have legislation and strict penalties for anybody caught trying to defraud insurance companies. But I think technology is assisting us, and companies are now able to compare notes with one another. We have to be careful to investigate certain claims, but inevitably some people say that we just don't want to pay!

AR: Do you have much involvement with the oil and gas industry?

FO: Yes, indeed. As Nigeria is one of the leading oil producing countries we have specialist knowledge, and we are now providing support to Kenya now that Kenya has discovered hydrocarbons. We are assisting not just in underwriting also but in terms of framing legislation to support the underwriting, by having a dialogue with regulators.

AR: Do you see linkages between mobile technology and insurance, particularly for micro insurance?

FO: I think mobile technologies do offer innovative ways to pay premiums, allow customers to make and check claims, receive payments etc. So it's an interesting development. It's significant that at the last meeting of the African insurance industry in Kigali, the chief executive of the Lloyds market said that there was a lot that European insurers could learn from Africa in terms of the use of communications technologies.

AR: Does the insurance sector in Nigeria have strong links with the banking sector?

FO: The situation has been changing in Nigeria because of new regulations from the Central Bank of Nigeria, the central bank, affecting those banks that have insurance subsidiaries. Perhaps part of the problem is that we don't have a common regulator. I think we have only two insurance companies that are still affiliated to a bank.

AR: Are the big international insurance companies now eyeing Africa?

FO: Fortunately or unfortunately, yes they are and you see a lot of them visiting Africa. Insurance is truly a global business. But what we have seen in Africa is our best and brightest leaving to acquire skills and experiences overseas. So the objective for our industry, I believe, is to encourage our people with those skills to return to Africa. We are always on the look out for people who want to come back.

Let me give you an example. In Nigeria there are probably only eight qualified actuaries. All the others are working overseas - so one of my passions is to try and attract them back to Nigeria.

AR: Do you ever foresee a day where African insurance companies can take position in Western economies?

FO: It depends on how things are allowed to develop. I am sure we are going to see a lot of vision within Africa.

The question is, where will the investment come from? If investment comes from within Africa, we will build strong pan African institutions and we will be able to look beyond Africa in the near future. If investment comes from outside Africa, unfortunately we will have lost a good opportunity. Africa's economic growth is at almost double digit. That is not happening anywhere else in the world, but we must leverage our opportunities.

So I do believe that the growth opportunities are in Africa and we can work in such a way as to harness our own strength and develop international companies who will be able to compete. And that is my vision for Continental Insurance. ■

The interview was conducted for African Review of Business and Technology by Stephen Williams

Leading the way with industry apps

Creating industry applications with GE's innovative Predix Industrial Internet platform

GE has brought innovative technologies to the Middle East, North Africa and Turkey (MENAT) markets through the launch of its software platform Predix, which powers the Industrial Internet. Available now, Predix enables users to create and deploy customised industry apps at speed and scale to manage the performance of their assets better.

The launch of Predix closely follows the unveiling by GE of 'The Future of Work in MENAT,' a roadmap to unlock the true growth potential of the region by redefining economies of scale, creating new jobs for youth, reshaping supply chains, promoting small and medium enterprises and accelerating the pace of innovation. A key pillar in 'The Future of Work' is the Industrial Internet - the merger of cloud-based analytics (big data and industrial machinery (big iron)) to boost efficiency. Globally, GE is estimated to have delivered more than US$1bn in incremental revenue in 2014 from 40 Industrial Internet offerings, with US$1.3bn in orders, helping customers improve asset performance management (APM) and business operations across the company.

The future of work, through the Industrial Internet

GE's 'Future of Work' approach of capitalising the power of Industrial Internet, Advanced Manufacturing (through techniques like 3D printing) and the Global Brain (the collective intelligence of human beings integrated by digital communication networks) is an ideal fit to the aspirations of business leaders in the region, reflected in the findings of the 2014 'Global Innovation Barometer' survey. In key findings, for example, compared to a global average of only 52 per cent, over 78 per cent business executives in the UAE observe that the nation is currently in a new Industrial Revolution era defined by Industrial Internet, the meeting of hardware and software.

Jeff Immelt, chairman & CEO of GE

"The tools are in place to realise the potential of the Industrial Internet to increase productivity for our customers and for GE," said Jeff Immelt, chairman & CEO of GE. "The more we can connect, monitor and manage the world's machines, the more insight and visibility we can give our customers to reduce unplanned downtime and increase predictability. By opening up Predix to the world, companies of any size and in any industry can benefit from the investments GE has made by eliminating the barrier to entry."

Nabil Habayeb, GE's president & CEO for the Middle East, North Africa and Turkey, added, "The launch of our Industrial Internet offerings reflect the fundamental shifts occurring in the regions' business sector. Across our geographic footprint, our customers and partners are increasingly drawing on the power of innovation and digital technologies to maximise their operational efficiency. Our Industrial Internet offerings will be the game-changer for the region as they enable businesses to make the right decisions at the right time to keep assets safe, help them run better, consume less fuel, receive service more efficiently and minimise unplanned downtime."

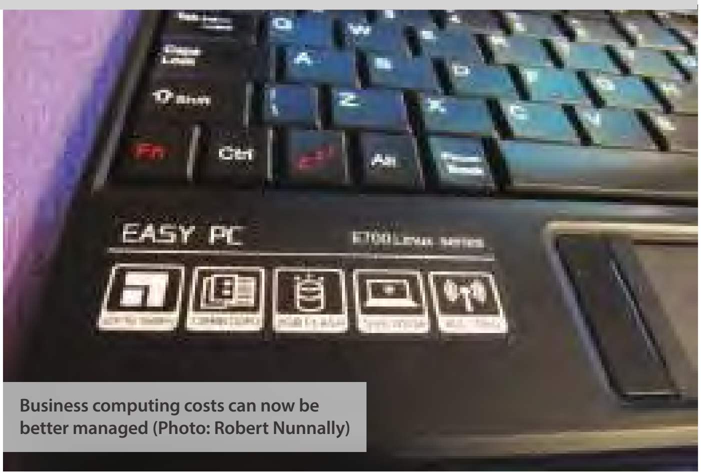
Optimising processes with Predix

To help businesses accelerate the adoption of Industrial Internet solutions, GE also offers an APM tool, which helps customers assess their current operations and identify the assets and processes that would benefit the most from increased connectivity, data analysis, and optimisation. Rania Rostom, GE's chief innovation officer, GE MENAT, commented, "Businesses in the region are open to a wave of innovation led by collaboration and co-creation. Industrial Internet technologies are the future and present a win-win situation for all; for us, it enables us to provide optimal solutions for our partners, and they in turn benefit from the increased operational efficiency and potentially reduced costs. It also supports the region in creating a thriving local supply chain and business ecosystem, which is powered by the innovative initiatives of small and medium enterprises sector. ■

Managing cloud business models

The emergence of cloud computing and big data has fundamentally changed the role of the CIO, requiring clearer insight into IT spend

IT is improving with cloud-based technology business management (IICD)



Business computing costs can now be better managed (Photo: Robert Nunnally)

Apptio, which provides cloud-based technology business management (TBM) software, recently introduced a new version of its software, to automate application total cost of ownership (TCO) to accelerate investment and rationalisation decisions. New capabilities are designed to meet needs outlined by more than 200 IT leaders during a recent series of TBM industry and functional Workgroups hosted by the TBM Council, an organisation of IT leaders seeking to influence new IT management standards, collaborate with peers, and redefine the value of technology in business.

Apptio Cost Transparency (CT) is powered by the Apptio TBM Unified Model (ATUM), a standardised combination of data and cost models. Building upon the foundational capabilities delivered to customers in a previous version of the CT package. ATUM now extends from IT cost pools and resource towers to the application level.

With the kind of comprehensive monthly analysis of application cost trends and drivers delivered by this kind of software, IT leaders can accelerate decisions on application rationalisation, investment, and cloud migration. With enhanced application TCO analysis, users are able, quickly and easily, to manage the financial impact of events like mergers and acquisitions, data centre change, shared serviced migration and outsourcing.

Working with technology for business

The TBM Council recently joined with KPMG and ISG to host seven TBM Workgroups chaired by forward-thinking CIOs to collaborate on business management strategies, financial best practices, and industry-specific benchmarks.

A key conclusion shared by attendees of these workgroups was that understanding the factors that drive application costs is time consuming and challenging. Without this information, IT leaders encounter overconsumption of infrastructure, difficulty consolidating their application portfolios, and the inability to report and show the value of their costs to the business.

Enhanced cost management capabilities

As an example of an improved approach to business, CT users have access to interactive guidance on the data needed to power relevant analysis, good/better/best cost modelling options, and categorisations to slice and dice application costs by business criticality, investment objective, family, function, type, and more. Additionally, CT now includes tens of thousands of configurable out-of-the-box key performance indicators (KPIs) to analyse granular cost and resource metrics for each application.

These enhanced business analytics allow users to:

Automate a monthly "buy-build-run" cost breakdown for each application in their portfolio to maximise alignment to business objectives.

Drive understanding and action with interactive, granular views into the composition and drivers of application cost. TCO is achieved through a comprehensive cost view including software licenses, development projects, support, infrastructure and operations.

Automate monthly analysis of the total cost to buy, build, and run each resource-intensive application with a total view of software, project, asset, and labour costs.

"It's our goal to design and develop elegant, powerful, and effective applications for our customers that ultimately make their job easier," said Ted Kummert, EVP of engineering at Apptio. "Cost Transparency arms IT leaders to solve one of the key challenges facing them today. We believe that the capabilities included within this release are essential to IT leaders looking to understand the impact of their applications on IT costs." ■

South meets West for multi-purpose trade

Good prospects for logistics services between South Africa and West African countries, encompassing multiple modes of transport

Shipping line SafmarineMPV expects the multi-purpose trade between South Africa and West Africa to grow in 2015 as South African companies strengthen their foothold in the West African market and become more globally competitive. According to SafmarineMPV's James Lewer, "Intra-Africa trade of value-added, manufactured goods has grown faster than African exports to the rest of the world, according to a recent Economic Outlook Report published by the African Development Bank, OECD Development Centre and United Nations Development Programme (UNDP). South African companies such as Gauteng-based Dominex – which provides infrastructure parts and manufactured goods to railway and mining companies in Africa – have seemingly proven their competitiveness globally as well as their ability to respond to West Africa's needs for goods and services."

An executive rail coach is loaded onto the Safmarine Longa under the watchful eye of SafmarineMPV staff and crew

Angolan links

Dominex was recently awarded a tender to supply Angola's major railway line, Caminho de Ferro de Benguela (CFB) with 11 rail wagons, following a global tender process. The rail wagons were destined for the Caminho de Ferro de Benguela (CFB) which links the port of Lobito to the eastern border town of Luau in Moxico province, where a new international airport is under construction. Dominex had previously supplied two train sets to CFB in 2011 and were chosen again as the preferred supplier for the new tender as a result of their proven ability.

According to Dominex's Kirk and Nico Christodoulakis, "Angola is rebuilding and upgrading the railway infrastructure for the future, responding in particular to the demand from the emerging and growing middle-class for more executive rail transportation and accommodation. The CFB is a very important and strategic Angolan rail network, not only because it provides access to the inner part of the country but, more importantly, because it links to the copperbelts of Katanga province, the Democratic Republic of Congo and Zambia."

Dominex's Nico Christodoulakis was on hand to oversee the shipment of the nine rail wagons to Angola

Shipping opportunities

This was the first time Dominex and their freight forwarder, Mentor Freight Services, had shipped with Belgian-based shipping line SafmarineMPV. According to Kirk Christodoulakis, "Having access to a reliable and frequent shipping service, such as SafmarineMPV's SAFWAF service, makes it possible for companies such as Dominex to take advantage of the significant business opportunities in West Africa."

James Lewer commented, "SafmarineMPV was on hand throughout the loading process and appointed a team which comprised in-house and third-party experts in rigging and lashing as well as handling and stowing to ensure the rail coaches arrived safely in Lobito." ■

Powering Up With an Eye on Corruption

In June 2013, during his visit to South Africa, Barack Obama announced a new initiative that many hope will generate significant investment opportunities for energy markets across sub-Saharan Africa. Obama's "Power Africa" speech signalled the commencement of US$7bn in new investment inflow into the African power sector. The call to action, which aimed to generate an additional 10,000MW of electricity to power 20mn new homes and businesses across the continent, received over US$20bn in commitments by August 2014.

