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December/January 2016

African Review

of BUSINESS and TECHNOLOGY

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Editor's Note

This issue of African Review of Business and Technology offers insights into business and finance, security, power, manufacturing and construction, and mining. From page 18 to page 23, this issue analyses Nigeria's food security situation, appraises HR tools for the Nigerian businesses, and reports on the governance of Ghanaian investment. Included also, from pages 24 to 31, are articles on Chinese investment into African economies, including specific analysis from Djibouti's Minister of Finance, and analysis of Nigerian accounting. Pages 32 to 35 include features on information governance and IT service provision, and on surveillance. From page 36 to page 39, this issue reports on solar power boxes in South Africa, on grid electricity for remote communities, and on the five decades of standby power support delivered by F G Wilson. Pages 40 through to 46 report on the marketability of precast concrete, block and brick-making for 'smart' buildings, concrete batching plants, the relationship between energy and architecture, the recent improvements made to a healthcare facilities on South Africa's Western Cape, and guidance on safe scaffolding. From page 48 to page 51, there are overviews of project management for mineral extraction, sustainable gold mining in Ghana, software for mine planning, and training for mine health and safety.

Andrew Croft, Editor

Cover picture: DW art
Inset, bottom left: Government of Djibouti

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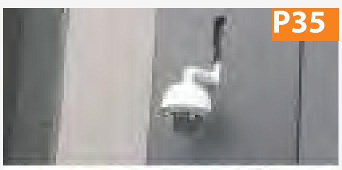

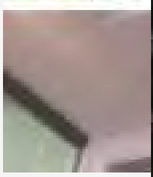

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Agenda / North

Lekela Power signs MoU for Egypitna wind power station

Renewable energy enterprise **Lekela Power** has signed a memorandum of understanding (MoU) with the **Egyptian Electricity Transmission Company** for a 250MW wind power station in Egypt's Gulf of Suez area. Lekela Power is owned 60 per cent by the investment firm Actis and 40 per cent by the wind and solar company Mainstream Renewable Power. This latest power station is Lekela Power's third project in Egypt following two power stations signed earlier this year (one 50MW solar power station and one 50MW wind power station). It will be situated in the Gulf of Suez area to capitalise on Egypt's unique wind resources and will be managed with a build, own and operate (BOO) framework.

Equipping Somit's dredging operations in Casabanca

A project is currently under way to construct a new, larger fishing port in Casablanca, Morocco. For dredging operations, subcontractor **Somit** is using a dredger carrying an excavator equipped with an **Atlas Copco** HB 7000 hydraulic breaker. To ensure reliable operation of the attachment underwater, Atlas Copco has supplied a comprehensive package comprising the breaker, a compressor, and an underwater connector kit.

The construction of the new fishing port involves extensive dredging of the channel and the basins and the main contractor has subcontracted the dredging and marine works to Somit, an Italian company. The primary equipment used by Somit is Bucephalus, a self-propelled backhoe dredger equipped with a Liebherr R 984.

Underwater breaking

Seeking a suitable breaker to mount on the Liebherr excavator, Somit consulted Atlas Copco. Taking into account the working depth of 5–18m, Atlas Copco recommended an HB 7000 hydraulic breaker with an underwater kit. Compressed air is provided by an XAHS 347 Cd compressor, also mounted on the dredger.

The equipment was supplied as a complete package and the installation of compressed air lines for the underwater kit on the Liebherr excavator was tested successfully and went into operation.

Atlas Copco Marocco sales engineer Mustapha El Idrissi explained, "Underwater breaking requires a special installation. The compressor and kit are mandatory to avoid serious damages.

"The underwater connector kit, with protective equipment, feeds compressed air from the compressor to the breaker's percussion chamber. This prevents water entering the attachment and avoids problems of 'water hammer'. An automatic switch prevents the breaker from being started up without ventilation."

Morocco's national ports authority (ANP) appointed Dumez Maroc, part of VINCI Construction, as the main contractor for the construction of Casablanca's new fishing port. Begun in February 2015 with completion scheduled for January 2017, the new port will provide more than twice the surface area compared to the existing facility.

In addition to the dredging, the project involves building a main breakwater (715lm), a secondary breakwater (500lm), two quays (325m and 145m), 11 hectares of quayside surfaces, a slipway (70m), and 240m of floating landing stages.

Casablanca Harbour

Sphinx Glass investment boosts Egypt's industry

World Bank Group member institution **IFC** is investing in a 20 per cent equity stake in Egypt-based **Sphinx Glass**, to boost the glass manufacturing sector in the region, support the company's expansion, and spur job creation and growth.

Sphinx Glass is a subsidiary of Saudi-based **Construction Products Holding Company (CPC).** The IFC investment enables Sphinx Glass to optimise production, improve its energy efficiency and create more jobs, as well as boost the development of Egypt's industrial infrastructure. The company is a key supplier of float glass to Egypt's construction sector, and a significant regional and international exporter.

Mu'taz Sawwaf, vice chairman of CPC said, "IFC will play a strong role as an equity partner helping a regional player in its expansion plans in Egypt. We aim to build a long term relationship with IFC, as we continue to execute on our international expansion strategy, capitalizing on increasing demand for building materials and glass in Egypt and Africa."

The investment is part of World Bank Group strategy in Egypt to boost job creation through the manufacturing sector and promote energy efficiency improvement initiatives. It will also strengthen regional integration through a South-South investment, a key pillar of IFC's strategy in the Middle East and North Africa.

Nada Shousha, IFC country manager for Egypt, Libya and Yemen, said, "Creating new jobs and strengthening the manufacturing sector, particularly in an area that can boost exports, is vital in this period of transition for Egypt. We hope this investment will also help restore investor confidence in the country, and send a positive message to international and domestic investors."

Between fiscal years 2011 and 2015, IFC's investments in Egypt totaled close to US$1.2bn, including mobilization. Those investments covered 18 projects across a host of sectors, including financial markets, infrastructure, oil and gas, agribusiness, manufacturing, and health care.

Agenda / East

Green revolution means innovation for rural Rwandan shareholders

Under contemporary constraints, the mechanisms for achieving improvements in the lives of smallholder farmers through 'green' policies are unclear. Both policy rationale and the means of governing agricultural innovation are crucial for pro-poor impacts. Researchers at the **University of East Anglia (UEA)** in the UK have set out to critically analyse Rwanda's 'Green Revolution' policies and impacts from a local perspective, a mixed methods, multidimensional wellbeing approach is applied in rural areas in mountainous western Rwanda.

The British researchers, led by ed by Dr Neil Dawson, a senior research associate in the School of International Development at UEA, established that the policies involve a substantial transformation for rural farmers from a traditional polyculture system supporting subsistence and local trade to the adoption of modern seed varieties, inputs, and credit in order to specialise in marketable crops and achieve increased production and income. Although policies have been deemed successful in raising yields and conventionally measured poverty rates have fallen over the same period, such trends were found to be quite incongruous with local experiences. Research reveals that only a relatively wealthy minority were able to adhere to the enforced modernisation and policies appear to be exacerbating landlessness and inequality for poorer rural inhabitants. Negative impacts were evident for the majority of households as subsistence

Rwanda c. (Photo: Neil Dawson_UEA)

practices were disrupted, poverty exacerbated, local systems of knowledge, trade, and labour were impaired, and land tenure security and autonomy were curtailed.

In order to mitigate the effects, the university team recommends that inventive pro-poor forms of tenure and cooperation (none of which preclude improvements to input availability, market linkages, and infrastructure) may provide positive outcomes for rural people, and importantly in Rwanda, for those who have become landless in recent years. Applying analysis to a pan-continental perspective, the researchers conclude that policies promoting a Green Revolution in Sub-Saharan Africa should not all be considered to be pro- poor, but rather should be the subject of rigorous impact assessment including localised impacts on land tenure, agricultural practices, and the well-being of different communities.

Orange agrees to sell stake in Telkom Kenya to HIP

Helios Investment Partners (HIP) has reached agreement with the **Orange Group** on the sale of Orange's entire 70 per cent stake in **Telkom Kenya**. The finalisation of the transaction is subject to approval from the relevant authorities.

Telkom Kenya is the country's incumbent fixed-line operator and is the third player in the mobile market. The company, which operates a high-quality mobile data network, had four million mobile customers (as at end-June 2015).

MAN opens centre for service in Kenya

Nairobi can now boast a new **MAN** and **VW** heavy commercial vehicle servicing facility, situated on the old Mombasa Road that connects the Kenyan capital to the nation's primary port of Mombasa. Owned by industrialist Rajinder Singh Baryan, managing director of **R T East Africa Limited (RTEAL)**, the 9,000 square-metre facility has been built at a cost of over KES250mn (US$2.45mn) and has been custom-designed to allow optimum flexibility for vehicle servicing. It is equipped with two inspection pits, an engine and pump room, a large parts warehouse and expansive office space.

Mr Baryan said, "the facility will bring RTEAL's client service functions together to promote collaboration and address client issues quickly and efficiently. The new facility will also offer after-sales service for MAN trucks with a capability of 12 truck service bays, and carry an extensive inventory of MAN parts."

Robert Clough, head of MAN Sub-Equatorial Africa, added, "MAN has been enjoying steady market share growth in East Africa which is a reflection of the organisation's innovative engines, transmissions, braking systems, remote diagnostic and fuel economy technologies. We believe this new facility is ably equipped to support our East African markets for MAN and VW trucks and buses. With its strategic location, RTEAL's new service centre will undoubtedly assist MAN in maintaining its strong competitive advantage in East Africa."

The new R T East Africa premises


30! years 4MATIC

Agenda / South

India's EXIM Bank supports Bulawayo power station upgrade

Zimbabwean Minister of Finance and Economic Development Patrick Chinamasa has received an US$87mn credit line from India's **Export Import Bank (EXIM Bank)** for the renovation and upgrading of Bulawayo thermal power station.

"The facility is one of the fruits of our accelerated re-engagement with the BRICS countries and pursuance of our Look East Policy," Mr Chinamasa said.

EXIM Bank credit lines extended to date include: upgrading of the Deka pumping station and river water intake system to support cooling at Hwange thermal power station, at US$28.6mn; purchase of vehicles and spares for the Ministry of Tourism and Hospitality Management, at US$49,9mn; and the purchase of mining equipment and spare parts for Hwange Colliery, at US$13.03mn.

Mr Chinamasa said that the upgrading project of the Bulawayo thermal power station is expected to be completed by 2018. It is also expected to contribute an additional 70MW to the country's national grid from the current 30MW.

"The project will consequently assist in reducing the current power deficit, which currently stands at 1,500MW in circumstances of depressed demand," Mr Chinamasa said.