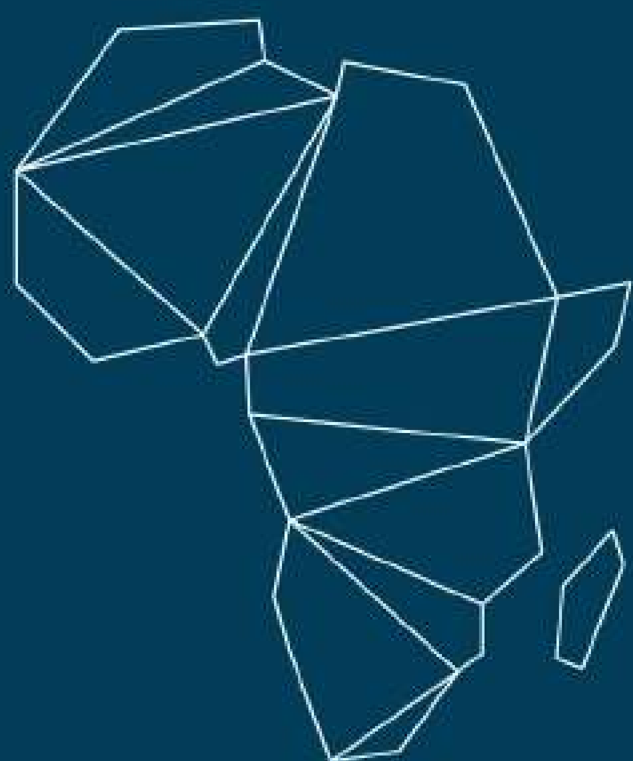
The initiative fosters long-term relationships between private investors and African governments, with a view to deliver major advancements in power infrastructure and capacity. Several transactions have been initiated under the programme, including a 1,000MW geothermal-power project in Ethiopia, wind-power projects in Kenya, and hydro- and solar power projects in Tanzania. Private equity in the African energy sector is likely to continue to increase throughout 2015, especially in light of a pledge by Nigerian investor Aliko Dangote to invest US$5bn jointly with Blackstone group in sub-Saharan Africa with a special focus on electricity infrastructure and generation assets.

African governments had already begun to address the power conundrum prior to Obama's announcement. The Nigerian government recognised that it had neither the resources nor skill required to plug the power deficit, and it began to privatise the state-run power sector. Other African governments are similarly opening up their electricity sectors to private investors. A variety of opportunities has sprung up for projects linked to national power grids as well as independent, "off-grid" solutions.

Gbenga Abosede, Practice Leader for Compliance Intelligence Investigations and Technology at Control Risks

Significant challenges around undoubted investment potential

The process of privatising the Nigerian power sector highlighted some of the challenges that will be faced by investors across the continent. Several high-profile international financial backers steered clear of the process in Nigeria, citing such problems as inadequate electricity tariffs, a perceived lack of transparency regarding



the conditions of assets being auctioned, and the absence of government guarantees to protect investors against circumstances beyond their control, such as gas supply outages. The net result was that the winning bidders relied on debt capital from local Nigerian banks. One year on, the sector is in urgent need of additional finance to recapitalise the asset purchases. There is now a need to replace local short-term financing with long-term capital from foreign investors as local banks contend with lending limits. The Nigerian Ministry of Power estimates the requirement will be about US$10bn over the next 10 years.

African governments are taking steps to facilitate investment in their economies by improving the regulatory environment. However, a significant hurdle remains- the risk associated with investing in emerging economies, where there are concerns about high levels of corruption and political interference. Anxiety about 'integrity' is at the top of the agenda, not only for international businesses but for the more sophisticated local African investors. They are keen to attract co-investment, and aware of the judicial and reputational pitfalls of being caught up in bribery, conflicts of interest and political intrusion.

Three powerful drivers are sharpening corporate attitudes to corruption. First, the US is consistently tough on bribery and continues to diligently enforce the Foreign Corrupt Practices Act (FCPA), which claims jurisdiction over international transactions. Secondly, other industrialised economies are tightening enforcement and some member countries of the Organisation for Economic Co-operation and Development are following the US lead. Finally, and perhaps most significantly, emerging markets are also joining in the enforcement trend. Recent developments in China, Brazil and India have signalled that anti-corruption enforcement – driven by several factors, including economic protectionism is no longer a Western phenomenon. In this context, more than ever, international investors need to be prepared to account for the effectiveness of their anti-corruption programmes.

> **"Power Africa fosters long-term relationships between private investors and African governments, with a view to deliver major advancements in power infrastructure and capacity"**

Implementation instead of glossy programmes on paper

In this year's edition of Control Risks' annual survey International Business Attitudes to Corruption, 638 senior legal and compliance professionals from around the world answered questions aimed at establishing whether their organisations are ready for the challenges of today's compliance environment. Our findings suggested that although companies are aware of the warning signs from various high-profile prosecutions, there remains a disconnect between their observations and the actions they take to improve compliance levels. 87.9 per cent of the respondents stated that they have policy statements banning bribes to secure business. However, far fewer have actually taken measures to implement such policies effectively.

Investors should consider introducing measures in the following critical areas:

- Leadership – Without clear leadership from the top, company policies, however well drafted, are unlikely to be effective. Of the survey respondents, only 47.5 per cent had a board director or a compliance committee specifically responsible for anti-corruption. A company's reputation is a strategic issue that demands close attention at the very highest level.

- Third-party checks – Most high-profile corruption-related enforcement actions involve intermediaries paying bribes on behalf of their business partners to secure contracts. Several FCPA cases have demonstrated that companies are expected to ensure intermediaries and other third parties do not pay bribes on their behalf. Failure to do so could lead to prosecution. Our survey found that only 58.3 per cent of respondents had procedures for carrying out integrity due diligence assessments of new business partners. Fewer than half of the respondents said they frequently conduct integrity due diligence of third parties in high-risk jurisdictions. In Control Risks' view, integrity due diligence is an essential measure for investors in these jurisdictions and is key to demonstrating a company's commitment to getting to grips with integrity risks.

- Anti-corruption assessments – Despite the fact that most businesses have an anti-corruption policy statement, only 38.2 per cent of respondents said they have procedures for assessing corruption risks when entering new countries. In our experience, contextualising the real risks they will face is an essential step in implementing a policy statement.

- Training – Anti-corruption training is an effective method of getting the message across to employees. However, our survey found that only half of the respondents have such training programmes for employees. Fewer than a third have programmes for selected groups of employees, such as board directors, sales professionals and other high-risk employees.

- Internal communications – To demonstrate commitment to clear and accessible lines of communication, confidential whistle-blowing lines should be a pillar of managing a business in a high-risk jurisdiction.

The power sector is just one example of the growing investment opportunities mushrooming from the demand for better infrastructure and amenities amid developing and urbanising populations in fast-growing African economies. The issues faced by international and local investors are common across sectors; businesses need a rounded approach to managing and mitigating these very real risks.

About the author

Gbenga Abosede is Practice Leader for Control Risks' Compliance Intelligence Investigations and Technology department in West Africa. Gbenga specialises in integrity due diligence and provides strategic advice on corruption-related matters and their effects on investment in the region.
Contact him at lagos@controlrisks.com

About Control Risks

Control Risks is the only international integrity risk consulting and investigations practice with a real and permanent presence in Africa. Our Africa teams based in Lagos, Johannesburg, Nairobi and London are exceptionally well equipped to deliver nuanced assessments of context-specific issues faced by our clients. ■

www.controlrisks.com

Alternators offering **reliability** and **durability**

Leading alternator manufacturer Cummins Generator Technologies elaborates on their range of power alternators, and why the products are a perfect fit in Africa

AFRICA HAS GRAPPLED with power supply for several years now. However, there has been a steady stream of investments and new technologies coming to the aid of Africans. UK-based Cummins Generator Technologies is assisting the process of power generation in Africa by supplying the latest range of alternators.

Currently, the low to middle range of STAMFORD are the most popular across Africa at this time. These alternators range between 4kVA to 700 kVA. Specifically, the STAMFORD P0 and P1 alternators have been the most popular products across Africa to date. The P0 and P1 alternators are robust, with power outputs of up to 45 kVA and are designed for prime power, construction, telecommunications, standby power, oil and gas, critical protection, marine and CHP. They are available in either two or four poles with single or double bearings, and can be fitted with optional anti-condensation heaters while operating in demanding conditions.

STAMFORD P6 alternator from Cummins Generator Technologies has a power range up to 1,250kVA and is designed for standby and island mode operation

Power requirements in challenging environmental conditions such as in Africa have meant that alternators must be more robust and capable now than they ever have been. Air filters are commonly employed to keep out sand and dust, while water filters can be fitted to large alternators to moderate the temperature in hot and challenging applications.

The alternators are mainly made out of "active materials" such as copper and electrical steel. The quantity and quality of these materials are critical to the overall performance and reliability of the product. Designers of modern alternators are always looking at improvements in other areas, particularly insulation, where new materials with improved thermal and di-electric strength are continuing to be developed. This gives the designer the opportunity to increase power/voltage outputs or increase the operating temperature of the electrical machine.

In addition, the company also offers marine alternators across STAMFORD and AvK ranges with various, tailored options including water coolers and enclosure options, depending on the type and harshness of the marine application.

According to officials at Cummins, applications like telecommunications, residential and prime power are popular in Africa, while commercial and mining are touted to be the sectors to provide the company the most potential to grow in Africa in the next decade.

While in southern Africa, the main applications are standby power, it is for prime power in the rest of Africa. Nigeria, South Africa, Egypt, Morocco and Algeria are among the company's largest markets currently.

Cummins Generator Technologies has increased its investment in Africa and now has a growing presence. Africa is a key market for Cummins and one that it wants to grow in.

Authenticate your STAMFORD alternator:
There are many fake STAMFORD alternators in the African market. Many customers do not realise they are counterfeit and therefore contact Cummins Generator Technologies directly for after-sales support. Cummins is proactively trying to educate customers about how they can authenticate their STAMFORD alternators (see www.genuine-stamford.com for more information). Dedicated to the success of their customers, Cummins has created an informational microsite on how to guarantee customers can always get genuine STAMFORD alternators (www.genuine-stamford.com) as well as another microsite on the complexities of Grid Codes and how customers can be guided through to compliance (www.gridcodegenerators.com). From 2015, customers will be able to tune into live Webinar broadcasts hosted by Cummins Generator Technologies, which will help them with a range of technical advice. ■

Transforming Africa's power provision

Africa's markets for electrical equipment are growing, in line with the growth of economies and the rise in orders for infrastructure

There are many opportunities for investors seeking industrial applications for innovative energy technologies, or to create a distributed, heterogeneous, robust, and sustainable energy infrastructure. However, socio-economic developments are constrained by the relative immaturity of the continent's energy networks.

The statistics show the broad need for further growth. The World Bank indicates that only 24 per cent of the sub-Saharan population has access to electrical power, and many regions that do have power are plagued by rolling blackouts. However, electrical equipment manufacturers and suppliers are benefitting from orders for large-scale projects and local sourcing, and stronger interest in prioritising product quality over price. There is some way to go, but the following pages offer evidence that the industry for power components is strong and gaining momentum. The key message is that Africa is open to technologies for all forms of power generation, as well as strategies for operating in smarter ways.

Rotary's motor rewind and coil manufacturing technology

For over 50 years Rotary has been manufacturing motor rewind workshop equipment. It has helped many African companies improve their productivity and quality of service.

Rotary's history as a high voltage coil manufacturer and repairer of power station generators and motors of all sizes led to the design and development of a complete range of equipment which we manufacture either as one-off additions to a rewind workshop or as part of a complete package of workshop design, training and technology transfer where required.

Rotary's range includes: coil winding equipment, including coil presses and spreaders for HV coils; DC coil manufacturing equipment; motor test consoles; coil removal equipment: coil pullers, coil end winding cutters, burnoff ovens; varnish dip tanks; bearing extractors; bearing heaters; brazing equipment.

Rotary's rewind workshop

www.rotary.co.uk

Marelli Motori attends to clients at ADIPEC

At ADIPEC 2014, held in November in Abu Dhabi, Marelli Motori presented current and potential customers with a medium voltage explosion proof motor specially developed for hazardous areas such as the refineries and offshore installations commonly found the Middle East and North Africa.

The company also offered insights into the recent IECEx certification of its explosion-proof motor range. An IECEx Certificate of Conformity attests to compliance with the international product standards and that the manufacturing site has been audited to verify that quality. Hence, in addition to the range's attributes, certification makes international trade simpler, faster and more cost-effective.

Marelli Motori attends to clients at ADIPEC
At ADIPEC 2014, held in November in Abu Dhabi, Marelli Motori presented current and potential customers with a medium voltage explosion proof motor specially developed for hazardous areas such as the refineries and offshore installations commonly found the Middle East and North Africa.