EXIM Bank chairman & managing director Yaduvendra Mathur (right) concluding line of credit agreement for US$87 mn with HE Mr Patrick Anthony Chinamasa [MP], Minister of Finance and Economic Development of Government of Republic of Zimbabwe, in the presence of Piyush Goyal, Hon Minister for Power, Coal, New & Renewable Energy, Government of India

The plant will now replace the existing worn-out and inefficient facility and will introduce more advanced technology to cut down on additional costs. It is also expected to create downstream employment in the coal and transport industry.

Wallace Mawire

Cheetah Cement to set up Namibian operation

Building materials manufacturer **Cheetah Cement** plans to establish a US$30mn manufacturing plant at Otjiwarongo in Namibia's Erongo region. The cement factory, a partnership between **Whale Rock Cement Company** and Chinese partners, would be the second cement producer after Ohorongo Cement.

Cheetah Cement spokesperson Manfred Uxamb said that the company plans to produce 1.5mn tonnes of cement per annum. He said, "Together with our partners, we have performed a comprehensive investigation of the plot, limestone, clay, wasted iron ore, and gypsum which are necessary for this cement plant. And we found that all these resources meet our requirements. However, there are still some issues such as the supply of electricity and water."

In 2005, Whale Rock Cement attempted to enter the Namibian market by selling Cheetah brand cement imported from Brazil. However, this attempt was short-lived in the face of stiff competition from South Africa's **Holcim Cement** (now **AfriSam**).

Konecranes delivers RTG cranes to Maputo

Lifting solutions enterprise **Konecranes** has received an order for six rubber tired gantry (RTG) cranes from **DP World Maputo** in Mozambique. The cranes will be delivered at the end of 2016.

Located on the south-eastern coast of Africa, DP World Maputo is a container shipping gateway to southern Africa's vast economic hinterland. The port plays a major role in linking regional production, mining and commercial hubs to the markets of south-east Asia. The port, which is almost entirely focused on origin and destination throughput, serves as the main shipping terminus for land-locked regions of southern Africa such as Gauteng province, Zimbabwe, Swaziland and Botswana.

The six RTGs on order are 16-wheel RTGs with a lifting capacity of 40 tons, stacking one-over-five containers high and six rows plus truck lane wide. They will be equipped with auto-steering, a driver-assisting feature which keeps the crane on a pre-programmed, straight path, and stack collision prevention, truck anti-lifting and a truck positioning system. The cranes will also be equipped with TruConnect, a remote service that provides 24/7 access to a global network of support centres, offering expertise to help solve problems and reduce downtime.

Mr Junaid Zamir, CEO of DP World Maputo, said, "Container handling equipment is key to operations across our network including Maputo, and we strongly emphasize reliability and efficiency. Local support on the ground is also important for maintaining our assets so that we meet customer expectations. These RTG cranes will add to our capability in this major market."

"Our business continues to grow in Africa. With this RTG delivery to DP World Maputo, we will add southern Africa to our growing presence in Africa. I look forward to forging a long-term, mutually beneficial relationship with DP World Maputo," said Antoine Bosquet, sales director, port cranes, Konecranes.


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Agenda / West

MainOne and Microsoft present data centre solutions

L-R: Ernst & Young IT transformation director Dapo Adewole, MainOne head of technical solutions Damola Solanke, Microsoft Nigeria business group director (cloud & enterprise) Oluyomi Alarape, and Accenture Nigeria MD Niyi Tayo, during the joint business session between the MainOne's data centre subsidiary MDX-i and Microsoft on 'Innovative Business Models' in Lagos

In light of the current economic challenges facing businesses in emerging markets, **MainOne** and **Microsoft** have called for the adoption of data centre colocation and enterprise cloud solutions, stressing benefits that include cost savings and high availability.

Speaking during a presentation at the MainOne/Microsoft Enterprise seminar on deploying 'innovative business models' to achieve improved efficiency with data centre services, MainOne chief executive officer Funke Opeke urged CIOs and other IT decision-makers to take advantage of MDX-i's services, utilising Microsoft's cloud expertise on the Azure platform and the high availability of the MDX-i data centre, owned by MainOne. She noted that Tier III rated MDX-i is the only data centre colocation facility in Nigeria that has received the PCI DSS and ISO 9001 and 27001 certifications, which are critical to ensuring data security for customers.

Ms Opeke said, "Our Cloud Infrastructure as a Services ensures quick provisioning of ICT solutions for businesses, thus improving their time to deploy new applications and services. This affords our customers lower deployment costs and streamlined expenses to enable them focus more on their core business."

Microsoft Nigeria business group director (cloud & enterprise) Oluyomi Alarape said, "MainOne is a member of an elite list of Cloud OS Network partners who deliver Microsoft-validated solutions and geographic specialization. Together, Microsoft and MainOne have partnered to implement an Enterprise ready infrastructure platform in Nigeria that includes Azure-enabled scenarios. You gain the peace of mind knowing that solutions deployed with MainOne are supported by Microsoft, thus minimizing risk and simplifying your move to the cloud with data domiciliation in Nigeria. As trusted advisors, the partners are also available locally to lend their technology expertise to you while providing other services such as connectivity that improve the quality of your solution."

SacOil supports oil in Equatorial Guinea

South African oil and gas company **SacOil** has committted to woring within the consortium of **Taleveras Group**, **Gunvor Group** and the **Strategic Fuel Fund** in developing the Bioko Oil Terminal tank farm in Equatorial Guinea into a massive oil and petroleum products storage facility.

The project, which is spearheaded by the country's **Ministry of Mines, Industry and Energy**, is central to the **Government**'s attempts at making Equatorial Guinea the premier storage location in West and Central Africa, and a major transit point for global oil and gas deliveries.

SacOil is active in upstream, midstream and downstream projects across Africa - including Egypt, the DRC, Malawi, Mozambique, and Botswana.

"The entry of a fourth partner company into the Bioko Oil Terminal project signals the international interest in this facility, which will serve the huge demand for petroleum storage in the Gulf of Guinea region," said Minister of Mines, Industry and Energy HE Gabriel Mbaga Obiang Lima. "Projects such as the Bioko Oil Terminal further reinforce Equatorial Guinea's status as a major African oil and gas actor and a highly attractive investment destination."

SacOil Holdings chief executive officer Dr Thabo Kgogo said, "The project fits well with the company's overall strategy of diversifying the business into midstream and downstream activities."

> "Projects such as the Bioko Oil Terminal further reinforce Equatorial Guinea's status as a major African oil and gas actor and a highly attractive investment destination."

HE Gabriel Mbaga Obiang Lima, Minister of Mines, Industry and Energy, Equatorial Guinea

Events / 2016

February

8-11
Investing In African Mining Indaba
Cape Town, South Africa
www.miningindaba.com

9-11
Water Africa and West Africa Building & Construction
Abuja, Nigeria
www.aceevents.com

11-12
Africa Air Expansion Summit
Accra, Ghana
africa.airportexpansionsummit.com

15-16
Drilling Africa
Cape Town, South Africa
www.iadc.org

16-17
Africa Energy Indaba
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21-22
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Boosting business with improved aviation

Organised by **Lnoppen**, taking place 11-12 February 2016 in Accra, Ghana, the fourth Africa Airport Expansion Summit represents the best opportunities and innovations around the continent's air transport hubs. Over the past few years business activities at African airports have grown from 45 per cent to 80 per cent, and passenger and cargo traffic volumes are growing at a never seen rate.

To accommodate this increase many airports are upgrading; moreover, there are plans to construct at least 40 new airports across the continent. Opportunities for airport contractors, airport equipment suppliers, management services and other products and services are unprecedented. At the 4th Africa Airport Expansion Summit; government officials, investors, civil aviation authorities and airport management groups will discuss with consultants, architects, construction companies, equipment providers and service groups, in order to better explore the market and support the project development. The event's confirmed speakers include Alexanfer Herring, managing director, **Safegate Germany**, chairman of the summit; Bruno Boucher, associate partner, **Luftansa Consulting**; Flora Wakola, chief air traffic control officer, **Kenya Civil Aviation Authority**, and Jean Francois Guitard, director international development, **Aeroports de la Cote d'Azur**, France.

Sponsors of the 4th Africa Airport Expansion Summit include **Cyclone Technology**, **Avlite**, and **IATAS**. Topics to be addressed at the event include:

African Open Sky Policies.

- Optimising airport planning & design to drive revenue, improve security and cost efficiency.
- Airport expansion and development projects from around Africa.
- Promoting public-private partnerships (PPPs) to finance airport expansion and development.
- Achieving low carbon sustainable solutions for airport expansion projects.
- Insights in the future of airport technology.
- A few of the event sponsors' bear particular significance in the market:
- Avlite Systems recently introduced a new ICAO Type A and Type B medium intensity obstruction light (MIOL).
- Cyclone Technology specialises in hard surface cleaning solutions.
- IATAS offers the platforms, solutions, tools and professional services for tomorrow's ATM challenges.

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

Mercedes Benz latest firm to capitalise on Nigerian auto policy

Mercedes Benz will assemble mini buses and ambulances in Nigeria (Photo: Technik Museum Sinsheim und Speyer)

Mercedes Benz is to begin the assembly of mini buses and ambulances in Nigeria in an attempt to draw benefits from the country's automotive policy. The company's managing director in Nigeria, Benson Uwatse, said the country could benefit greatly from its current automotive policy. Uwatse stressed, however, that there remains much to accomplish with the policy, as Nigeria lacks the infrastructure and the ancillary industries required for vehicle assembly.

www.africanreview.com/manufacturing

Toshiba signs MoU geothermal power generation deal with TGDC

Japanese multinational Toshiba Corporation has concluded an MoU with the Tanzania Geothermal Development Company Limited (TGDC) to develop geothermal power in the East African nation.

TDGC is the only organisation in Tanzania with geothermal exploitation rights, according to Toshiba, whose business ranges from geothermal resource development to power plant construction.

Through TDGC's expertise, Toshiba will be expected to develop and provide major equipment, create guidelines for plant operation and management, as well as handle personnel training.

www.africanreview.com/energy-a-power

Air Seychelles to launch non-stop flights to Beijing

Air Seychelles will fly directly from Mahe to Beijing (Photo: Edwin Ieong)

Air Seychelles is set to launch non-stop flights between Mahe and Beijing by January 2016. According to the Seychelles government, this would be the first direct air link between the two countries, following regulatory approvals.

Air Seychelles chairman Joël Morgan said, "The start of this service next year is especially fitting as Seychelles and China will celebrate the 40th anniversary of diplomatic relations established in 1976, and I am confident our friendship will continue to strengthen with this important new air bridge."

www.africanreview.com/transport-a-logistics

France to invest in clean energy projects in Africa

France has revealed its plans to spend "billions of euros" on renewable energy and environmental projects in Africa over the next five years.