The company also offered insights into the recent IECEx certification of its explosion-proof motor range. An IECEx Certificate of Conformity attests to compliance with the international product standards and that the manufacturing site has been audited to verify that quality. Hence, in addition to the range's attributes, certification makes international trade simpler, faster and more cost-effective.

Application-oriented and distributed protection testing

Omicron´s RelaySimTest software allows CMC test set users to easily perform simulation-based relay tests independent of the relay type, manufacturer and detailed parameters. For end-to-end testing in the field, even multiple CMCs can be controlled from one PC, using a standard Internet connection. This considerably simplifies distributed testing of systems such as teleprotection or line differential protection. The time synchronization of the devices is conducted by the flexible PTP grandmaster clock CMGPS 588.

With RelaySimTest, distributed tests can be performed in the same way as single-end shots. The required injection signals are calculated for all ends automatically, making troubleshooting of the network very efficient. Comprehensive reports can be generated in a single place over the whole test, covering all relays. Furthermore, RelaySimTest simulates relay-controlled breaker operations. With iterative closed-loop simulation, the testing of auto-recloser functions is possible even in distributed protection systems.

Legrand's new UPS system enables continuity of service

Legrand's range of service sector solutions includes an uninterruptible power supply (UPS) system, which enhances products - from structured cabling systems for data networks, to control and management of the installation, including trunking and distribution systems.

"Legrand's environmentally approach to constantly changing global markets, encompasses ongoing technological developments of the company's extensive product portfolio. "Energy efficiency, quality power supply, optimum safety and enhanced aesthetics are critical in the advancement of all Legrand systems," claims Luk Ivens, general manager, Legrand SA, global specialists in electrical and data building infrastructures. "The Legrand UPS system, which ensures continuity of service for installations in diverse industries, provides reliable performance in terms of power and back up time.

R&S HMC power supplies gain functionality

Tracking, sequencing, FuseLink - these terms designate highly attractive extra functionality included in the new R&S HMC804x power supplies from Rohde & Schwarz. Data logging and an integrated energy meter are further new features.

The R&S HMC804x power supplies developed by Rohde & Schwarz subsidiary HAMEG Instruments are equipped with one (R&S HMC8041), two (R&S HMC8042) or three (R&S HMC8043) channels. All models from this series deliver up to 100W of power and are adjustable between 0V and 32V in steps of 1mV. They also offer a range of attractive extra functions.

Tracking is available in the two multichannel models and enables combined parallel or serial operation. It is still possible to provide power to several circuits independently. Changes to current and voltage values are carried out synchronously in combined channels.

The R&S HMC804x power supplies series deliver up to 100W of power, are adjustable between 0V and 32V in steps of 1mV and offer a range of attractive extra functions.

Lighting up the Hotel Verde - Africa's greenest hotel

Part of the BON Hotel Group, Hotel Verde has been dubbed 'Africa's greenest hotel' and it is obvious why. Every aspect of the hotel is designed to be as sustainable as possible, employing systems that are efficient at saving water and electricity, while reducing waste. The building features green landscaping, a vegetated roof, impressive three-3kW vertical axis wind turbines and a façade of photovoltaic panels contributing to renewable energy, generated on-site. The lighting infrastructure formed a central part of the energy savings envisioned by the owners and they wanted to invest in cutting edge, energy efficient lighting technologies right from the start, whilst considering the aesthetics of the hotel. In order to achieve this, they turned to lighting experts Eurolux and Blair Hammond & Associates for help.

Eurolux and Blair Hammond & Associates were contracted to design and supply lighting solutions for Dematech's offices, Hotel Verde's bedrooms, conference rooms, living wall, parking garage and exterior lighting, which included architectural, street and security lighting. The brief was to create an exceptional guest experience showcasing the beauty and functionality of energy efficient lighting, whilst adhering to the most advanced global sustainability standards. Given the hotel's location – but a stone's throw from Cape Town International Airport – aviation standards required the hotel to only illuminate downwards, further emphasising luminaire selection.

In order to achieve all of the above, a complete lighting design was completed for each of the specific areas, taking into account luminaire specifications and lighting control systems. A detailed Basis of Design (BoD) document was also compiled to document all technical aspects of the concept design, relevant codes, systems, equipment and parameters required to achieve a maximum Leadership in Energy and Environmental Design (LEED) rating.

The density of design

Each area of the hotel was modelled in lighting design software in order to confirm correct light levels and to ensure achievement of the lowest possible lighting power density targets, over and above the LEED baseline values.

"The use of lighting design software enables the client to make an informed decision by being able to visualise the effect of the lighting designs, this allows the design process to run smoother and more accurately," explained Daniel Hammond, lighting designer at Blair Hammond & Associates.

LED light sources were installed throughout the hotel's interior and exterior, with the exception of the conference rooms and task lighting for offices. In the conference rooms and offices, low brightness T5 fluorescent fittings were installed, as these illuminate work spaces while minimising glare. Eurolux also supplied all 2560 meters of LED strip lighting and 528 drivers for the hotel. All fittings in the conference rooms, reception and restaurant are controlled by the lighting control system, which was installed by a specialist company. This ensures that the optimum usage of light and energy is realised when needed.

Eurolux further boosted the energy efficiency of the hotel by supplying a range of sensors. All public areas, including the passages, boardrooms, underground parking areas and gym have motion-sensors that activate the lights when motion is detected. After a timed period of about 15 minutes without any motion being detected, the lights will switch off. In addition, they also fitted light level sensors that measure the amount of light received. These sensors consider factors such as natural light entering through windows, and dim or brighten the output of the lights to ensure sustained light levels.

"The lighting designs by Blair Hammond & Associates specified the latest LED technologies, with careful consideration for stable colour temperature, good colour rendering, durability and most importantly, aesthetics," said Shaun Bouchier, director at Eurolux. "We provided top of the range products that met with all the requirements."

PV systems from Dehn

Be it kilowatt or megawatt systems, Dehn protects investments against interference caused by lightning currents and surges.

Dehncombo YPV SCI type 1 and 2 combined arrester for PV system

The Dehncombo YPV SCI combined arrester safely protects PV systems from surges caused by lightning interference. This surge protective device combines a type 1 lightning current arrester and a type 2 surge arrester in a single device. It incorporates a tried and tested Y circuit with patented SCI technology and takes up little space.

Dehnguard YPV SCI - New surge protective device for string inverters

The Dehncube YPV SCI surge arrester reliably protects the d.c. side of photovoltaic systems from surges caused by lightning interference. This new concept for the first time combines a number of benefits for PV systems in a single device.

Dehn protects PV systems – in a practical and future-oriented way

Concentrating on the essential without compromising safety – this means for the protection of string inverters, that reliable products with economic benefits are required. The compact Dehnguard YPV SCI type 2 arrester from the surge and lightning protection expert Dehn, which was specifically developed for string inverters, meets this customer requirement and has a total discharge current of 40 kA (8/20 µs).

Victron Energy's solar charge controller range

A provider of power solutions for marine, industrial, and automotive application, Victron Energy offers eight models within its ultra-fast BlueSolar charge controller (MPPT) range.

Key features include: automatic battery voltage recognition, intelligent battery management by load shedding, ultra-fast response times to solar irradiance, and multi stage charging algorithms.

Whilst BlueSolar MPPTs (like other major manufacturers) allow solar modules to be placed in series as well as parallel to increase input power; Victron MPPTs are unique in having solar power limiting built in, which ensures the output power of a system will never exceed the maximum rating of the controller. This special feature of the Victron BlueSolar MPPT range allows customers to connect a surplus of nameplate solar power.

EHT enters West African electrical market with Sopam

A subsidiary of Enerdynamic Hybrid Technologies Corporation (EHT) has entered into an agreement with Sopam SA to establish an entity called Maple Leaf Energy SA (MLE) to serve West Africa from Côte d'Ivoire. MLE is targeting the Economic Community of West African States (ECOWAS) for the sale of its micro hybrid energy line of products, which include micro wind, solar and battery back-up systems packaged for varying power outputs, and which can be assembled in approximately one hour. This 'Ener product line' can be used by consumers to power homes in remote locations where there is no grid connection or to power a home and distribute power to the grid when the electricity supply exceeds demand.

Satir's portfolio of thermal imaging products

Satir manufactures thermal imaging cameras for thermography, process control, security, surveillance, vehicles (for night driving) and specific applications such as fever detection. Either handheld or fixed mounted and bespoke systems can be supplied, as per requirements. Typically, the firm offers: 80x60, 100x80, 160x120, 384x288 and 640x480 resolution UFPA detectors, with 25µm pitch, 50-80mK thermal sensitivity at 50Hz, license free.

Satir's latest products include: PK160 thermal camera, which integrates tablet and thermal camera technologies; the NV600 and La Moon range of products, which have been designed to assist the drives of any vehicle, lorry and buses; UMTI monocular technology for night time patrolling and observation; and thermal cores with optional lens and resolutions designed to meet the demands of the new industries such as UAV and process control.

ABB equipment for new railway line

Power and automation technologies provider ABB has won orders worth around US$16mn to supply traction substations and auxiliary power supply for a new rail corridor in Ethiopia. The Awash-Kombolcha-Weldia line is part of a five-year growth and transformation plan being implemented by the Ethiopian Government to provide efficient mobility, facilitate trade and strengthen the economy. The order was booked in the third quarter.

The contract was awarded by Yapı Merkezi Construction and Industry Inc., a leading Turkish transportation infrastructure company. The project is scheduled for completion in 2017.

ABB will design and supply engineered equipment packages for five 230/25 kilovolt (kV) traction substations, eight section posts and about 30 auxilliary substations. Key products to be supplied include a range of high and medium-voltage switchgear, traction transformers rated at 25 megavolt-ampere (MVA), power factor correction (PFC) transformers, FSK II+ railway circuit breakers and auxiliary power supply equipment.

The 400km Awash-Kombolcha-Weldia railway line will connect the northern and eastern traffic corridors of Ethiopia via Kombolcha and Weldia/Hara Gebeya in the north. The line will also connect to the line linking Addis Ababa, the Ethiopian capital, to the port of Djibouti. This will enhance passenger travel and trade, reducing travel time to the port by 50 per cent.

"These substations will enable the efficient supply of electricity to power the network's expansion and ensure reliable operation and performance of this rail network," said Claudio Facchin, head of ABB's power systems division.

Phaesun's plug 'n' play Lithium battery for off-grid systems

Solar tech firm Phaesun offers compact user-friendly lithium batteries for small off-grid PV systems. Solar Side lithium batteries can supply lamps, small TVs and other standard 12VDC appliances up to 60W. With three load outlets (5A, 12VDC), loads can be connected in plug & play fashion. A USB-Outlet (1.5 A, 5VDC) allows 5V USB devices to be recharged or operated.

Africa: the fuel of Europe

The energy generation systems provider Himoinsa speaks to *African Review* about plans to expand business in the continent and the value of Africa's telecommunications sector

Himoinsa is looking to build on business in Africa with hopes to open a subsidiary in the northern region in 2015, according to Himoinsa executive director Lydia Gracia.

The global provider of energy generation systems has stated that nations including Morocco, Algeria and Senegal are potentially viable locations to house Himoinsa's second Africa regional subsidiary.

"The company is very focussed on opening new subsidiaries and North Africa has been quite an interesting market for us over the last year," the company executive director told African Review.

"We consider the area is big enough to demand us internally. It's something we're working on [...] I think 2015 will be the year."

Telecommunications is one industrial sector where the company is experiencing growth in the African market. According to Himoinsa, it has worked with more than 20 telecommunication companies across the continent and has sold approximately 100 units for one company in Morocco alone.

"This is a very important sector, which is growing," Lydia Gracia stated. "With telecoms we are succeeding well in Africa, South America, and Asia."

She added, "2015 will be quite an important year for telecommunications projects."

Evidence of Himoinsa's growing interest and investment in Africa can be found in the news, announced in May 2014, that it has appointed a new position of business development director in Eastern Africa.

Awarded to Ramy Mohy, the appointment was made in light of the significant inroads and strong distribution network that the energy provider had achieved in the region over recent years.

Mohy commented, "Himoinsa is constantly endeavouring to increase its international presence. My goal is to draw on all my personal strengths to extend the company's distribution network in those countries in East Africa where it is not fully represented."

Furthermore Francisco Gracia, chairman of Himoinsa, highlighted the importance of Africa and the value of the business potential and resources it holds for European companies.

Himoinsa chairman Francisco Gracia

He said, "Africa is the fuel of Europe. In Europe we must be clever enough to consider Africa as a partner in order to help them develop the area."

The Himoinsa chairman, who has followed Himoinsa's steady growth since it was founded in 1982, explained that the two continents make ideal partners, because they compliment each other in regards to the resources that both continents lack.

"One of the problems in Europe is employment. There are 60-70mn people in Europe who cannot find a job and Africa needs 60-70mn people in helping them to develop their resources," he stated.

"In Europe there are a lot of people with knowledge in many sectors. Sending people to Africa is a way of helping Europe while also helping them."

Himoinsa boasts a global network, with distributors in more than 100 countries and more than 1,000 employees. Furthermore Himoinsa has one subsidiary in Angola, which is joined by nine others across the Middle East, Europe, South America and Asia.

According to Himoinsa, much of its success is thanks to remaining a family-run vertical manufacturer and the speed and flexibility this allows in decision making.

Francisco Gracia explained, "The reason Himoinsa has [reached] the size it has is because we reinvest all the profit back into the company, new machinery, and new factories."

He added, "We have to be competitive, but at the end of the day price will be forgotten and quality will remain always in the minds of the people."

With eight production plants worldwide, Himoinsa has the capacity to produce 60,000 generating sets per year.

According to the company chairman, robotising the production processes has allowed Himoinsa to maintain a consistent high quality product throughout.

"High quality control is important," he stated. "Robotising the production processes is how we can keep the high quality product."

With new appointments to parts of the continent and plans to establish a second regional subsidiary, it is safe to say that Himoinsa's presence and business in Africa is expected to develop considerably over the coming years. ■

Powerful data explained by PowerGen

A key figure at market research company PowerGen Statistics (PGS), Romain Mocaer offered an appraisal recently of the performance of the diesel generator market through 2014 in Europe, the Middle East and Africa (EMEA). Mr Mocaer accounted for export performance, and growth in market demand, and supply-side data.

> "PGS data reveals genset export giants and Africa's largest importer of diesels for standby power

Globally, the first half of the year was down by nine per cent. However, the export market has risen slightly in Q2 and Q3 2014 amongst exporting countries, three - UK, USA and China - represent the majority of exports, with China the greatest exporter. France, Italy and Spain follow the big three, but by some distance. China's exports tend to be less powerful, cheaper sets than those emanating from the UK and the USA. Three-quarters of US sets, and around 60 per cent of UK sets are above one kVA in capacity. However, Chinese exports of larger sets are rising, indicating a maturity of the manufacturing industry in that country, alongside a maturity in Chinese sales abroad, and specifically to EMEA markets.

UK companies such as JCB are prime exporters to Africa

The EMEA region represents more than 50 per cent of global imports, and much of this market is in Africa and the Middle East. Many Arabic imports are destined for oil and gas operations, whereas a significant share of sub-Saharan imports are bound to support computing and telecommunications facilities.

One notable fact emerges with respect to bilateral trading. Britain exports gensets to Nigeria more than to any other country. ■

Empowering Uganda

Uganda's power regulatory body has devised a 10-year strategic plan to ensure an uninterrupted flow of electricity to the East African nation

The Electricity Regulatory Authority (ERA) of Uganda has formulated a ten-year strategic plan (2014/15-2013/24) with the focus directed towards ensuring power supply security and sustainability of the electricity supply industry and facilitating increased access to electricity by all Ugandans.

The government body ERA regulates the generation, transmission, sale, export, import and distribution of electrical energy in the country. "Our role will be to establish a regulatory framework that will facilitate achievement of these key outcomes, and hence contribute to national socio-economic development," says Richard Apire, chairman of ERA.

He added that the strategic plan is expected to drive the electricity industry to the next level and has taken into account the Common Market for Eastern and Southern Africa (COMESA) and East African Community (EAC) energy agenda, the five-year National Development Plan, rural electrification strategy and Uganda' vision 2040.

Uganda's vision 2040 states that in order for Uganda to attain its development agenda and meaningful economic growth, the provision of quality, reliable and affordable energy services is critical for the country to attain middle income status in 30 years.

The ERA stated in its strategic plan that the performance of the electricity supply industry has steadily improved over the last ten years with more private sector participation and government investment with an increase in generation capacity from an installed of 380MW in 2003 to 852MW in 2013.

The transmission network has also increased from 1,165km in 2003 to 1,626km in 2013 - the main addition being the Bujagali interconnection line while energy sales have more than doubled from 1,038GWh in 2003 to 2,118GWh in 2013.

With the growing demand for electricity estimated between 10 to 12 per cent per annum in the short to medium term, the ERA would continue to focus the regulatory thrust on expansion of generation capacity with corresponding investment in transmission and distribution infrastructure.

Recognition is made of the fact that the developments in Uganda's oil industry are likely to trigger significant industrialisation and hence, substantial increase in electricity demand in the medium to long term. ERA will remain alert to these developments and adjust the demand assumptions and electricity generation targets in this plan.

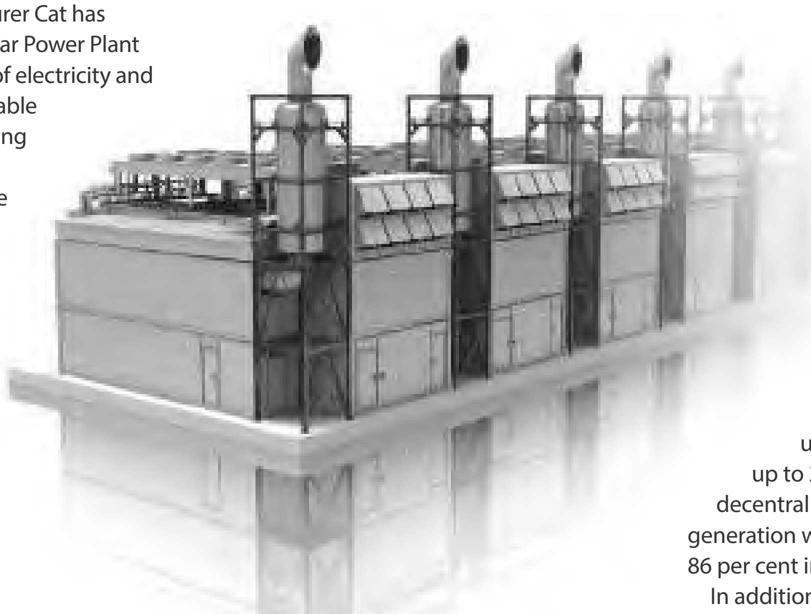
Benon Mutambi, CEO of ERA noted that the "strategic plan serves as a roadmap for ERA for the next ten years, takes advantage of the foundation laid by previous plans and it emphasises the positioning of electricity supply industry as a key enabler for the achievement of the country's sustainable development goals."

The Ugandan agency recently announced measures aimed to address the challenges surrounding supplying energy to Uganda's urban areas, including the implementation of a Demand Side Management Plan. The plant targets saving 20 to 50MW of electricity through a number of interventions such as promotion of consumer awareness on energy efficiency and efficient lighting technologies, applying Time of Use (ToU) tariffs to attract consumers to use more electricity outside peak hours and conducting energy audits to identify areas of improving efficient energy utilisation, especially for commercial consumers. ■

Geoffrey Muleme

Electricity on the go

Cat's latest power plant is economical, eco-friendly and can be assembled onsite despite limited access to infrastructure, making it an ideal fit in sub-Saharan Africa



Machinery manufacturer Cat has introduced a Modular Power Plant for the production of electricity and heat in a reliable and sustainable manner. The product was being developed over the past two years, stated officials from the company. Each Modular Power Plant is a location-independent complete system, fully equipped with components for speedy installation. The device takes only 12 days to assemble.

Cat officials also stated that the modules would be delivered to the installation site to be assembled, facilitating ease of onsite installation and enabling precision assembly with availability of limited infrastructure.

The power plant is suitable for continuous and intermittent use and can provide fast ramp up times when required. The device is commonly used in mining, heavy and light industry, electricity utilities, and oil and gas industry.

Each module has a Cat CG260-16 generator set with an output up to 4.3MWel per unit, which can be deployed in all natural gas and biogas applications. The gensets are designed for the highest electrical and thermal efficiency, low operating and service costs, as well as high reliability and availability. More than 580 power generators with nearly 2,170,000kWel have already been installed in various applications.

Each Cat Modular Power Plant can be expanded step-by-step to include up to six modular units, delivering a rated output of up to 25.8MWel. The device offers decentralized and mobile power generation with an overall efficiency of over 86 per cent in natural gas operation.

In addition, the modular plant can be easily disassembled, enjoys advantages of credit financing due to a mobile system

The Cat generator set has high availability, with extended maintenance intervals and major overhauls at 80,000 hours.

The power plant is ideal for eco-friendly power generation and is economical too. ■

The modular plant by Cat is eco-friendly and economical

Power tech potentials

Using ICT to manage energy resources smarter, to manage challenges in African power provision

Africa is being touted as the next frontier that will supply natural and renewable resources to the global energy market, but many countries within sub-Saharan Africa are either struggling to provide access to energy and electricity for their citizens or can't keep up with demand, resulting in rolling blackouts becoming a common part of people's daily lives. Within the African energy sector there are a number of key issues that are preventing the continent from living up to its potential as a reliable contributor to the global energy balance sheet and more importantly, stemming regional economic development and social well-being.

Power to the people

The first of these key issues is a low level of access to energy for inhabitants. According to The World Bank, less than one in four people (24 per cent) in sub-Saharan Africa have access to electricity, compared to 40 per cent of the population within other low income countries.

Governments and utility providers in the region can adopt various strategies to help alleviate the continent's power poverty problem. These include the need for safe, portable solar chargers that can charge cellphones and the like as well as fluorescent bulbs (CFLs) that dramatically slash power demand.

Managing power demand well

Another factor is poor reliability when it comes to the provision of power to citizens and businesses. South Africans are very familiar with rolling blackouts as a consequence of ageing infrastructure that breaks down at inconvenient times or the need to optimise assets to meet the increasing demand for power, especially during winter.

Unfortunately, the rest of Africa are not strangers to this scenario, as African manufacturing enterprises are plagued by power outages by a whopping 56 days annually on average, according to The World Bank. This causes African businesses to lose six per cent of sales revenues in the informal sector alone and up to 20 per cent within areas in which back-up power solutions are limited or non-existent.

Modern ICT tools can help energy providers with outage monitoring and prevention, demand response, asset performance, analyse consumption patterns and load forecasting. There are software packages delivering a single, real-time view of utility companies' operations to boost plant as well as grid efficiency.

African power pricing

The final key issue is the high cost of energy within Africa. According to The World Bank power tariffs have dropped in most emerging economies to US$0.04-0.08 per kilowatt-hour, whereas the SSA average is US$0.13 per kilowatt-hour. Utility providers can cut costs and tap revenue by upping the price of power. However, big data can be used by organisations to generate business opportunities for them to exploit.

By using data analytics and other solutions, firms can cover important areas as diverse as balancing profits, monitoring sustainability and safety of supply by diagnosing and even predicting issues before they happen. This leads to increased asset effectiveness, improved prevention and handling of unplanned downtime in real-time, better daily forecasting and even the ability to predict demand. For example the Plant and Grid Operations solutions from SAP enable utility providers to create a safe, reliable, profitable energy infrastructure, and monitoring of plant as well as grid performance.

Various deficiencies and limitations in the African power sector are not just inconvenient for companies and citizens, but actually threaten the continent's long term economic growth prospects and competitiveness as a region within the global economy.

The cost to the economy of load-shedding is equivalent to 2.1% of GDP on average according to The World Bank. This means that the use of technology to manage power better not only makes life more convenient for people and businesses, but enables economic growth for the continent as well. ■

Ashley Boag, head of energy and natural resource industries at SAP Africa

Decongestion at the Port of Douala

SEPBC uses a Volvo loader to clear the timber yard at Cameroon's principal harbour, alleviating stress on a critical area of the nation's economy

A new initiative has enabled decongestion at the timber yard in the Port of Douala, in Cameroon's capital city. Through much of 2013 and 2014, congestion at the port has paralysed certain critical operations, impacting negatively on the national economy of Cameroon, and also the economies of nations served by the port.

The Lumberyards Operating Company of Cameroon (Société d'exploitation des parcs à bois du Cameroun, SEPBC), contacted SMT Cameroun (SMT) in order to acquire new handling equipment to help decongest the wood yard at the port.

SEPBC is the concessionaire of the timber yard at the port. Over the three months from August to October 2014, 246,196m3 of logs and 82,550m3 of sawn wood were delivered. In October 2014 alone, it cleared 122,562m3 of wood (91,196 m3 of logs and 31,366m3 sawn timber). These performances were recorded while the company took delivery of new handling equipment, to strengthen its operational capabilities. The port performance was enhanced by delivery of the new handling equipment, to strengthen SEPBC's operational capabilities.