At the 2015 Paris Climate Conference – COP21, French President François Hollande said that his government was planning to double its investments in clean energy production, which could include wind farms, solar power and hydro projects.

Though Africa produces considerably lesser number of greenhouse gases, the continent at large is vulnerable to the devastating effects of climate change.

www.africanreview.com/manufacturing

Orange and Engie set to boost African telecom network

Small scale electricity networks will be set up across Africa, according to Engie officials (Photo: Tony Webster)

Orange and Engie have signed two deals to expand the electricity grid and optimise the power supply for the telecom infrastructure across Africa. For the additional supply of power, solar kits and small-scale electricity networks will be set up. The service would be billed to customers through mobile networks, explained officials from Orange.

Engie's expertise in renewable energy production, aggregation and maintenance, in addition to Orange's dominance in the telecom sector, could result in domestic power supply solutions for rural populations. Trials will be conducted that will help companies validate technical solutions, sales and distribution models, as well as the economic feasibility of the project.

www.africanreview.com/energy-a-power

Caterpillar launches virtual training website for technicians

Caterpillar has launched the pilot phase of the Technicians for Africa project, which aims to train those who aspire to become technicians in the heavy equipment sector.

The project is applicable for those living in Nigeria, Mozambique and DR Congo, said Caterpillar. It entails a website that engages participants in virtual training sessions. There are 18 modules that provide technical insights into safety and basic fundamental systems like electrical, hydraulics and powertrain. The website will be available in English, French and Portuguese.

www.africanreview.com/ict

Bulletin / Investment

Zambia government's most significant outreach to UK investors

On 4th November, the **Government of Zambia** came to London, for the 2015 UK-Zambia Trade & Investment Forum: the Zambian government's most significant overseas investment outreach in recent years. Organised by **DMA** and led by Her Honour Madam Inonge Wina, Vice President of the Republic of Zambia & Minister of National Planning, provided a unique opportunity for investors and business leaders to gain in-depth knowledge of Zambia, one of Africa's fastest growing and most stable economies.

With a real GDP growth averaging roughly 6.7 per cent per annum, a rich resource endowment and business-friendly environment, Zambia continues to attract international investors and to entice firms looking to build their African presence through the country's excellent access to markets across Southern Africa. Through the Forum, the Government of Zambia set out its ambitious programme for developing the economy beyond its strong extractives base and for exploiting opportunities in new growth sectors such as agriculture, hydro-power and tourism.


DMA Zambia Forum

Supported by The **Zambian Embassy** in London, **Zambia Investment Development Agency**, **FCO**, **UKTI**, **BCA**, **RSA & British Expertise**, the forum was comprised of both plenary and more targeted sessions. It was specifically designed to highlight the large investment opportunities in Zambia, the rapidly improving infrastructure, the attractive fiscal incentives, the supportive FDI legal framework and the competitive workforce ability. DMA also arranged 1-2-1 meetings to take place in the margins.

"Our government will play its part to create an enabling environment; in which doing business can be made easier and where benefits and incentives can help the private sector to take root and flourish," noted Her Honour Madam Inonge Wina. "We now look to the international community to play an important part – to bring new investment, skills and resources, and to share in the rewards and opportunities for growth."

To initiate vigorous, constructive dialogue between would-be investors and government, Her Honour Madam Inonge Wina, was accompanied by Hon Margaret Mwanakatwe, Minister of Commerce, Trade and Industry as well as the most senior delegation of ministers and officials. Speaking alongside the delegation, CEOs and directors from leading international businesses presented their own investment plans in Zambia, a number of which were translated into deals by the end of the day.

Letshego gains majoity interest in Advans Bank Tanzania

Financial institution **Letshego Holdings Limited**, which runs consumer, micro lending and deposit-taking subsidiaries across Southern and East Africa, has acquired a 75 per cent stake in **Advans Bank Tanzania** by way of a subscription for new shares; the subscription of Tanzania Shillings 15.5bn (approximately US$7mn) is positioned alongside existing shareholders **Advans SA** and **FMO**, which will continue to provide on-going governance and oversight.

Angola's new airport to be operational in 2017

A new international airport in Luanda, Angola, is expected to become operational in the first half of 2017, according to Angolan Minister of Transport Augusto Tomás, ultimately serving some 15mn passengers per year; construction of the airport, costing US$3.8bn, has been contracted to **China International Fund Limited (CI)**.

Sandvik expands Zambian support centre

Mining equipment company **Sandvik** has invested in additional support facilities in Zambia that include administrative offices, workshops, parts distribution and logistics centres, with advanced equipment and tooling, along with globally accepted management systems, are also in place to ensure services and support that is comparable to other Sandvik centres across the globe; Steve Chambers, Sandvik technical and workshop manager for central Africa, said, "With a significant amount of stock and spares parts and a complement of specially trained staff able to maintain and support our full range of machines there is no need to look elsewhere."


Assembling of a DANA CL9000 torque converter used in the Sandvik TH540 dump truck for a customer

Bulletin / Investment

CIF endorses Ugandan renewable energy plans

The **Government of Uganda** has welcomed endorsement of its renewable energy investment plans under the dedicated fund for Scaling Up Renewable Energy in Low Income Countries Program (SREP) established by the **Climate Investment Funds (CIF)**, with SREP funding of US$50mn now available to help advance geothermal exploration, solar photovoltaic net metering, the building of mini-grids and the development of wind power in the East African country; James Baanabe, Uganda's Commissioner of the Energy Efficiency and Conservation Department in the **Ministry of Energy and Mineral Development**, said, "Energy is the driver of social economic development so adequate and reliable renewable energy is vital to our vision of becoming a prosperous country within 30 years."

Dutch funding for Mozambican water project

The **Government of The Netherlands** has approved a grant for more than €20mn (US$21.4mn) has been signed for the execution of the project plan developed by Mozambique water supply company **FIPAG**, engineering and project management consultancy **Royal HaskoningDHV** and water utility partner **Vitens Evides International**, to supply clean drinking water to 650,000 people in Maputo; FIPAG CEO Pedro Paulino said, "The new sustainable water supply system will provide good quality drinking water via public infrastructure to 650,000 inhabitants in northern Maputo."

The Netherlands Deputy Director-General for International Cooperation, Mrs Reina Buijs, and the Minister of Public Works, Housing and Water Resources of Mozambique, His Excellency Mr Carlos Bonete Martinho, have signed a grant arrangement for the implementation, operation and maintenance of the Greater Maputo Water Supply Expansion Project (Photo: Netherlands Water Partnership)

"At ECAir, we opted to negotiate with our peers and were able to conclude inter-airline agreements with TAC, Asky, Ethiopian, South African Airways, Air Algérie and agreed to operate the Brazzaville-Beirut route in collaboration with Trans Air Congo." - Fatima Beyina-Moussa, chief executive officer,

Equatorial Congo Airlines (ECAir)
Fatima Beyina-Moussa, chief executive officer, Equatorial Congo Airlines (ECAir)

"Trade between countries and regional cooperation are of the utmost importance when it comes to building a strong and sustainable African economy." - Dr Ibrahim Mayaki, CEO,

NEPAD Agency

"The entrepreneurial spirit in Africa and the creativity to come up with out-of-the-box solutions are simply amazing. In a world that is increasingly shaped by digital solutions, this innovative spirit is enabling Africa to spearhead technological solutions in areas such as e-health, mobile banking or community information." - Stefan Oschmann, CEO-elect,

Merck

"Conditions in mining industries around the world remain challenging as the fall in commodity prices has far-ranging impacts that will continue to weaken the unit sales of new mining pumps. However, there are opportunities for growth with the demand for replacement pumps, a bigger focus on recycling and reusing water, and investments made towards productivity improvements." - Nez Guevera, senior mining analyst,

Timetric

"If we are to engage in envisioning and co-designing a sustainable future for African cities, we need to envisage a sustainable, low carbon future using the best minds available and plan to realise that vision." - Jeff Robinson, sustainable buildings group leader

Aurecon

"One of the greatest economic challenges Nigeria faces is how to economically empower the youth. The answer to this is support for entrepreneurship. Nigerian youths have been actively engaged in business creation. They control the entertainment industry and are expressing themselves in the technology sector. If we managed to unlock funding for these and other sectors, the doldrums that a recession symbolises would become a possibility far-fetched for Nigeria." - Roberts Orya, managing director/chief executive officer,

Nigerian Export–Import Bank (NEXIM Bank)

"Sustainable agriculture in South Africa and mitigating the impact of climate change is going to require significant collaboration between a multitude of stakeholders, including: government, private sector players, the farming community and environmentalists." - Mark Beaumont, project director,

Global Forum for Innovations in Agriculture (GFIA Africa)

"The mobile wave for international remittance growth is just beginning. An increasing number of mobile wallet providers are now ready to open networks and make low-value international payments an integral part of their businesses."

Ambar Sur, founder and CEO, **Terra**

"It's the role of intellectual property organisations in Africa to push African leaders to understand that there is an entire edifice to build that will allow our youth to cross the Rubicon - to break the glass ceiling and partake in the excitement of the inventor, to dare to become the first in their country, in the region and even the first in the world to propose a solution to a social ill." - Martial De-Paul Ikounga, Commissioner for human resources, science and technology,

African Union

"Agribusiness is strategically placed to drive Africa's future economic development. The need to transform the African agri-business sector is a development challenge as it involves small-scale and family farmers who are the largest private investors into African agriculture. Promoting innovative business models in African countries opens up new business opportunities, helps raise efficiency and advances national economic development." - Mark Beaumont, project director,

GFIA Africa

"There is growing recognition of the importance of appropriate accounting and financial management in the public sector as a key means of achieving sustainable public finances." - Shirley Machaba, public sector leader,

PwC Southern Africa
Shirley Machaba, public sector leader, PwC Southern Africa

Industry, economy and opportunity

Food security is a serious socio-economic concern, but it can be addressed by private sector enterprise and public sector administration

Nigeria is Africa's most populous nation with more than one hundred and sixty million people. It is the largest market on the continent and is also Africa's biggest economy. President of the African Development Bank (AfDB) and Nigeria's former minister of agriculture, Akinwumi Adesina, says that out of a total landmass of 923,768 sq km, about 840,000 sq km is arable and only 40 per cent has been used for agricultural purposes.

Notable for its vast oil and natural gas reserves, Nigeria is seen by many to possess great economic potential. Ironically, in the last few years, it has been unable to diversify from its over-dependence on oil and gas exports.