Machines for material handling

SEPBC acquired two new Volvo L220G loaders and a Speed Appro barge. Another three L220G loaders, coming from Bolloré, are being delivered at the timber yard, which will make a total of five Volvo L220G loaders working there.

The L220G loaders can handle loads of up to 12 tonnes. They are used for specialist applications such as loading dock balls, and sorting and retrieval of packages on site. They optimise handling operations with safety and speed.

And the Speed Appro barge - a flat-bottomed boat, without an engine - is used generally in convoys on rivers and large-gauge canals. It can carry up to 400 tonnes of cargo and enables log delivery operations.

The Volvo L220G, at work in the timber yard in the Port of Douala

Aside from the immediate improvements to performance, in clearing the wood and following decongestion of the timber yard, SEPBC's investment, which amounted to 382mn CFA francs (US$718,000), will significantly boost activity in the timber terminal.

Investing in improvement

In Cameroon, Bolloré Africa Logistics operates both the port concession (Douala International Terminal) and rail concession (Camrail). It is a major shareholder in SEPBC supporting SEPBC's annual investments to improve the quality of its services. The funds ploughed in to port operations helps to increase rates of unloading (trucks and cars) and load (crane and ramp) on the terminal, in substantial terms. A prominent example of such investment by SEPBC is the acquisition towards the end of 2014 in a quay crane grid, at a cost of over two billion CFA francs.

Eric Gerbet, CEO SEPBC, said, "The equipment purchased by SEPBC are the materialisation of a desire to continue to provide our customers with quality service. We will stay the course with current performance. And I must also say that the dialogue that has prevailed between the players in the timber industry and SEPBC facing congestion, allowed us to bring together and unite our efforts to improve the performance of our timber terminal. Today we reach the peak load of approximately 4,700 m3 per day. We aim to reach the Cape of 6.000m3 wood removed daily."

Philemon Alfred Mendo, Deputy Director General SEPBC, added, "Today we celebrate the success of an exemplary collaboration with the Directorate General of the Port of Douala. When we arrived we took the measure of the problems created by the massive influx of wood from Central Africa, Congo and even our country, Cameroon. With investments and mobilisation of the entire staff and management of Bolloré Africa Logistics, we were able to reverse the trend and it is clear that we will maintain the systems put in place to continue to participate in the massive modernisation of the port of Douala."

Finally, Jacques Dupanloup, of the Group of Wood Industry of Cameroon, affirmed that he was optimistic about a return to normal performance within few months on the back of the investment by SEPBC in the Volvo loaders and the Speed Appro barge, and stressed the continuing benefit of investment to working relations at the port. He sid, "We meet regularly with SEPBC officials to make a point about changing things. We hope that it continues to provide the necessary fluidity to a real lumberyard bottlenecking ... But we are optimistic in view of the efforts made in recent times." ■

How Volvo equips operators for aggregates

"The future potential of the African region is excellent," said Craig Griffiths, extraction business development manager at Volvo Construction Equipment Sales Region EMEA. "The mineral resources in this region are extensive and infrastructure improvements are essential. The same applies for the aggregate business."

Construction aggregates are the most mined materials in the world. They are widely used in drainage applications, and as base material for foundations, roads, and railroads. Griffiths said. "Materials are required in high demand within the region. Interestingly we see that the way of working is being modernised which creates a demand for improved safety features and machine reliability.

"Productivity is a high priority for customers - especially for companies that rely on operators being in the machine for long shifts. Safety, quality and reliability are always identified as key selling points."

The Volvo A30F articulated truck is depended upon time and time again on jobsites around Africa

Aggregates firms in Africa choose equipment such as the Volvo EC220D crawler excavator to handle primary extraction and bulk muck shifting duties at quarry sites. The performance and reliability of machines such as the EC210 is often, indeed, the primary consideration when companies are looking to add excavators to fleets. Aggregates firms can gain from significant fuel savings and take advantage of weight and specification advantages to find improvements in overall performance. But, more than this, the key piece of equipment to have on site is the Volvo A30F articulated hauler. With their heavy duty frames and immense off road performance, Volvo's F-Series articulated haulers are the ideal platform for a host of applications. Moreover, on the A30F model, hauling speeds are increased thanks to soft, progressive gas-hydraulic front suspension, which minimises vibrations to the operator, reducing fatigue and enhancing productivity. The A30F is fitted with fully hydraulic brakes and dry discs on all wheels. The A30F also features a hydraulic retarder and Volvo Engine Brake (VEB). VEB comprises a compression brake and exhaust retarder.

"With the Volvo articulated haulers customers get a lower total cost of ownership, with long life, high availability and productivity," Craig Griffiths observed. "The products can operate in tough terrain and are very well suited for transporting materials, on both short to medium hauling distances. And to support the machines, Volvo CE has many available dealers across the continent that can quickly assist customers."

New attachment bracket aids wheel loader operators

An updated attachment bracket from Volvo Construction Equipment turns your wheel loader into a real all-rounder, increasing your versatility and ensuring you always get the most out of your machine.

To ensure maximum productivity, it is important to be prepared for any job. With many jobsites requiring more than one operation – but not more than one machine – Volvo Construction Equipment provides you with a tool that allows you to adapt your wheel loader to a number of different jobs, giving you the versatility needed to increase your profitability.

At the heart of the updated design is a tradition of quality and expertise. In 1954, Volvo CE invented the world's first wheel loader attachment bracket, and through constant innovation and improvement the company is still the market leader today. This pioneering design enables a safe, quick connection to a variety of attachments, providing the flexibility to perform a wider range of tasks.

The new attachment bracket helps Volvo wheel loaders switch tasks with ease

When used together with Volvo attachments, the attachment bracket has a minimal impact on machine capacity. To ensure the highest levels of precision and controllability, the operator has excellent visibility of the attachment from the cab at all times.

The attachment bracket meets all international safety standards, including the updated EN474-1 and the upcoming ISO 13031.

A versatile addition

The attachment bracket increases the versatility of your wheel loader to the highest standards. The hydraulically driven bracket allows the operator to switch easily and quickly between attachments, minimizing downtime, and it is safely locked from the operator seat by the press of a button.

To ensure excellent performance and profitability, Volvo provides a comprehensive range of attachments that are designed to work in harmony with Volvo wheel loaders. Attachments include buckets, grapples, forks and material handling arms. Whatever the job – make sure your wheel loader is ready with the improved Volvo attachment bracket.

Working in Waterfall City

A 1.6mn square metre mixed-use development, regarded as the most projects undertaken in southern Africa to date

The 1.6mn square metre mixed-use Waterfall City is being called the most ambitious commercial development undertaken in southern Africa to date. Close to the Allandale off-ramp to the N1 highway in Midrand, Gauteng, Waterfall City will be the epitome of the eat-shop-work-play integrated living environment that we are already seeing at internationally acclaimed commercial hubs across the globe. At its centre is the Mall of Africa. Set to become the largest mall ever built in a single phase in South Africa, Mall of Africa is raising the bar for retail centres on the African continent.

Earthworks for the Mall of Africa began in October 2012, with the mall's opening scheduled for April 2016.

It is envisaged that the 130,000 m^2 retail mall's distinctive design, which was meticulously planned by MDS Architects, prime location and envious retail mix will offer a unique retail experience, making it a destination for both local and tourist visitors.

Aurecon was contracted by leading South African property developer and investor, Atterbury Property Developers, to undertake both civil and structural engineering on this iconic development, with a focus on optimised design solutions through continuous value engineering, working closely with the Quantity Surveying team, to ensure budgets are adhered to in support of the feasibility of the project.

Proven investment potential

"Several urban studies have proven that there is an excellent business case for situating the Mall of Africa within the Waterfall City development. The mall will help the City realise its financial potential," said Aurecon project director, Nicol Labuschagne.

He adds that while involvement in such a

The 1.6mn square metre mixed-use Waterfall City, the most ambitious commercial development undertaken in southern Africa to date

large-scale project has been exciting, projects of this scale and magnitude present a unique set of challenges to the project team.

Pre-empting material shortage

The recent strike in the metals and engineering sector, led by the National Union of Metalworkers of South Africa (Numsa), saw over 200,000 Numsa members embark on what was dubbed an 'indefinite strike' by the local media. This could potentially have derailed a number of major deliverables on this project.

"In this instance, detailed design documentation had to be fast-tracked even further to enable the contractor, WBHO/Group Five JV, to pre-order rebar and steel formwork ahead of the strike. This mitigated many of the potential delays as a result of the strike," said Labuschagne.

Geotechnical challenges

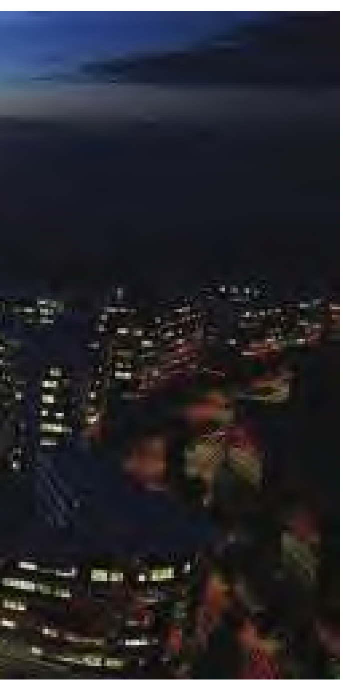
The underlying geological profile of the 16.5 hectare footprint of the mall site comprises soft to very hard rock granites with intrusions of diabase in places. Residual soils have developed from the weathering of the granites and diabase bedrock with overlying transported hillwash of varying depths and an abundance of subsoil groundwater in places.

"Geotechnical challenges to be dealt with as a result included the upfront profiling of the granite bedrock to minimise the amount of hard rock excavations, the subsoil drainage design over such a large footprint, and the varying founding conditions encountered due to the variable nature of the site geology," said Labuschagne. "This meant that no single founding solution could be used. Our project teams had to tailor the founding solution for each column or wall in accordance with its specific site condition, making use of either piling or conventional spread footings or a combination of both."

Time constraints

The planned opening of the mall at the end of April 2016 has placed the professional team and the contractor under tremendous pressure with a number of milestone deadlines to meet. This called for close cooperation and collaboration with the full professional team.

"For Aurecon, this meant ramping up our delivery capability by allocating additional resources to the project to ensure our construction documentation is timeously produced, peer-reviewed, approved and issued to site. The fast-track nature of the construction programme saw us using reinforced concrete flat and coffer slabs for the retail areas and post tensioned flat slabs for most of the parking decks to speed up construction," explained Labuschagne.



The epitome of integrated living

In terms of aesthetics, the parking areas at Waterfall City include valet parking as well as additional parkades which, together with the entrances, will accentuate the urban planning framework and the unique identity of the mall. The development is being designed to create a pedestrian-friendly environment around the perimeter, with focus being placed on immaculately landscaped areas and aesthetically pleasing walkways.

"The Mall of Africa is much more than an economic anchor of Waterfall City; it's also a visual and social anchor with striking features and bespoke amenities. Aurecon applauds the developers for this bold, ambitious project and is proud to be involved," Labuschagne said. ■

Engineering prospects in Angola and Kenya

In the latter half of November 2014, Luanda in Angola and Nairobi in Kenya played host to a delegation trip by representatives of eight German companies from the cement plant engineering sector. Under the umbrella of the VDMA Construction Equipment and Building Material Machinery Association, they invited local building material manufacturers to two symposia to get to know technical solutions "made in Germany" and to discuss local features and individual requirements.

Delegation trip with eight company representatives

"With our symposia, we hope to create opportunities for our customers," said delegation leader Bernhard Pagenkemper, head of sales at Haver & Boecker OHG, who went on to explain the aim of the delegates' commitment in sub-Saharan Africa. "When we take care of things and travel with stamina, good will and a smile, we have always been well-received. It is worth believing in Africa: every country offers opportunities for our companies to sell something."

As well as Haver & Boecker, the delegation included representatives from Aumund, Claudius Peters, Hazemag & EPR, Gebr. Pfeiffer, Christian Pfeiffer, Toni Technik and Thyssen Krupp.

Angola and Kenya are developing well

Angola and Kenya are two economies that are enjoying good development. Economic growth means an increase in cement consumption. The construction material industries of both countries have a long way to go to catch up. Until 2013, cement was the most-imported product in Angola by some margin. Cement imports were banned at the start of this year in order to kick-start domestic production. Experts estimate production in the country to be around 5.5mn tons, while demand is 8.5mn tons per year. The government plans to increase capacity to 12mn tons by 2016, so that the surplus can be exported to other countries in the region. The political situation can be expected to remain stable until the next election in 2017, and infrastructure and construction projects are being financed with profits from the oil business. The sector also sees significant potential in eastern African countries. In Kenya, for example, cement consumption rose by 6.8 per cent in 2013 compared to the previous year, putting it at 4.2mn tons. Here, too, various large-scale projects and increasing private need for building materials is pushing up demand.

Germans also want to provide training and establish service

For the German mechanical and plant engineering companies, this is fertile ground for business. However, as Pagenkemper said, "We want to do more than just help the countries with deliveries; we want to train the people in how to use the machines and to establish proper service."

The Germans hope that this long-term commitment has distinguished them from the Chinese competition, which is ubiquitous in sub-Saharan Africa.

The symposium in Luanda was held on 18 November, and that in Nairobi on 20 November 2014. The events were organised in cooperation with local German Chambers of Commerce. ■

Cement as an African commodity

The demand for and value of cement is rising dramatically to serve the growth in construction industry across the continent

The current African building boom is boosting the continent's cement industry

Cement is used in 65 to 75 per cent of all construction projects in Africa and demand for the commodity is on the rise in the sub-Saharan region. In Nigeria, the cement industry has grown by 95.6 per cent since 2005. In Kenya, cement consumption per capita has increased 60 per cent over the past five years.

The scale of this burgeoning industry will be reflected again at the 2015 Totally Concrete Expo, scheduled to be held 26-28 October in Nairobi, Kenya, where cement and construction industry magnates will convene - as they did in May 2014 - for access to government stakeholders and investors who can facilitate commercial opportunities in Africa's high-growth markets. Previously, discussions have been held at Totally Concrete with personalities such as HE Vincent Karega, High Commissioner of the Embassy of Rwanda, Eng. Daniel Manduku, CEO of Kenya's National Construction Authority and Rockson Dogbegah, vice president of Africa at the Chartered Institute of Building (CIOB) in Ghana - each of whom has provided invaluable insights into doing construction business in their respective national marketplaces.

Manufacturing cement to meet construction needs

In East Africa, demand for cement has increased competition in the marketplace. Local producers such as ARM Cement have been building additional clinker plants, while international companies such as Savannah Cement, a consortium of Chinese and Kenyan investors, have been spearheading investment initiatives in cement manufacturing infrastructure to meet growing demand fuelled by an upsurge in private sector housing developments, foreign-funded commercial projects and mega infrastructure projects ranging from ports to rail to roads financed by government and donors.

In Southern Africa, African companies still dominate the market. PPC is well-established with cement plants in Zimbabwe, Botswana, Mozambique and ongoing efforts to extend its presence with facilities such as the US$260mn cement factory in the Democratic Republic of the Congo. Dangote Cement is another example of an established international player, with facilities in South Africa and Zambia and ongoing engagement in Tanzania, the Republic of Congo, and Gabon.

As local and international companies vie for business in African cement markets, new plants have been built at a rapid rate. Africa's increasing demand for cement is attracting global attention, with international and multinational players now investing millions of dollars into projects in the sub-Saharan region. Once more, Totally Concrete may be expected to provide an outlet for construction business development for new entrants into the African marketplace and also to offer practical insights into managing daily operations in the African context. At the last event, for example, Wouter Trollip, Consolidated General Minerals (CGM) project manager in Mozambique, highlighted the requirements and obstacles to building a cement plant in Africa. Previously, also, Nedbank Group South Africa lead principal for infrastructure Brett Botha educated participants with proven exit strategies for high growth, high risk markets.

Incorporating both strategic and technical elements, Totally Concrete has practical tools and techniques for all professionals active in producing cement or using concrete. In 2014 stakeholders from over 40 countries worldwide gained access to cutting edge technology - and more are expected at the next event. Totally Concrete has been endorsed by over 60 industry associations and sponsored by PPC, Lafarge, AfriSam, CCS, PMSA, Reimer, Nyeleti Consulting and WBHO. John Sheath, CEO of the Concrete Society of Southern Africa (CSSA), an endorsing association, has observed that Totally Concrete "provides a distinctively African platform in which the concrete and construction industries can converge for skills development, access to cutting edge building and construction technologies and cross-border information sharing". ■

KEMACH JCB

Johannesburg 0861 KEMACH (536224)
Bloemfontein +27 (0) 51 432 3978
Port Elizabeth +27 (0) 41 453 1819

Johannesburg (011) 826 6710
Cape Town +27 (0) 21 949 7442
George + 27 (0) 44 878 0366

Pretoria +27 (0) 12 548 2768
Kwazulu-Natal +27 (0) 31 700 8278
East London +27 (0) 43 736 1252

JCB has teamed up with Absa to bring you not just the best backhoe on the market but also the best finance deal. Its versatility, performance and robust design together with the lowest cost of ownership, have made the JCB backhoe the world's best selling. And now you can afford to buy and actually own one outright in under 3 years. Backed up by the best customer support in the business, you really are buying a money making machine.

JCB

So don't miss out, call your nearest dealer on the number above or visit the website.

www.jcbafrica.com

Tech for quality control

A first-of-its-kind moisture measurement system that combines Bluetooth, GSM, Windows, smart phone and microwave technology is now available through Pan Mixers South Africa (PMSA) - the largest supplier of a complete range of quality concrete equipment ,machinery and technology in Africa.

The FL-MOBI-MIC Inspector, developed by German-based moisture control expert Ludwig Moisture Control, utilises a combination of advanced technology that secures the technical status of readymix concrete in transit, from the supplier's batch plant, to handover or delivery at the construction site.

PMSA sales and marketing manager Quintin Booysen notes that the system consists of a microwave moisture measuring probe and a consistency measuring bar with transmission unit mounted on the truck's rotating drum, which in turn communicates via Bluetooth to a receiver module in the cab.

"This signal is then forwarded on the GSM network via a Windows-based smartphone or compatible device, thereby enabling the data to be available in almost any location. What's more, an industrial standard for the Bluetooth connection ensures reliable data transfer at long range even under challenging conditions, which is particularly important in the harsh African environment," he said.

The FL-MOBI-MIC Inspector utilises Bluetooth and GSM technology

In addition to the transmission of product moisture data, the FL-MOBI-MIC Inspector system also sends other crucial process parameters for real-time monitoring. These include; product temperature, consistency, slump, residual water, filling level, rotating direction and speed of the mixing drum. Booysen reveals that this ultimately puts the supplier in full control and able to monitor the concrete whilst in transit, for the first time.

"Throughout the entire transit phase, the supplier is aware of any change introduced to the readymix product. This eliminates various risks – such as water being added onsite to speed up the load discharge – to fully guarantee the quality control of all readymix deliveries," he said.

Cavatorta's mesh protects against shocks

Manufacturer of galvanised and plastic coated wire, nails Cavatorta's Replax T Sport is a plastic-coated chainlink with diamond shaped mesh made using the simple torsion method.

The zinc-plated steel wires of the mesh have an enhanced diametre and are coated by PVC through the sintering process 'Galvaplax' developed by Cavatorta.

This helps Replax T Sport to be strong and durable that is particularly suitable for constructing fencing that requires special safety standards and high shock resistance (UNI 10121-2), such as stadiums and any type of sport facility.

In normal conditions, Replax T Sport is guaranteed against corrosion for over 10 years.

The features of Replax T Sport include:

- Shock resistance without deformation due to the diametre of the wires, the sizes of the mesh and the connection mode among the wires that make up the mesh
- Optimum front and side visibility of the pitch even from a very close position to the fence
- Effective and durable corrosion resistance thanks to the special PVC coating of the wires developed by Cavatorta

Replax T Sport are particularly suitable for perimeter boundaries inside football stadiums.

Replax T Sport is sold in compact rolls of 10 metres with protective covers on the ends, in bundles of nine rolls each.

AfriSam sanctions two readymix plants in South Africa

AfriSam has commissioned two new readymix plants at Pietermaritzburg and Umlaas Road in South African province of KwaZulu-Natal (KZN).

"The plants were commissioned in late 2013 and are in response to increased demand in the Durban/Pietermaritzburg corridor development as well as to give AfriSam a readymix presence in areas where we already had quarries established," Pieter Uys, sales manager at AfriSam in Durban, said.

AfriSam operates a fleet of 50 readymix trucks and two sophisticated boom pump vehicles in KZN

"As we use AfriSam cement in readymix production in KZN, it also gave us an opportunity to pull through additional volumes of cement," Uys added. The construction materials group currently operates seven readymix plants and six quarries in Durban, the Natal Midlands and Northern KZN. It also operates a fleet of 50 readymix trucks and two sophisticated boom pump vehicles.

"KZN is a strategically important market for a construction materials company, hence the plan to expand the footprint of AfriSam in the province."

AfriSam focuses on a range of market segments in KZN, from building residential and non-residential to civil, retail, national and local government, municipalities, asphalters, readymix, concrete product manufacturers and cash customers.

"Although we had a presence in terms of cement at retailers for many years, we started marketing cement to other market segments through our KZN sales team from 2012," the sales manager explained.

Another major opportunity for AfriSam to bolster its presence in the province is the 20-year, multi-billion rand Cornubia mixed-use development in Umhlanga, the eThekwini Municipality's first Cabinet Lekgotla priority project. "Additional provincial flagship projects at present include development plans at Richards Bay Harbour, the Durban to Pietermaritzburg Corridor Development and mass housing throughout the province."

Looking at particular initiatives launched by AfriSam in KZN, Uys said that it offered various services to its customers, "including mix optimisation using our high performing cement as well as providing on-site training on aggregate and concrete sampling and concrete cube making procedures." The KZN Provincial Development Plan aims to make the province the 'Gateway to Africa and the world' by 2030.

A pioneer of product and application

How East African operators are benefitting from one man's experience in equipment manufacturing and application

Meet David Whiston, JCB's man on the ground in Africa, and an ambassador for best practice at every level or stage of the construction industry. Over three decades' employment at JCB, David has developed personal experience or knowledge of construction equipment at every level. African Review interviewed Mr Whiston recently, to gain insights into the construction industry from the perspective of this key equipment manufacturer.

The JCB DNA, that consists of an innovative spirit and a passion for quality, runs through David Whiston. He has worked on the factory floor, within service teams, in sales and distribution, and on construction sites. He has worked within teams and has led the way. And he has worked across continents, developing JCB's business in Europe, the Americas and most recently in Africa. The first thing he told African Review is that, consistently, he has been guided by the company's pursuit of quality and innovation to benefit its customers. He said, "The reason why JCB is a success is because we listen to what customers say, and we do everything we can to put that feedback into our plans and our products."

Experience and application

Mr Whiston began his career at JCB as a research apprentice - learning the considerations affecting design, development and manufacture of construction equipment. He became, then, a demonstrator, gaining advanced knowledge of both JCB products and of competitor products, as they are used around the globe. Eventually, he applied his knowledge of JCB's product manufacture and application to JCB's regional and national sales forces, helping build the company's presence in Spain, Brazil, Mexico and Portugal before reaching Africa. Today, Mr Whiston is JCB's regional sales manager for East Africa. He directs and oversees the day-to-day business of dealers throughout the region - in countries as diverse as Kenya and Sudan.

He is widely regarded within the company in the industry as a pioneer. He has opened up markets and generated sales opportunities for sales teams. The key to his success rests not only with his comprehensive experience, but also how he uses that experience to ensure operators of the company's equipment benefit fully from use. He knows that customers need to understand their product and any possible applications. He knows that operators need staff to be trained. He knows that product knowledge, business acumen and knowledge-sharing are essential components in successful relationship management.

The JCB 1CXT, a tracked backhoe with 'go anywhere' performance

And the human touch goes a long way. As he puts it, to do his job to his satisfaction, to serve his markets well, he must engage with operators where they work, and speak in a language they understand. Not only does that mean using vocabulary familiar to operators, when discussing machine use. To David Whiston, it also means conversing in Spanish, Portuguese or French; he has learned each language specifically to bring him closer to his customers. He said, "You have to be personal in this business. People think that earth-moving equipment is massive industry, a global market, but it's not. Realistically, when you get into each country, it is a very small, close-knit community. Everybody knows everybody else."

Of service to African enterprise

David Whiston stresses that success lies in selling what customers need rather than what they want. He has seen many

The 1CXT gives operators the option of running on tracks for reduced ground damage, superlative climbing, exceptional pushing power, unparallelled stability and improved soft ground performance

examples of companies being sold the wrong piece of equipment for a particular operation or application.

He said, "If you sell a customer what he wants, then you are liable to wasting his money and his time. I have seen so many people around Africa who sell on the basis of opportunity, and solely on product, and not on the needs of the operator - and that's wrong. It slows business. It breaks down the confidence the customer has in the market. That's why, at JCB, we approach customers by building confidence in our product but also by building confidence in JCB as a partner. When I speak to a customer in Africa, I'll tell them that I don't want them to be my customer, but I do want us to partners in success. Their success is our success."