The hunger for solutions

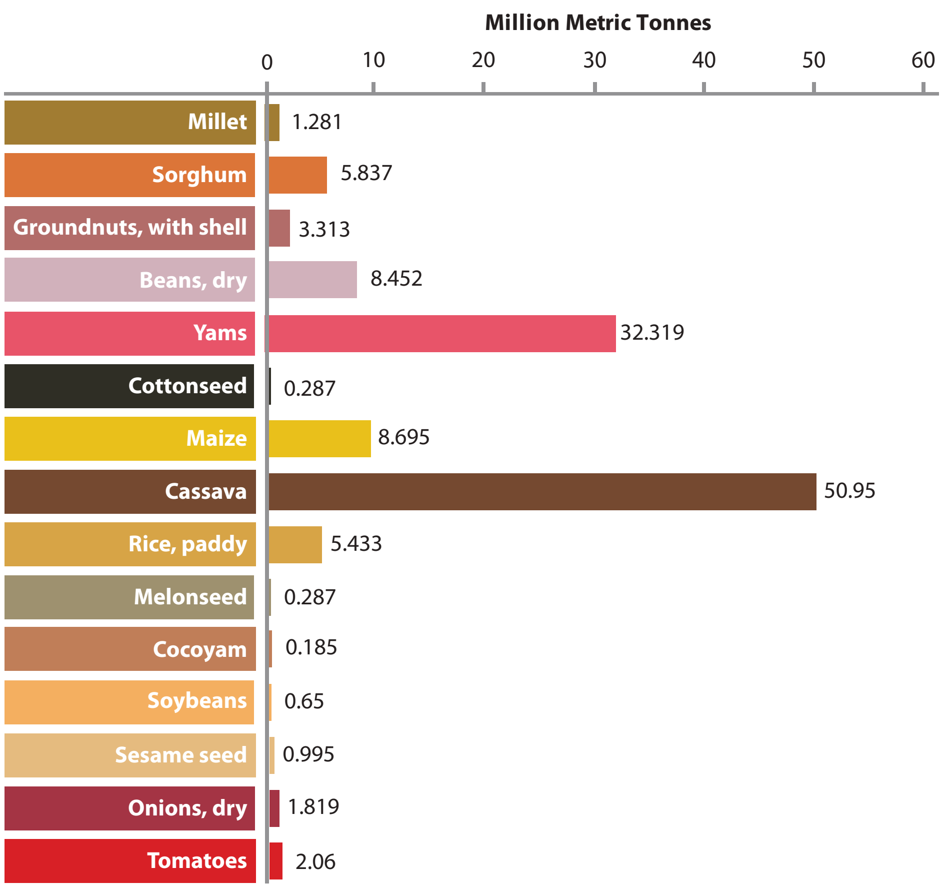
Data on global food security from the non-governmental organisation Oxfam says that over seventy million Nigerians go to bed hungry every day. A prestigious school of technology based in Nigeria, Yaba College of Technology in Lagos, estimates that the figure falls in the range of fifty to sixty million.

This clearly shows that Nigeria has been unable to tap into its vast arable land for farming.

Nigeria's National Bureau of Statistics in its Q2 2015 export report reveals that a total of ₦2,879.2bn (US$14,453,584,000) was received from exports. This is an 8 per cent increase from its Q1 export receipts but ironically, is a 38.5 per cent decrease from the corresponding value in Q2 2014.

Earnings from crude oil exports continue to dominate Nigeria's gross domestic product (GDP). In Q2 2015, oil receipts accounted for 73.7 per cent or ₦2.121 trillion of total exports. Liquefied natural gas (LNG) had the second highest export value, recording 9.1 per cent or ₦260.7bn of the total export value during the period.

Nigerian Commodities Production



Agriculture production data for 2012, taken from Nigeria's National Bureau of Statistics

Vegetable Products recorded 1.3 per cent or ₦36.7bn while prepared foodstuffs, beverages, spirits, vinegar and tobacco recorded 0.9 per cent or ₦24.6bn respectively.

These statistics reveal a worrisome trend and further disclose the impact that Nigeria's agricultural exports have on the economy.

Improving industry performance

Many believe that agriculture in the West African nation has performed poorly in the past few years, thus making food security a mirage. While Nigeria continues to boast of being the largest economy in Africa, economists believe there are great potentials for its agricultural sector if it is modernised and that it can produce enough food for the one-third of its citizens who are in dire need of food.

A 2007 research states that Nigeria's agricultural sector's contribution to its GDP has remained stable between 30 per cent and 42 per cent, and the sector employs 65

per cent of its total labour force.

In the 1960s, agriculture accounted for 65-70 per cent of total exports; it fell to about 40 per cent in the 1970s and fell further to less than 2 per cent in the late 1990s. The decline in the agricultural sector was largely due to rise in crude oil revenues in the early 1970s.

Nigeria's agricultural workforce is comprised of smallholder and traditional farmers, mainly women, children and elderly men who use rudimentary tools and production techniques to cultivate farmlands with resultant low yields. The smallholder farmers are constrained by many problems including poor access to modern inputs and credit facilities, poor infrastructure, inadequate access to markets, environmental degradation, and inadequate research and extension services.

Susana Godwin, a female farmer in Nigeria's North Central Nasarawa state, says women also face challenges as they do not have access to lands and credit facilities because of cultural practices. The inability of farmers to access credit facilities is worrisome as this leads to low and poor agricultural output which has a negative effect on the country's economy.

Several other factors such as education, poor infrastructure and inflation have also been identified as factors retarding growth of the agricultural sector.

Agricultural activities in Nigeria are usually concentrated in the less-developed rural areas where there is a critical need for rural transformation, improved infrastructure, social development and poverty alleviation.

Nigeria's wide range of climatic variations allows it to produce a variety of food and cash crops.

Crop production continues to dominate agricultural production. The major agricultural crops in Nigeria include guinea corn, millet, cocoa, sorghum, groundnut, beans, yam, cottonseed, maize, cassava, paddy rice, melon seed, cocoyam, soya beans, sesame seed, onions and tomatoes.

> **"The wide range of variations in Nigeria's climate allows for the production of a large variety of food and cash crops, providing the potential for ensuring food security**

Some of the crops like guinea corn, millet, sorghum, groundnut, bean, cotton seed, sesame seed, onions and tomatoes are found in the north of the country, while other products like maize, yam, cassava and paddy rice are not specific to regions. Cocoa is grown in the western region of Nigeria.

Nigeria's National Bureau of Statistics states that in 2012, cassava topped agricultural yields followed by yams. Melon seed and cotton seed had the lowest yields.

Agricultural imperatives

Livestock production in Nigeria comes with its own set of challenges. Yakubu Ago of Nigeria's National Livestock Training Centre says that feeding and disease challenges are two major areas affecting the livestock industry.

Nigeria's National Bureau of Statistics claims that this sector contributed less than three per cent to Nigeria's GDP. The sector grew slightly due to lower demand for wood products and depletion of existing resources. Nigeria's Forestry Research Institute worked towards increasing wood production in the country, including supplying improved breeder seedlings to replace harvested tree stocks.

Fish investor, Yashpal Jain of Triton Aqua Africa, says Nigeria has a local demand of about 2.7mn tonnes of fish which can be estimated at more than ₦130bn. This shows that there is a thriving market for domestic fish production.

Investment can be made in twelve areas in Nigeria's agricultural sector. These are:

- Input production and supply
- Staple food crop production
- Fisheries
- Industrial crop production
- Livestock production
- Forestry
- Commodity processing
- Storage enterprises
- Agricultural commodity marketing
- Agro-industry and manufacturing
- Agricultural commodity export
- Agricultural support services

Available research reveals that foreign investors are usually attracted to enterprises that are capital-intensive and that add value to primary output. Foreign investors prefer input production and supply enterprises, commodity processing and agro-industry and manufacturing enterprises. These can be regarded as downstream activities and are highly capital intensive. Primary enterprises and agro-services are more attractive to local investors. Activities that are infrastructure related are not favoured by private investors because they are seen as belonging in the government's domain. Domestic investors will be willing to invest in input production and supply, agricultural production enterprises, commodity processing, commodity marketing, and industry enterprises.

In order to ensure adequate food security in Nigeria, there are several interventions that must be made to ensure problems in Agriculture in Nigeria are adequately tackled. Some of these are:

Education of farmers - Many farmers in Nigeria have very little knowledge of improved and modern agricultural techniques, many of them need to be trained on how to use modern techniques to boost their production.

Electricity - The Civil Society Coalition for Poverty Eradication in Nigeria claims that more than 40 per cent of perishable goods produced get spoilt after harvest due to the lack of electricity needed for their storage and processing.

Bad road network - Of Nigeria's 200,000 km road network, many roads remain untarred and poorly managed. Most farms in Nigeria are located more than a kilometre and a half away from the main roads, and the only entrance to these farms are mostly through bush paths. It is virtually impossible to transport harvested produce through these roads because of their proximity to farms and also due to the bad condition of the roads.

Lack of funds - Funds are usually needed to run a farm, construct farm houses and adequate storage system. Farmers are uneducated and poor, and do not have adequate requirements to obtain loans from banks.

Nigeria's growth initiative

In the last four years, Nigeria's government has initiated the Growth Enhancement Support Scheme. Its aim was to put local farmers at the centre of the government's interventions by making fertiliser, improved seedlings, direct access to available markets and other critical components available to farmers through a variety of unconventional means.

Nigeria has what it takes to multiply its GDP through agriculture and ensure guaranteed food security for the entirety of its population. If the government will intervene in solving the problems faced by many farmers, it is believed that as early as 2020, the import of food stuffs and livestock will witness a gross decrease. ■

Amadin Uyi

Sage's HR solutions

Sage recently launched new human resources management (HRM) tools in the Nigerian market, bringing mid-size and large enterprises a powerful, simple and flexible solution to gain efficiency in HR processes. It is available either as a standalone product or as a module that integrates with Sage X3, empowering HR managers to improve overall business performance by gaining better control over their workforce costs and creating stronger engagement with employees.

Sage HRM automates processes such as payroll, hiring, on-boarding and talent retention. The solution ensures legal compliance as well as higher employee retention and engagement, with easy self-service HR services. It also helps manage employee development by providing faster and simpler access to skills and performance information. Sage HRM contains all settings, features, statutory calculations and parameters for payroll and global legislations compliance for the Nigerian market.

Accurate and informed

Sage HRM provides a global and accurate view of the HR budget and in real-time. With Sage HRM, HR managers are able to accurately estimate workforce costs and performance and make data-driven personnel decisions which translates into more informed decision making. Plus, it includes flexible mobile features that enable employees to access HR services anywhere from any device, thus providing HR managers access to live key performance indicators.

The solution is aimed at companies in the manufacturing, distribution, services and healthcare industries that are keen to integrate HR with finance, thereby improving efficiency and cost control through back office automation. Sage HRM enables HR departments to improve administrative efficiency and compliance management.