In many parts of Africa, longevity is key to good business relations. In construction, after-sales service often matters even more than the original product sale. Speaking to African Review, David Whiston was emphatic on this point. He said, "You have to remember that the most important thing about earthmoving equipment wherever you are in the world is not the salesman. He will sell the first machine. However, the mechanic will sell every machine afterwards. Your after-sales service, and your response to problems, are crucial."

He learned, doing business in Europe and in Latin America, the necessity of building in service to the sale. He brings to Africa an understanding of the importance of making sure that when a customer is buying equipment, he can guarantee that the transport links are in place, the teams are ready and able to serve the customer, by addressing any issues with any equipment sold, in any application. The key here is to understand the challenges the customer faces. As he put it, a customer might have a 45-tonne vehicle in Mombasa, which he needs to bring to work on a site half-way along the road to Nairobi. So, as that company's partner, it is necessary to know what it takes to move that machine to site from port - and what it takes to ensure service, if required, when it gets there.

In this sense, he empowers JCB's dealers in East Africa to extend full local support to customers. The relationship between customers and dealers is critical to the ongoing success of JCB's partnerships across the continent, as around the world. Mr Whiston said, "I work with the dealers, because the dealers are a reflection of JCB. Customers will not be speaking to me. They are speaking to our dealer in Nairobi, or our dealer in Khartoum. The dealers feed back to me the issues they have encountered, the support they have provided, what they have seen work and not work on site - and we introduce that into JCB's DNA, feeding those experiences in to product development, so that we are continuously innovating with our products and ensuring comprehensive service for our partners." ■

Emeralds are the greenest investment

Kagem Mining Limited expands the production of its haulage fleet with Cat 730C articulated trucks, unlocking the value of its opencast operations

Latest generation Cat 730C articulated trucks being loaded by a Cat 336D L hydraulic excavator at Libwente, Kagem's newest pit, which has a targeted final depth of 60-80m according to the geological survey

The world's largest producer of ethically sourced coloured gemstones, Gemfields Plc has captured the attention of investors and jewellery manufacturers worldwide with its innovative marketing strategies and with the introduction of a reference grading system for emeralds according to colour, size and clarity. For the first time in the industry, an auction platform with graded parcels of emeralds, coupled to a healthy demand, has led to Gemfields achieving record auction results.

Primary production tools

Emeralds are being sourced from Gemfields' Kagem mine in Zambia, an operation covering a licence area of approximately 43km^2, situated some 65km south from Kitwe, the main centre in the country's Copperbelt Province.

A variety of the mineral beryl, emeralds derive their distinctive colour chiefly from the trace element, chromium. Considered one of the rarest gemstones, their mineralisation can only occur when two different rock types with contrasting characteristics come into contact with one another under unique conditions. For Zambian emeralds, it was the specific combination of the 1.5bn-year-old high grade metamorphic rock named the Talc Magnetite Schist (TMS) and the younger 500mn year old intruding pegmatite. The contact zone, known as the reaction zone, is where the emeralds have crystallised.

Chama is the main pit and revenue earner at Kagem Mining Limited. However, Kagem runs two other opencast operations - the Fibolele pit, established almost three years ago, and Libwente, which is the most recent development to come on stream and is currently at the bulk sampling stage. Across all operations, it deploys a dedicated Cat earthmoving fleet to meet its production and waste stripping programmes. Recent acquisitions by the company include a fleet of 28 tonne payload Cat 730C articulated trucks, supplied and supported by Barloworld Equipment Zambia.

The Cat 730Cs are used for production, with Kagem's larger 39.5 tonne payload Cat 740Bs deployed for waste haulage. Production mining takes place during daylight hours only, whilst waste stripping is ongoing 24/7, with Cat 374D L hydraulic excavators deployed as the primary loading tool. A portion of the load and haul waste stripping programme is out-sourced to a contractor.

Mining methods for pit viability
Combined, the scale of the operation across the three pits is large. In an average month, some 900,000 tonnes of waste rock will be moved, of which between 7,000 and 8,000 tonnes will be sent to the washing plant for potential emerald recoveries. There are high production costs to be sustained in the discovery and processing of these rare gemstones.

The pit depth at Chama is now down to around 110m from surface, with a west to east strike length of approximately 900m

"For every one gram of beryl we have to move one tonne of rock. And of that one gram of beryl only 10 per cent constitutes of our premium grade," explained Robert Gessner, senior manager: geology for Kagem Mining Limited. "The key to our planning in the various pits is that we have emerald bearing contact areas, or reaction zones, available at all times, which requires precise pre-production planning."

As reported in Gemfields' financial results for the six months ending 31st December 2013, the average grade at Kagem was 267 carats per tonne, with total production for the period of 10.4mn carats of emeralds and beryl.

At Chama, a strip and fill mining methodology is used - stripping the high wall and filling the footwall. According to Kagem, this practice entails optimum efficiencies for subsequent face advancements and new bench layouts. Both being waste materials, TMS and pegmatite are removed by blasting and mechanised mining. All the top soil is transported via articulated trucks to dumps on the mine boundary and are brought back during the final rehabilitation phase. The footprint of the mine and dump area is approximately 4km^2.

The pit depth at Chama is now down to around 110m from surface, with a west to east strike length of approximately 900m.

Ongoing work
In the meantime, as work continues from surface, an underground project is also ongoing at Chama. This pilot programme that has been running for more than five years with the intention of determining the best mining approach and future viability of tapping into emerald bearing contact areas that extend down to at least another 2km from the current depth.

So far, some 950m has been tunnelled and supported and around 16,000 tonnes of rock removed.

"Kagem is the first company in the Zambian emerald sector to mine underground on this scale, and the results so far are very encouraging," Gessner said.

Work at Libwente, Kagem's newest pit, is also looking promising, with a targeted final depth of between 60 and 80 metres envisaged according to the geological survey. The presence of TMS with pegmatite at shallower depths will also result in lower stripping volumes, passing on operational savings, and here Kagem's new Cat 730C trucks are helping to drive down the cost per tonne.

Srinivasan Ramachandran, head of engineering at Kagem, is responsible for managing the overall maintenance of the mine's 160-strong plant, light and HEMM equipment fleet, of which around 60 are Cat earthmoving units. He said, "The performance output to date on our new Cat 730C trucks has been excellent, and they are an optimal loading match with our recently acquired Cat 336D L hydraulic excavators."

Caterpillar's new Cat 730C articulated truck features a new, more powerful engine, an advanced transmission, plus automatic traction control. The truck's 274kW Cat C13 ACERT engine delivers nearly 16 percent more gross power, and a 30 per cent gross torque improvement when compared to the previous generation model.

On the C-Series, the Cat 6F/1R power-shift transmission, which electronically modulates clutch engagement pressures for smooth, positive shifts, now also incorporates Caterpillar Advanced Productivity Electronic Control Strategy (APECS). The APECS system improves acceleration, maintains torque converter lock-up (and ground speed) during critical shifts, increases rimpull, provides automatic speed-holding, modifies shift points to match operating conditions (for increased fuel economy), and automatically reduces retarding forces on lesser grades in lower gears.

The overall net benefits are optimum productivity and truck control, which is proving beneficial as the machines move in and out of the various in-pit operations.

Going forward, Kagem has a five year mine plan in place, with a major focus on exploration within its licence area. ■

Visual cues for workplace

KBC Health and Safety demonstrates essential safety practices, if taught to miners in an engaging and interactive manner, can be more effective

A new-and-improved basic safety training programme ensures that employees along all levels of an organisation are fully aware of, and understand, the importance of adhering to internationally recognised OHSAS 18001 standards.

KBC Health and Safety continues to revolutionise the concept of workplace safety, through the development of a first-of-its-kind video-based safety training that interactively explains basic health and safety principles in the workplace, while covering OHSAS 18001 standards.

Visual cues

KBC innovation manager Natalie Pitout revealed that a video-led presentation is more inviting and easily understandable for trainees, when compared to the standard slide-based presentation. "The video is more visually-appealing, and provides a more hands-on approach to safety training. What's more, it can be paused at any time to encourage regular interaction and participation," she explained.

In order to make the training as engaging and user-friendly as possible, the fully-narrated training video focuses on a day in the life of the protagonist 'Joe', and KBC trainers use a spaza shop analogy to introduce the 12 OHSAS 18001 standards to the learners in basic language, as many people in this target audience do not have matric.

"At the end of the one-day course, learners will be able to describe OHSAS 18001 standards, explain employer and employee duties with regard to occupational safety and health in the workplace, and explain the general safety rules in the workplace. What's more, they will understand the use and application of personal protective equipment in the workplace, the importance of good housekeeping, as well as the application of emergency procedures in the workplace," said Pitout.

A model for practice

The KBC basic safety training course also features an organisational model for continuous improvement, which is made up of four sections — plan, do, check and act. Pitout added, "The 12 OHSAS 18001 standards are introduced to the learners, and explained in more detail by demonstrating how they all fit in to the running of the spaza shop."

Plan: As part of the planning section, a company must know what it wants to achieve, who will be responsible, how will goals will be achieved, and how success will be measured. The goal is to achieve no harm. The company must also decide how to measure performance, and how to handle all emergencies. Finally, a plan for changes in the workplace and law must also be considered.

Do: A company must subsequently identify its risk profile and assess these risks, before identifying what could cause harm in the workplace, who it could harm, and what to do to manage the risk. The company should aim to involve all employees in communication, so that everyone is clear on what is required of them. This leads to the development of positive attitudes and behaviours.

Check: It is essential that performance is constantly measured, by making sure that plans have been adhered to. The company should also measure how well the risks are being controlled and if objectives are being achieved. Any incidents or near misses should be thoroughly investigated.

Act: In the final part of the cycle, the company must review its performance, learn from past mistakes and take the correct safety actions. Plans, policy documents and risk assessments should be updated. By embracing change, the cycle will continue to ensure continuous improvement.

Responding to demand

Since launching this basic safety training course in May 2014, KBC has received an overwhelmingly positive response from customers.

Pitout said, "Mining companies form the bulk of our client base, and they have displayed their satisfaction in the new layout of the training programme, which serves as a value-added offering in a constantly changing environment."

Confident of future success, the manager said that given the success of the programme in the mining sector, that there is a strong possibility for growth in this market. "The construction industry also holds enormous potential, and we are placing a strong focus on penetrating this burgeoning market through the development of tailor-made solutions to suit each specific client," she noted.

Since launching this basic safety training course in May 2014, KBC has received an overwhelmingly positive response from customers

'Work smart' for efficient project output

Management discipline, including software, will help a long way for execution of projects in Africa, SNC-Lavalin opines

A smart and accurate work breakdown structure, budget and schedule can cut five to 10 per cent off a project's final installed cost because key performance criteria can be simply and effectively tracked and controlled, according to John Dixon, project manager at SNC-Lavalin.

The engineering and construction company offers experience and know-how to help mining clients in Africa remain competitive by implementing latest project management and control methodologies and software.

SNC-Lavalin has already carried out various studies and executed projects in the iron ore, copper, gold and rare earth market sectors. Dixon said that one of the challenges facing projects in Africa that some of the players are not really convinced of the advantages of the project management discipline, and its criticality in effectively managing risk and opportunity on their projects,.

He, however, warned against the misperception 'that too much money is being spent on project management and controls'.

"I think that is false economy. Certainly everyone is moving towards 'leaner and meaner'. However, what you can save by cutting back on project management and controls is minuscule in the context of the entire project," the executive noted.

A major challenge looming over is educating operational management within the mining industry as to the benefits of project management and controls. "There is a great deal of work to be done in upfront planning and structuring of a project so as to render it eminently controllable. Operational focus is often more immediate and situation driven, whereas project focus tends towards consideration of a wider set of success criteria in a somewhat more measured and structured approach."

He said that more was being expected a lot faster, and the engineering project houses have to continually streamline their approach to execution within the constraints of established workflow processes and discipline.

Despite shortcomings, the fundamentals of mining projects in Africa, in general, remain lucrative

"Leveraging low-cost procurement and high-value engineering centres to support optimal and cost-effective delivery of projects are two of SNC-Lavalin's strengths in that regard," Dixon added.

Another area of concern is the level of appreciation for multi-disciplined peer reviews, engineering verification and professional sign-off on designs prior to implementation and after construction.

"Within SNC-Lavalin, project managers have a corporate responsibility to formally attest on a regular basis that this is actually taking place within their projects and raise alerts and propose remedial action when deviations occur. Often the appreciation for such discipline at the coal face is low, being perceived as restrictive or even counterproductive. It is one of the important roles of the project manager to ensure that the key players on the client's team are appropriately educated in this regard."