Functional and collaborative

Ivan Epstein, president of Sage International, said, "With more than 93mn Internet users in Nigeria (according to the Nigerian Communications Commission), Sage HRM's rich cloud and mobile functionality makes it a perfect match for the market. If you want to profit from modern technology that's not only future-proof, but also helps increase visibility and collaboration in your business, you are in good hands with Sage HRM."

Jeremy Waterman, managing director, Sage Northern Africa & Middle East, added, "Sage HRM, together with Sage X3, gives your organisation more accurate and exhaustive data over your different business units and locations. It supports best practices and can give you an integrated view of HR and financial data to help you keep your costs under control." ■

Seeking a stable and reliable setting

How the GIPC governs Ghana's investment framework, to ensure a robust entrepreneurial environment in the West African state

With a severe downturn in its economy, attracting foreign direct investment continues to be a priority for the government of Ghana, given the urgent need to restore the country's economic momentum and overcome an annual infrastructure funding gap of at least $1.5 billion.

Investment will continue to be critical, even though an IMF credit facility approved in April 2015 is expected to bring some relief from the current macroeconomic imbalances – high fiscal and current account deficits. The current administration fully recognises that foreign investment requires an enabling legal environment and is open to discussing issues that hinder foreign investment.

The 2013 Ghana Investment Promotion Centre (GIPC) Act governs investment in all sectors of the economy and outlines the government's investment framework, but the implementation of the legislation could end up increasing the burden on domestic and international investors.

With a stable and predictable political environment, Ghana offers investors a forward leaning, business-enabling environment. There is no discrimination against foreign-owned businesses. The government has instituted a free-flowing exchange rate regime and guarantees repatriation of profits out of the country. There are also investment laws that protect investors against expropriation and nationalisation. And in a region perceived to be riven by corruption, the practice is comparatively less prevalent than in other countries.

The government has made great strides in fostering a conducive environment for investment, but some bottlenecks still remain. Although the existing legal framework recognises and provides ways to enforce property rights, the procedure to obtain a clear title over land is often difficult, complicated, and lengthy. There is also a lack of protection towards intellectual property rights, including computer software and pharmaceuticals. In addition, the process to establish a business in Ghana is lengthy, complex, and requires compliance with regulations and procedures of at least five government agencies.

Overall, the investment climate in Ghana is welcoming to foreign investment, especially relative to others in the sub-region. Nevertheless, analysts believe the passage of stringent local content regulations in the petroleum sector could serve as a signal of future efforts to legislate restrictions on how international capital can be used within Ghana. 'If these regulations become overly restrictive, they could stifle foreign investment, impacting domestic growth. As Ghana transitions to an established middle income country, we expect the investment climate to continue to improve, but the government will determine the rate at which those improvements occur,'said a western diplomat in Accra.

The government passed laws to encourage foreign investment and replaced regulations perceived as unfriendly to investors. The 2013 GIPC Act regulates investments in almost every sector, except minerals and mining, oil and gas, and the industries within free zones. Sector-specific laws further regulate banking, non-banking financial institutions, insurance, fishing, securities, telecommunications, energy, and real estate. In oil and gas specifically, these laws include specific local content requirements that could discourage international investment. Foreign investors are required to satisfy the provisions of the investment act as well as the provisions of sector-specific laws. In general, GIPC has streamlined procedures and reduced delays.

The GIPC Act specifies areas of investment reserved for locals, which include small-scale trading, operation of taxi and car rental services with fleets of fewer than 25 vehicles, lotteries (excluding soccer pools), operation of beauty salons and barber shops, printing of recharge scratch cards for subscribers of telecommunication services, production of exercise books and stationery, retail of finished pharmaceutical products, and the production, supply, and retail of sachet water. The law further delineates incentives and guarantees that relate to taxation, transfer of capital, profits and dividends, and guarantees against expropriation.

GIPC registers investments and provides assistance to enable investors to take advantage of relevant incentives. The government has no overall economic or industrial strategy that discriminates against foreign-owned businesses. In some cases a foreign investment may enjoy additional incentives if the project is deemed critical to the country's development. Foreign firms are able to participate in government-financed and/or research and development programmes on a national treatment basis.

Once all necessary documents are submitted, GIPC states that new investments will be registered within five working days. However, the actual time required for registration can be significantly higher - sometimes up to one month.

Although registering a business is a relatively easy procedure, it appears that the process involved in establishing a business can be lengthy, complex, and requires compliance with regulations and procedures of at least five different government agencies including GIPC, Registrar General Department, Ghana Revenue Authority (GRA), Ghana Immigration Service, and Social Security and National Insurance Trust (SSNIT).

The World Bank's 2015 Doing Business report states that the average time to start a business in Ghana is 14 business days. This places Ghana 96th out of 189 – down from 93rd the previous year.

Capital conditions

GIPC requires foreign investors to satisfy a minimum capital requirement. The minimum capital required for foreign investors is

$200,000 if they do a joint venture with local partners or $500,000 for enterprises that are wholly owned by foreign investors. Trading companies either entirely or partly-owned by foreigners require a minimum capital contribution of $1 million and are required to employ at minimum 20 skilled locals. Capital contributions may be satisfied by remitting convertible foreign currency to a bank in Ghana or by importing goods valued in this amount. This minimum capital requirement does not apply to portfolio investments, enterprises set up for export trading or their branch offices.

The principal law regulating investment in minerals and mining is the Minerals and Mining Act, 2006 (Act 703). This law addresses different types of mineral rights, issues relating to incentives and guarantees, and land ownership. The 2006 law provides for a stability agreement, which protects the holder of a mining lease for a period of 15 years from future changes in law that may impose a financial burden on the license holder. When investment exceeds $500 million, lease holders can negotiate a development agreement which contains elements of a stability agreement and more favorable fiscal terms. The Minerals Commission is the government agency that implements the law. Small-scale (artisanal) mining is reserved for Ghanaian investment.

Compared with its 'BB' rated peers, Ghana has a strong business environment, underpinned by foreign investment totaling $3.2 billion in 2014, second only to Nigeria. Ghana was 70th out of 189 countries in the World Bank's Doing Business Survey, scoring highly on obtaining credit, protecting investors and enforcing contracts. While foreign direct investment (FDI) has slid in recent years as some investors take a 'Wait and See' attitude as economic growth has slowed, Ghana's reputation as a reliable partner allows the country to continue to attract foreign investment at a higher rate than similarly positioned neighbours in sub-Saharan Africa.

The country's short-term fiscal and external risks have moderated following an IMF Extended Credit Facility worth $918 million. The IMF programme focuses on addressing Ghana's key credit weaknesses through prioritising fiscal consolidation, raising revenue and improving central bank policies. Analyst are confident that over time, commitment to the programme should result in a recovery of donor inflows, foreign investment in the domestic bond market, and easing of domestic funding costs.

Ghana's investment laws guarantee that investors can transfer the following in convertible currency out of Ghana: dividends or net profits attributable to an investment, loan service payments where a foreign loan has been obtained, fees and charges with respect to technology transfer agreements registered under the GIPC Act, and the remittance of proceeds from the sale or liquidation of an enterprise or any interest attributable to the investment. So far, companies have not reported challenges or delays in remitting investment returns.

There is a single formal system for transferring currency out of the country through the banking system. The Foreign Exchange Act, passed in November 2006, provides the legal framework for the management of foreign exchange transactions in Ghana. It has fully liberalised capital account transactions, including allowing foreigners to buy certain securities in Ghana - those with a three-year tenor and higher. It has also removed the requirement for the Bank of Ghana (the central bank) to approve offshore loans. Payments or transfer of foreign currency can only be made through institutions such as banks or persons licensed to do money transfer. There is no limit on capital transfer as long as the transferee can identify the source of capital.

In February 2014, the government announced limits to foreign exchange withdrawals in an effort to stem the deterioration of the cedi and prevent the dollarisation of the currency. By June, these limits had been lifted, making it clear that this technique will only be used as a short term measure to deal with urgent economic concerns.

Legitimate considerations

The Ghanaian Constitution sets out some exceptions and a clear procedure for the payment of compensation in allowable cases of expropriation or nationalisation. Additionally, Ghana's investment laws protect investors against expropriation and nationalisation. The government may expropriate when the property follows one of the following: national defence, public safety, public order, public morality, public health, town and country planning, or the development or utilisation of property in a manner to promote public benefit. It must provide prompt payment of fair and adequate compensation. The government guarantees due process by allowing access to the high court by any person who has an interest or right over the property.

Investors are generally not subject to differential or discriminatory treatment in Ghana, and there have been no official government expropriations in recent times. Since 2001, four foreign investors have filed for international arbitration against the Ghanaian government. Two of these cases were resolved when the government agreed to purchase the investments. In both cases the investors agreed to the terms of the government purchase as an exit strategy, notwithstanding perceived inequitable terms. There have been no reported instances of indirect expropriation or any government action equivalent to expropriation. ■

Jon Offei-Ansah

Technology to drive growth for MCS banks

Mauritius Civil Service Mutual Aid Association, one of the country's oldest financial institutions, is on a drive towards a digital future with Infosys Finacle as a partner.

Sunil Dabeesingh, CEO of Mauritius Civil Service Mutual Aid Association (MCS) is very proud of the history of the company and has big ambitions for the years ahead. Above all, Dabeesingh said MCS aims to "provide happiness to customers", and a partnership with Finacle is playing an important role in meeting this aim in the long term.

From humble beginnings

"MCS is one of the oldest financial institutions in Mauritius, it was started in 1893 by a group of civil servants the underlying philosophy is mutuality and this is still in practice today," he said.

Indeed, the very foundations of MCS were built on a need to help people in a time of trouble. The 175 civil servants pioneered the association by pooling resources in a fund to grant loans to members needing financial assistance. At the time, Mauritius was still recovering from a devastating cyclone which struck the island nation in 1892. At the time, loan facilities from banks were not widely available and MCS was able to offer a responsible alternative to unscrupulous money lenders. By 1894, an ordinance was passed, which constituted MCS into a limited liability society.

"The Association's mission is to provide the best services to make the customers happy."

When asked how MCS stands out from other financial institutions, Dabeesingh gave an intriguing response: "We are different but also alike."

He then elaborated: " We have loan facilities, we take deposits, we are licensed by the Central Bank of Mauritius, we have the same basic functions as other financial institutions, but we are different because as an association, we have evolved."

"The relationships between the association and its members is crucial, it is the basis of the success of the association we have lasted already for 122 years."

Dabeesingh described the mutual trust between MCS and its customers as a "win-win situation."

Sunil Dabeesingh, CEO of MCS says customer happiness is paramount

"Our culture is an alignment of the needs and expectations of our customers."

A major IT project for MCS with Finacle

Now MCS has plans for expansion, and Dabeesingh said the extensive overhaul of the company's IT systems is an important part of fulfilling this mission.

He said the company has fully replaced all IT infrastructure, moving to an IBM platform in a partnership with Finacle, a multi-national banking IT solutions company, which is a wholly owned subsidiary of Infosys. The replacement project supports all-new hardware, software, network resources and virtualisation technology rolled out across all front- and back-end services for the entire company.

> "Digital technology will play a crucial role in the next three to five years and to be on the competitive edge, we need an increased level of preparedness"

When MCS decided to pair up with Finacle for the IT project, Dabeesingh said the company was "at a juncture". A decision had to be made as to whether to upgrade the previous system, fully replace the system or simply contract it out.

It was decided that a full replacement was required and Dabeesingh said the decision to use Finacle as the partner for the project was the result of market research.

"We went for Finacle because of their state-of-the-art solutions," said Dabeesingh. "They met our specific requirements and we were also quite satisfied with their pricing policy."

The testimonials of other satisfied Finacle clients, in Mauritius and abroad, meant that MCS could "move forward with confidence".

The result was, according to Dabeesingh, a "very good partnership with Finacle".

"Finacle's people are very professional in their attitude to their work," said Dabeesingh. "Each time we had a problem, people with the right competencies came to help."

Additionally, Dabeesingh was impressed with Finacle's project management capabilities and said the replacement work was completed "on time and within budget".

Looking to the future

The IT replacement project with Finacle has been completed and MCS is now preparing for the next phase in its drive towards more digital services for customers.

"We are settling down now. The next stage is to prepare to enhance the technology platform for ease of doing business for customers," said Dabeesingh. Customer convenience is the main priority and MCS plans to move quickly with its latest digital plans. The new systems set up in partnership with Finacle form a solid foundation for future expansion.

"Digital technology will play a crucial role in the next three to five years and to be on the competitive edge, we need an increased level of preparedness," he said. "We cannot stay put."

Dabeesingh revealed that more web-based services are in the pipeline, including an online loan generator. MCS already offers a mobile banking facility to its customers and now plans to build on that service by offering tablet banking. He said the online and tablet services are part of the association's drive towards being more user-friendly and having more interaction with members.

"Our members want to get up-to-date information at any time and get answers to queries at any time this is for both potential and existing clients," said Dabeesingh.

The customer-centric nature of the MCS business model is never far from Dabeesingh's thoughts: "We put our clients at the centre of our decision-making process."

He described the relationship between the association and its customers as "life partners". The association's vision statement is: "We are committed to be your best financial partner."

As well as providing a range of financial service products, MCS has a CSR programme, a highlight of which is its annual scholarships scheme. This scheme provides financial assistance for needy undergraduate students at five Mauritian higher education institutions.

"We are the best financial partner for our customers, this is not just a collection of words, it is part of our corporate culture," he said. "We are reassured by the level of commitment of our people." ■

Finacle is committed to Africa

Give us a snapshot overview of Infosys Finacle in Africa.

Amit Dua, Vice-President and Regional Head, Africa, Europe and Americas: Infosys Finacle entered Africa through Nigeria in 2004. Back then, Nigeria had more than 50 banks, with only physical branches and no real service differentiation. Crucially, they did not have modern centralised core banking systems and electronic channels were practically nonexistent. Finacle brought in a new generation core banking solution and real-time internet banking to Nigeria. Today, about 65 per cent banking transactions in Nigeria happen on the Finacle Core Banking system, in seven of the 16 Nigerian banks.

Finacle supports cross-continent operations for banks in 21 African countries, powering more than 80,000 users and more than 58mn accounts. Finacle has matured its offering for Africa, ensuring easy localisation, ready compliance for varying regulatory requirements, rapid expansion into other markets and innovation with quick time to market. We have created a robust and empowered partner ecosystem, creating capability among our African partners.

How is Finacle helping banks expand?

Being a universal banking platform, Finacle has a broad suite of solutions beyond core and channels, which are available to banks in Africa. The Finacle suite includes payments, advanced analytics, Islamic banking, liquidity management, loan origination, wealth management, and others. Also, being part of the Infosys' wholly-owned product subsidiary Edgeverve, Finacle can provide cloud-based Edge solutions, which operate on the bank's core layer to enhance efficiency.

An important feature is Finacle's interfacing capability with third party applications. For example, in Equity Bank, we helped interface biometrics with the core solution, as per regulatory requirements, across five


Amit Dua, vice-president and regional head, Africa, Europe and Americas says the future is digital for African banking

countries. We have enabled customer onboarding on handheld devices for Equity Bank's several thousand agents with seamless connectivity. The bank's customer base grew above 25 per cent with their upgrade to Finacle 10.

Tell us about the future for African banks.

Banks in Africa are moving to the next generation of modernisation in line with rapidly evolving technology and customer expectations. The future of banking is digital and banks will need to re-design themselves. We see banks as becoming digitally-driven marketplace providers of financial services and products, centered on the customer location and experience. Processes must be entirely re-laid to support the new delivery and business models, enhanced security, and faster, cheaper processes, while keeping accessibility and affordability in mind. Most of all, workflows will be increasingly built around analytics-driven, actionable insights and automated decision-making.

African banks will need a "renew and new" strategy to be digitally enabled. This will call for renewing their core technologies while adding new ones to leverage opportunities.

What is Infosys Finacle's commitment to help African banks meet challenges?

Africa's demographics and unique customer needs necessitate constant innovation and rapid time to market. Customer expectations are increasingly towards instant gratification. Competition from foreign banks and non-traditional finance players means local banks need to innovate in their core offerings and expand into areas like corporate banking, wealth management and investment banking, the traditional strengths of foreign banks.

Homegrown banks need proven technology to enhance their capabilities to meet these needs. Finacle's solutions help our clients become more agile, while enabling them to introduce innovative products quickly. We help African banks leapfrog a generation by adopting cutting edge technology, such as cloud computing, mobility, and analytics.

On the regulatory front, the Finacle platform accommodates changes with ease. It has strong localisation with options to support governance and reporting requirements.

How will moving to EdgeVerve affect your clients and prospects in the Africa market?

Infosys is committed to building world-class software products and creating intellectual property. Under Edge Systems, a fully-owned product subsidiary of Infosys, Finacle will benefit from a robust product business eco-system, distinct from a services ecosystem. This will accelerate innovation and co-creation, leveraging the latest technologies in mobility, advanced analytics, block chain, social, cloud, wearables and digital commerce.

Our investments in Finacle and Edgeverve, to create world class products, will benefit banks across Africa.

Consistent growth in a tougher environment

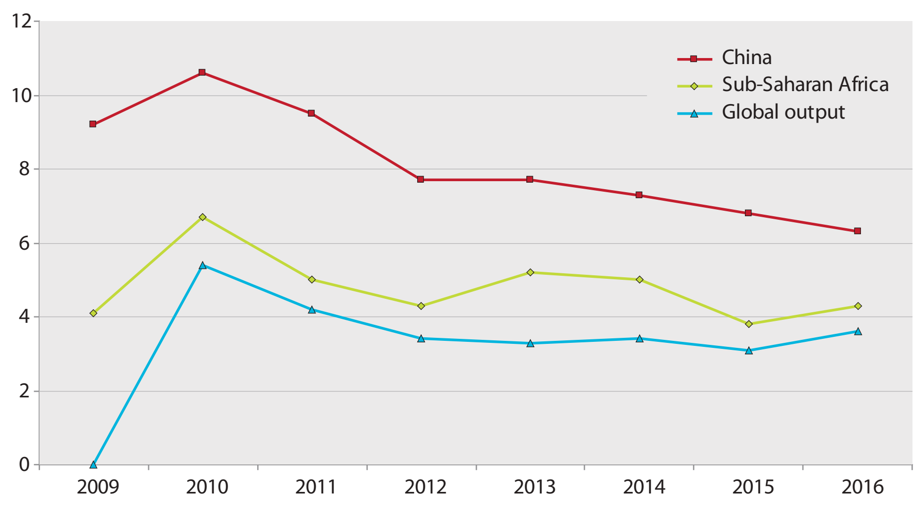
Assessing the global context as African economies continue to gain from Chinese investment vehicles in several industry verticals

After rising five per cent in 2014, growth in Sub-Saharan Africa (SSA) decelerated during 2015, reflecting the ending of decade-long commodity boom, heightened volatility in emerging market economies (namely Russia, Brazil and China), along with domestic challenges stemming from infrastructure bottlenecks (particularly electricity and transport).

Robust regional growth in the past decade was driven by three factors: vastly improved business and macroeconomic environment; soaring commodity prices that played pivotal role in the region's eight oil exporters led by Nigeria and Angola but also in several hard metals exporters (notably South Africa and Zambia); and substantial capital flows to African frontier markets, facilitating higher private and public investments.

Two of the three variables are now less supportive - commodity markets have turned bearish, whilst financing conditions are becoming more difficult for developing nations.

Trends in Real GDP Growth (annual percent change)



Source: IMF World Economic Outlook, October 2015.

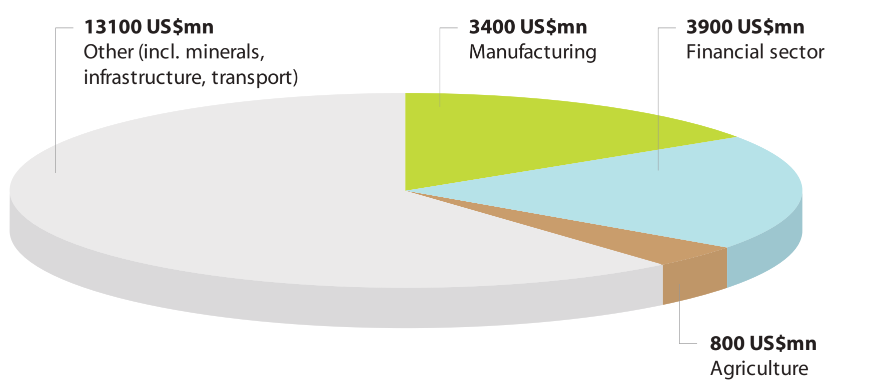
Trade relations

SSA's growth in recent years coincided with expanding commercial ties with China (see Chart1).

Foreign trade increased from negligible levels in 2000 to nearly US$200bn in 2014, a level comparable to aggregate trade with the European Union (EU) and about four times the total trade with the United States. China is also the largest developing country foreign investor in Africa. The officially reported Chinese foreign direct investment (FDI) stock in Africa was estimated at US$21.2bn in 2012 (see Chart2), a doubling since 2009, with the largest share directed at the resource sector, notably in Angola, Chad, Niger, Nigeria, Sudan, Zambia and Zimbabwe.