He pointed out that supply chain management and logistics in Africa do not present insurmountable problems. "It needs to be dealt with early on in the study phase by tailoring design to avoid having to transport large complex items that can be easily damaged. We look at engineering for simplicity of construction, which often means modularisation and containerisation. Bolting components together, rather than on-site welding, can materially reduce construction time and cost."

Looking to the future, Dixon is of the opinion that the mining industry in Africa continues to offer opportunities. "I think that while this year we will still have to tough it out as an industry, particularly in South Africa, the fundamentals of mining projects in Africa, in general, remain lucrative and we have pretty much graduated from the school of managing the risks in the challenging environments in which they are developing. We have a high degree of flexibility, creativity and tenacity that we can bring to bear in the delivery of effective project management solutions in Africa." ■

Solutions for better mining

BSPH Kundalila specialises in materials handling, crushing and screening, loading and hauling, rehabilitation and other turnkey solutions. It has over 320 items of earthmoving equipment in its fleet and is the largest owner of Cat 950H front end loaders in Africa, Asia, Australia and South America.

The firm is now looking to work 'smart'

"We want to do quite a lot more mineral processing and try and get into more 'smart' work. Turnkey solutions provide a unique opportunity in this regard as it is less volume work but with higher margins," said Jeremy Petter-Bowyer, MD of SPH Kundalila.

Established in 1969 as Saldanha Plant Hire for general plant hire and exploration drilling and later to mine limestone for Anglo Alpha near Saldanha in the Western Cape, SPH Kundalila has continued to expand its service offering and geographic base in the region.

The firm operates various crushers in South Africa, ranging from jaw to cone and Vertical Shaft Impact (VSI) crushers. For example, it crushes up to 350,000 tonnes of ore a month for Pilanesburg Platinum by means of a 57 t Metso L120 crusher and a 106 tonne Sandvik Crawlmaster with a capacity of 750 tonne per hour. In addition, SPH Kundalila has also partnered with sister companies and dedicated suppliers to design, construct and operate fixed crushing and screening plants.

Another focus area for the company is loading, hauling and materials handling.

According to Petter-Bowyer, the company prioritises and ensures the safety of their clients' reefs by fitting tracking devices to the majority of the vehicles so they can be monitored constantly from a centralised control room. "At West Driefontein Gold Mine in Carletonville, we have specifically modified a Cat 980H wheel loader with a control master tele-remote unit. This remote loader is able to retrieve valuable raw material from a dangerous site not accessible to humans due to a risk of sinkholes. This is believed to be the first remotely controlled wheel loader ever to be deployed on a surface application in Africa."

Another value-added service offered is site rehabilitation, which is currently in high demand in the South African mining industry. "We recognise the ever increasing importance of minimising the impact on all aspects of the environment and are committed to complying with the latest legislation in this regard. Our achievements include the successful rehabilitation of part of GoldFields' South Deep Gold Mine as well as some of Driefontein's rock dumps," the MD noted. ■

Materials Handling

Higher holding capacity with the Magni HTH

Ranging from 10t up to 45t capacity, **Magni** categorises its HTH range in four main families:

The HTH 10.10 and HTH 16.10 are the most compact models of the range,. Equipped with **Mercedes-Benz** engines with 156hp, the have hydrostatic Bosh Rexroth transmission (two speeds forward - reverse) four wheel drive, and four wheel steering. These machines are very suitable for the heavy industry, recycling and waste disposal, since they can equip a multitude of attachments which makes them very polyvalent. They are also very good for rental fleet since they match a very good compromise between price and performances.

The HTH 23.11 and HTH 27.11 models are also equipped with Mercedes-Benz engines, with 204hp and a **Bosch Rexroth** hydrostatic transmission, four wheel drive and four wheel steering. The best applications for these models are heavy industry, oil and gas, and mining. Thanks to the wide range of attachments, they can handle and place pipelines for crude petroleum with special clamp, pull and place segments for conveyor belts systems with a pin hook or make maintenance on big mining machines with wheel and cylinder clamps.

The HTH30.12 and HTH 35.12 are the best selling models in mining. The two biggest buyers are **BHP Billiton** and **1st Quantum Minerals.** These models have a special Bosch Rexroth transmission, which is hydrostatic with a fully automatic shifting gear box (developed by **DANA**). The thermic engine is a Mercedes-

Benx with 320hp from six-cylinders. The hydraulic circuit is load-sensing and 350 bar working pressure to ensure the best possible lifting performances.

The HTH 45.14 is the biggest rough terrain telescopic handler in the world, it is equipped with the same transmission and engine as the 30 and 35 ton models and, as all the other models of the range, has the possibility of levelling +/- 5° on each side. The best applications of this machine are heavy industry, mining and oil and gas.

Why LIFTUBE lifts profits by protecting belts

The LIFTUBE is an efficient solution developed by **SISA INDUSTRY** in order to optimise the sealing and safety of conveyor belts. This patented system ensures significant reductions in dust emission and spillage, while improving maintenance service and the safety of workers. The LIFTUBE is designed for belts up to 1,400mm wide. It can carry material up to 300°C with particles up to 500mm.

The LIFTUBE has a numerous benefits:

Modular: Standard, adaptable and progressive elements on new or existing conveyors/Installation on all or part of the conveyor. Compatible with reversible belt.

Quality: No contamination of the material.

Safety: A complete protection for pinch

points, avoiding physical contact with the band. Moreover, the reduction of dust emission improves the health, safety and working conditions of the workers.

Environment: Reduction and channelling of dust emissions at the transfer points, compliant with the ISO 140001 environmental management standard.

Maintenance: Thanks to the tilting glide boards, the belt can be accessed easily and quickly for maintenance purposes. The idlers brackets also simply the replacement or maintenance of idlers.

Payback (or profitability or cost efficiency): Thanks to the improved maintenance access and its enclosed design, the LIFTUBE is very cost efficient, allowing a quick return on investment while reducing production losses. Moreover, it does not require major modification of the existing conveyor design.

Option: ATEX/Food Grade/Fire Auto-extinguishing.

www.standard-industrie.com

Materials Handling

A new level of performance in Bobcat's telehandler portfolio

Bobcat's manufacturing facility in Pontchâteau, France, has produced over 80,000 telescopic handlers over five decades A quarter of that production run has emerged from the plant since it was acquired by **Ingersoll-Rand**, now a **Doosan** subsidiary company, in 2000. Almost 1,400 machines were sold in 2014 alone. According to Laurent Gicquel, Bobcat plant manager at the site, seven machines a day are built at the site.

Three-quarters of Pontchâteau's telehandlers have been made for customers in Europe, the Middle East and Africa (EMEA). Just over half the machines are sold to agricultural operators, with the remaining telehandlers going to construction companies.

There is a new portfolio of products emerging from Pontchâteau - the T35105, T350105L and T36120SL. The working environment in these machines is both comfortable and well-equipped, with features such as a large digital display, refinements to the joystick, and a semi-automatic wheel alignment empowering the customer or operator to produce higher quality work than before.

Cab visibility has been increased for the new telehandlers, as a consequence of a new box-welded frame design. The frame itself is reinforced, with shielded bottom plate to protect components. The rear lights are also protected, and are fully integrated into the counterweight.

Bobcat has sourced its engines for African markets from **Deutz** to ensure optimal performance. The goal for Bobcat was, according to Olivier Traccucci, Bobcat's global senior product manager for telescopics, "how to make the best even better, how to increase precision an smoothness of transmission".

Alongside Mr Traccucci at a recent presentation at the Pontchâteau facility, Bobcat France product line director Xavier Larroque, the T36120SL - a 12m compact telescopic handler - offers new levels of performance and comfort, with a spacious and ergonomic cab design and the introduction of hydrostatic transmission with forward/neutral/reverse (FNR) control on the joystick. Active diagnostics combined with a new boom and frame structure translate into superior performance as compared to other middle lift models in the market.

Like the T36120SL, T35105 and T35105L feature a panoramic cab, with a large curved windscreen to ensure comprehensive visibility when handling loads at reach and at height. In all three models, the cab is configured with a new dashboard with digital display and ergonomic controls including a joystick with integrated forward/reverse control.

Precision and speed are attributes - and the design of Bobcat's frame-levelling system is as important as the engines which power the range. Frame-levelling uses the front oscillating axle, piloted by a hydraulic ram, as a conventional frame-levelling device, at +/- 6°up to 50° boom angle, and +/- 2°above 50° boom angle.

The T36120SL, T35105 and T35105L are inherently stable designs - so, the hydraulic ram, proportionally controlled, can be useful to side-shift, whatever the boom angle. These telehandlers can travel as fast as 30km/h, but operators can also switch to an inching function for accurate positioning. One key distinction in the range is the incorporation of both stabilisers and the frame-levelling system in T36120SL, whereas the T35105L features the frame-levelling system alone. All three models are fitted with a 1.12m-wide foldable pallet forks carriage, and 1,200mm pallet forks. A notable safety feature is the aggravating movements arrestor (AMA) system fitted as standard, which cuts off all aggravating movements, regardless of the attachment or the type of load.

Concrete

Vortex Hydra continues to succeed in Africa

For many years, **Vortex Hydra srl** of Italy has been supplying concrete roof tile manufacturing plants throughout Africa as the continent has sought to produce high-quality building products and to initiate and promote local industry. The numerous plants supplied range from low output 'start-up' size plants for entrepreneurs and small family businesses who are looking to set up a new business in the roof tile manufacturing industry through to the fully automatic high volume plants used by large multi-national type companies.

Yet again, Vortex Hydra have the satisfaction in announcing the successful installation and commissioning of a new fully automatic roof tile manufacturing plant in Africa following several months of discussion with a new customer, Turnall's of Zimbabwe.


A house tiled with Vortex Hydra technology

Turnall's have been operating since 1943 and are a market leader in the quality manufacture of fibre cement type roofing, sheeting and piping products in Southern Africa.


Turnall and Vortex engineers assembled at the Turnall factory

The management of Turnall decided to diverse by adding high quality concrete roof tiles to their extensive range of building products. The production plant consists of:

- Automatic batching and mixing plant.
- Automatic production line including extrusion machine to produce two different tile profiles.
- Automatic 'Rotary Rack' for automatic warm air curing of the tiles together with automated racker/deracker.
- Automatic packing system for forming tile packs through to palletisation.
- Production line for ridge, rake and other special trim tiles for roof finishing.

The installation and commissioning of the plant progressed very smoothly to the mutual satisfaction of both Turnalls and Vortex thanks to the high standard of professional assistance provided by the Turnall technicians and the specialist expertise of the Vortex team of senior commissioning engineers assigned to the project.

Atlas Copco offers MEYCO Versa

Specialists in concrete spraying equipment at **Atlas Copco** have developed a new MEYCO mobile spraying unit designed for highly efficient shotcreting of mid-size tunnels. This unit, called MEYCO Versa, is the first Atlas Copco branded product to be launched on the market since the company acquired MEYCO in 2013. The new mobile unit is designed to meet the present and future concrete spraying (shotcreting) needs of mid-size tunnel in hydro-power, road and rail projects.


MEYCO Versa, the new mobile concrete spraying unit from AtlasCopco, dedicated to mid-size tunnel profiles

The future of financial self-service

Joerg Engelhardt is VP, global product management, at financial security and services firm **Diebold**. He spoke, recently, of the design, efficiency and reliability of the company's 5500 Series cash-dispensing terminal.

"This is all about purposeful innovation," he said. "We have been doing a lot of research to examine changing needs, changing demands."

The key is the capability of a footprint optimised multi-location design. There is consumer-driven, vibrant colour selection. There is a 15" multi-touch screen. And it is mobile-ready - so it can scan bar codes, it is enabled for near field communication (NFC), and it has a two-way video capability for interactive consumer engagement and support, and for marketing campaigns for the financial institutions deploying these units. It doesn't matter where it sits. We are addressing the cost of ownership, and facilitating consumers."

Diebold has focused strongly on emerging markets, where power consumption is at a premium. It has reduced power consumption by 60 per cent, and has increased uptime by 40 per cent.

Security is probably the biggest concern to be addressed these days. The new terminals have the Diebold ActivEdge secure card reader to combat these concerns. External skimming is no longer possible, and internal skimming is prevented by new encryption technology, right through from the read-head to the CPU. To ensure that there is no external intervention, the CPU must be paired with maintenance devices, too.

Mr Engelhardt is bullish about the terminal's prospects for emerging markets, as much as for more established financial territories. Diebold has deployed a live unit already in the USA, and discussions are currently underway with banks in Eastern and Southern Africa for deployment in a number of key markets.

"There is no geography that you can exclude with this terminal," he said.

Diebold introduces its 5500 Series cash dispensers, which enable banks to operate more securely and more efficiently

Advertiser's Index