Although commodities and associated infrastructure projects dominate the relationship, Chinese investment in other sectors is sizeable, especially in manufacturing. The shift towards manufacturing FDI is indicative of Chinese firms' strategy to develop global value chains (GVCs) as domestic labour costs increase relative to lower-cost Africa. African firms also enjoy growing access to Chinese markets; since 2012, China has granted some

Chinese FDI Stock in Africa, by Sector 2012



Note: The bulk of Chinese FDI to Africa has been directed at the resource sector.

Source: Government of China 2013.

30 SSA countries 'zero-tariff' treatments (covering about 60 per cent of their exports) and is importing a large share of manufactured goods from Africa. According to United Nations Comtrade database, SSA manufactured exports to China rose from just US$400mn in 2000 to US$12.2bn in 2013.

Africa received nearly half of the cumulative US$54bn provided by China in official development assistance (ODA) through 2012, significantly more than any other region (including Asia). Chinese ODA (US$3.2bn in 2013) has grown at a faster pace than bilateral aid from Western donors over years. The OECD country assistance is mainly tied to social projects in health, education, water, and sanitation, or towards emergency relief and food aid. By contrast, half of Chinese assistance is for investment projects aimed at closing the infrastructure gaps in many African countries.

Potential spill-offs from China

The growth of SSA's exports to China has outpaced that of exports to other regions. In 2011, China became Africa's largest single trading partner. Concurrently, traditional trading partners' shares have fallen steadily. The share of EU countries has declined from over 55 per cent in 1990 to 26 per cent by 2014 - on level with China. In most countries - including Angola, Congo, Republic, Congo (DRC), Sierra Leone, and Zambia - China accounts for over two-fifths of the country's exports (see Chart3).

SSA's pattern of exports makes the region vulnerable to external shocks. Africa is a net exporter of fuel, minerals and metals, and agricultural commodities. The combined share of energy and minerals/metals has surged, and now accounts for two-thirds of the region's exports. Oil, gas, and metals, sourced from a few countries, represent the bulk of SSA's exports to China, although regional exports to the US, Europe and major emerging market economies are even more commodity-intensive (see Chart4).

In contrast, SSA's imports from China are diverse. About one-third comprise capital goods, including vehicles, generators, telecommunications equipment, and factory machinery. Consumer and manufacturing goods account for the remainder and are about three times as large as imports from US and EU.

Evidence of slower, more balanced growth in China, coupled with a shift towards the services sector, more consumption and less investment in near future is weighing on demand and prices for industrial commodities. China accounts for one-tenth of global oil demand and consumes 57 per cent and two-thirds, respectively, of the world's copper and iron ore demand. Weak commodity prices largely explain the negative 'terms-of-trade' shock to metal and mineral-exporting SSA countries over the past year.

Intra-regional trade could also be impacted. For example, South African economy has been hit by lower Chinese demand for its gold, platinum, iron ore, and coal, among others. Weaker growth in South Africa influences member-countries of the Southern African Customs Union and Mozambique since one-third of their exports are sent to South Africa.

The International Monetary Fund (IMF) warns that further risk retrenchment from emerging markets, hard landing in China (albeit unlikely) and a disorderly global asset reallocation - raising financing costs for developing economies - thereby putting additional downward pressures on commodity prices and African currencies. Even though SSA (excluding South Africa) is relatively less integrated with global capital markets, an expected US rate hike and the reassessment of global risks since mid-summer have affected frontier African economies by altering the environment of abundant liquidity and cheap borrowing costs experienced during recent years.

After record Eurobond issuances in 2013–14, fewer sovereigns have tapped the international markets in 2015; when they did (Cote d'Ivoire, Gabon and Zambia); it was at higher yields than in previous issuances. Tightening financial conditions in China may also lead to higher funding costs for banks, which could slow Chinese companies' investment abroad, including in SSA.

How big the impact?

Growth slowdown in world's second-largest economy will have repercussions for developing Africa both directly (via trade intensity, inward FDI, and aid flows) as well as indirect effects, especially for resource exporters (via China's insatiable appetite for raw materials that fuelled the prices of global metals and crude oil).

Beijing's strong linkages are reflected in a quadrupling of the contribution of net exports and productivity-enhancing investment to growth in gross domestic product (GDP) in SSA since early 2000s. Research shows that a one percentage point increase in China's domestic investment growth boosts SSA export growth by an average of 0.6 percentage point.

Over the medium to long-term, China-Africa relationship should continue to flourish, reflecting many opportunities in SSA, as well as Beijing's growing strategic (political, economic, and security) interests in the region. Greenfield projects are either underway or at advanced planning stages. For example, in May 2014, China signed a deal to build a US$3.8bn rail link between Nairobi and Mombasa in Kenya, the first phase of a line that will eventually connect Burundi, Rwanda, South Sudan, and Uganda. Under the deal, the Exim Bank of China will provide 90 per cent of the cost for replacing the decades-old British colonial-era line with a 609.3km standard-gauge link. The government of Kenya will fund the remaining balance (US$380mn).

On mining front, Africa (alongside the Arctic) remains globe's two prominent 'unchartered' regions. SSA share is projected to grow, given the depletion of easily accessible mineral reserves in other explored countries and ongoing improvements in technology. Although short-term infrastructure-related and mining investments are likely to slow, given depressed metal prices, Chinese existing investment should continue to support domestic demand for goods and services in SSA.

Africa could benefit from China's rebalancing over time, if it leads to a relocation of low-end manufacturing activities to SSA.

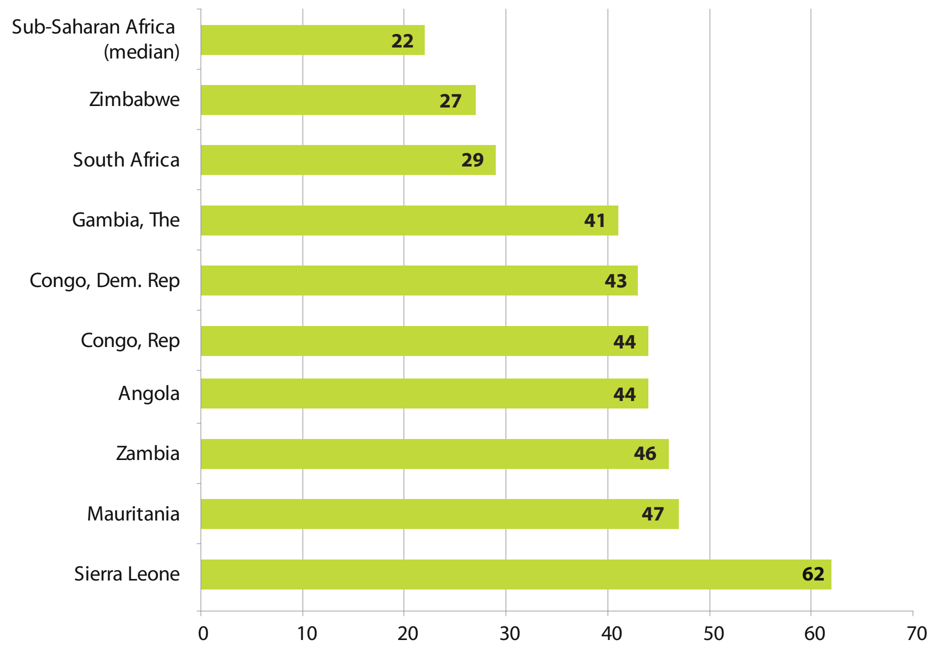
China is only one of several major emerging economies with a growing presence in SSA, the others being Brazil, India, South Korea, the Russia and Turkey. Traditional OECD partners still remain dominant - the magnitude of their aid, investment, and trade flows is (in aggregate) larger than that from China. The IMF expects continuation of tepid growth in Advanced Economies in 2016, with Euro Area (vital trading partner) growing at 1.6 per cent.

SSA's prospects in 2016-17 should improve - aided by general recovery in commodity prices, large-scale infrastructure schemes and consumer spending, as well as some new investment in the resource sector.

Leading frontier markets led by Mozambique, Ethiopia, Cote d'Ivoire, Rwanda, Tanzania and Kenya are projected to grow at between seven and eight per cent in the New Year.

Moin Siddiqi, economist

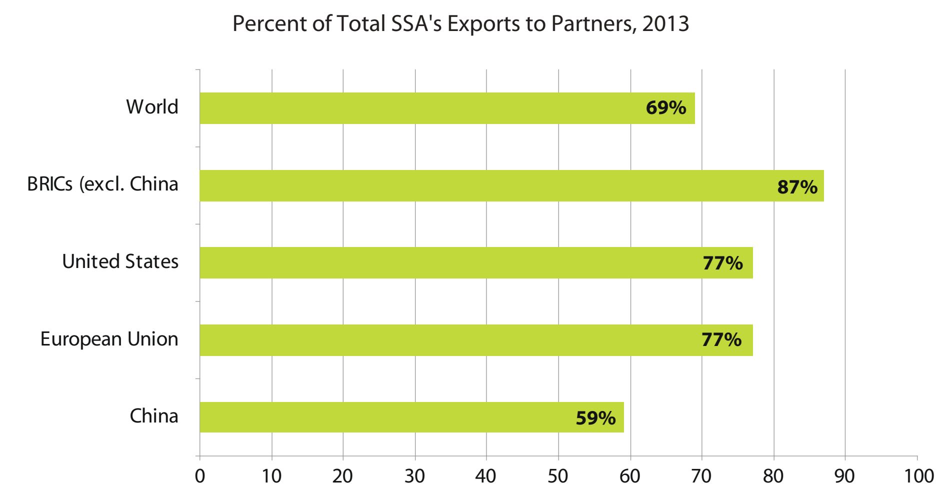
China's Share of Exports (average for 2010-14)



Note: China is the largest individual trading partner for SSA. In many countries, exports to China represent over 40% of country's exports.

Source: World Trade Integrated Solutions database.

Sub-Saharan Africa's Commodity Exports to Major Trading Partners



Note: Commodities comprise food & beverages; inedible crude materials; mineral fuels; lubricants; animal & vegetable fats; and chemicals & related products.

Source: UN Comtrade.

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China: neocolonialist or enabler?

H E Ilyas Moussa Dawaleh, Minister of Economy and Finance of Djibouti, considers the impact of Chinese engagement in African economies

According to the common theme in many media outlets in the western hemisphere, China is the big bad wolf, the neocolonialist power steamrolling Africa, stripping it of its resources and flooding it with cheap plastic goods. As the Minister of Economy and Finance for Djibouti, I beg to differ.

Firstly, this hypothesis is truly patronising to the progressive states of Africa. Africa has a great deal to offer, with annual growth rates ticking up since the turn of this century, and foreign direct investment reaching new heights. I would argue that Africa can and does choose its own partners to achieve its own development goals. For example, Djibouti has adopted a long-term development plan "Djibouti 2035" as well as an interim five year plan "SCAPE" (standing for Accelerated Growth Strategy for Employment in the French translation) which is underpinned by large scale infrastructure projects - projects which Chinese businesses are not only willing to part finance, but have the expertise to successfully execute.

Djibouti, which sits on two of the busiest shipping lanes in the world, is a natural meeting point for East and West to cooperate closely on a wide range of issues including business and trade, but also security, counter terrorism, and anti-piracy in pursuit of international peace and security. In fact, China shares this vision with its "one belt, one road" philosophy, which underpins the New Silk Road project crossing from Asia to Europe, encouraging trade, growth, development and investment along the way. Indeed, African nations have much to learn from China who in the last three decades alone has rapidly expanded its industrial base becoming the world's largest economy. China's accelerated growth and Africa's resurgence have gone hand in hand, creating a remarkable opportunity for the development of China-Africa relations. It's about time critics changed their worn out rhetoric of neocolonialism and view China as an enabler who is helping African nations work their way out of poverty.

H E Ilyas Moussa Dawaleh, Minister of Economy and Finance of Djibouti

The socio-economic significance

China is certainly enabling Djibouti to undertake over US$14bn worth of infrastructure projects, including a significant port expansion, two new international airports, a 750-km electrified railway to Ethiopia, and a super highway connecting Djibouti to Ethiopia, in turn further cementing Djibouti's status as the gateway to East Africa's markets. These projects don't only have the obvious benefits of enabling faster and more efficient trade between Djibouti and landlocked Ethiopia and South Sudan, but also with the whole of Africa and Asia.

And, within Djibouti, the socio economic benefits are vast. Although, the new railway and highway signify interconnectivity within the continent, they also connect many rural areas across Djibouti, enabling once secluded populations to integrate and have better access to jobs and education. Furthermore, these projects are creating thousands of jobs; the port upgrades and the new free trade zone alone are estimated to generate up to 200,000 jobs. As a result, the government is investing in education, technical skills and workforce development programmes for local youth.

Clearly, nothing in life is free and whilst the financing for such large-scale infrastructure projects will increase Djibouti's sizeable debt to China, the strong economic dividends generated will repay these loans.

Djibouti has a wealth of experience in forging alliances with partners from all over the world and we have learnt a few lessons along the way. The government's priority must always be to make good deals for Djibouti. However, if the partnership proves to be detrimental, we will do everything in our power to remedy any damage caused to our nation – Djibouti is open for business, will welcome the right foreign investors, but will not tolerate unfair contracts. Indeed, we are currently locked in a High Court case with a former government representative and a separate arbitration with Dubai company, DP World. Despite ongoing litigation, we remain committed to finding a way to rebuild the previously strong connections between Djibouti and the UAE.

What makes the Chinese presence in Africa welcome is their commitment to the communities in which they operate. China's Premier, Li Keqiang has emphasised his desire to form progressive partnerships with African countries, based on mutual respect. Most recently, at the China-Africa Cooperation summit in South Africa at the beginning of December, the President, Xi Jinping pledged more aid to the continent - Africa already receives nearly half of China's total foreign aid – hardly indicative of a country looking to ruthlessly rampage this continent. ■

H E Ilyas Moussa Dawaleh, Minister of Economy and Finance of Djibouti

A new take on Nigerian tax

Spreadsheets and other manual methods are insufficient to comply with inland revenue service requirements

Nigerian companies must ensure that they have robust, automated payroll systems and processes in place so that they can more easily comply with the demands of an increasingly tough tax regime in the country. That's according to Magnus Nmonwu, regional director for Sage West Africa, who has observed that a hard-line attitude to non-compliance from the Nigerian federal and state tax authorities means that companies must get all their processes and paperwork in order to avoid tax troubles in the months to come.

Nigeria's Federal Inland Revenue Service recently is committed to cracking down on tax evaders by conducting audits of companies doing business in Nigeria to ensure that they are compliant with the various taxes due to the country. Furthermore, a law enforcement exercise saw the Lagos Inland Revenue Service temporarily seal the premises of 10 firms for failing to remit N45.52 million Personal Income Tax of staff to the state government.

Nmonwu said, "These actions show that Nigeria's tax authorities are taking a zero-tolerance approach to non-payment of tax or incorrect remittances of taxes to the government, whether the reason is a deliberate evasion or an accidental oversight. With companies in Nigeria coming under more scrutiny for their tax affairs, it is essential to put in place systems and processes that help you to easily comply with tax regulations."

The Nigerian Personal Income Tax Act states that employers are required to file annual returns of all remuneration paid to their employees and taxes deducted and remitted to the tax authorities on or before 31 January every year. Failure to do so carries a maximum penalty of N500, 000 for the employer and N50, 000 for individuals.

In addition, employers must remit Pay-As-You-Earn (PAYE) tax each month for each employee to the relevant state internal revenue services, on or before the 10th day following the month in which salary was paid. Furthermore, employers and employees are each required to contribute 10 per cent and eight per cent, respectively, of their employee's monthly remuneration to the Nigeria's contributory Pension Scheme. There are also other statutory payments, such as the Employee Compensation Scheme (formerly known as the Workmen Compensation Act), Development Levy, National Housing Fund, Industrial Training Fund, just to name a few.


Magnus Nmonwu, regional director, Sage West Africa

A lack of formal systems makes it hard to comply

One common reason some companies in Nigeria struggle to meet these tax obligations and deadlines is that they don't have formal business systems in place to enable accurate recordkeeping, precise calculations and deductions, and automated preparation and submissions of these statutory returns to the relevant tax authorities or government agencies when due. Against the backdrop of growing regulatory complexity, organisations need to realise that spreadsheets and other manual methods are no longer sufficient to meet their needs.

To comply, companies need to put in place solutions that streamline capturing of transactions, automate payroll calculations and bring visibility of the business. Such solutions also make it simpler to keep track of annual changes to tax regulations that impact on payroll tax calculations and various changes in legislation, said Nmonwu.

The discipline a good payroll solution offers to the business also comes with other benefits, notes Nmonwu. Payroll fraud is a major risk, especially for smaller businesses, and incorrect payments can cost dearly. Payroll software delivers better visibility into transactions, provides an audit trail, reconciles input and output and offers a set of controls, checks and balances that help to prevent errors and fraud. What's more, the ability to generate tax certificates, reports and electronic payslips with the click of a button is a major timesaver.

A good HR and payroll solution allow HR managers to focus on performance management, training, skills development, alignment of the workforce with the business strategy, and other key strategic initiatives.

Costs and compliance

According to Nmonwu, Nigeria's federal and state governments are eager to expand their tax bases, and are investing heavily in modernising and streamlining tax administration. Given that they desperately need tax funds for social spending and infrastructure investment, they are closing in on companies that don't comply,

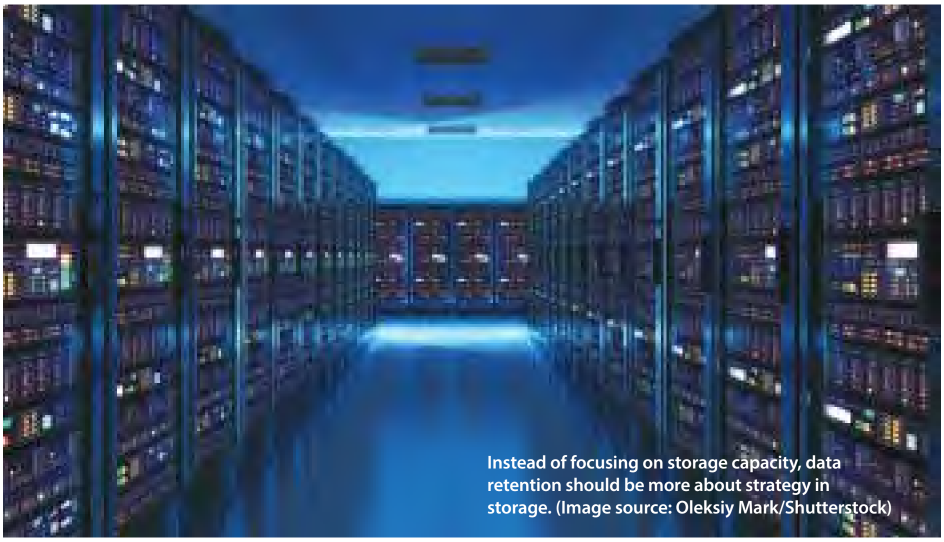
"As such, failing to meet the statutory reporting requirements set out in the Nigerian legislation is a growing business risk for companies in Nigeria. Failure to comply with these laws and regulations can cost a company greatly in fines, penalties, interest charges and reputational damage, which could lead to a going concern issues for the company.

Putting in place electronic or automated systems that allow you to stay ahead of tax authorities and legislation can help you avoid this risk, thereby enabling you to concentrate on your core business functions," said Nmonwu. ■

Essential rules for structured data

How an effective information governance strategy enables management of exponential data growth in a secure enterprise environment

Within the past decade, data growth has accelerated at an exponential rate, particularly around unstructured data such as emails, videos, pictures, documents and spreadsheets. This level of content creation can yield significant insight for businesses, but the sheer volume of information could also prove challenging. With increasing regulations requiring important data be retained for long periods of time, nobody wants to delete anything. The problem with data retention is that it lacks intelligence or strategy. Hoarding data makes it all but impossible to gain insight into important information, because organisations don't know which information is of value to their business. Information governance, in the form of effective policies, processes and technology, is essential in leveraging the value of information while optimising storage capacity and a host of other benefits.



Instead of focusing on storage capacity, data retention should be more about strategy in storage. (Image source: Oleksiy Mark/Shutterstock)

Retaining data to retain business

When it comes to data retention, many organisations simply keep it all, on the off chance that it may be needed at some point in the future. Estimates say that 70 per cent of data retained by organisations has no business or legal value. Accommodating growth is a discussion around storage capacity, rather than the implementation of an intelligent strategy. While storage is relatively inexpensive, this approach simply does not scale with the current accelerating rate of data growth. In fact, it can become a significant financial strain on organisations that simply multiplies as data continues to grow. This has an impact on the business from three different aspects – money, time, and risk. Infrastructure often makes up a large proportion of IT spend, with much of this budget going toward storage capacity. This removes budget from more strategic and value-adding initiatives. In addition, the total cost of ownership of data goes far beyond the cost of the storage.

Managing huge volumes of data also takes a lot of effort and time from many people – it needs to be available, secure, legally compliant and managed efficiently. Finally, hoarding data is perilous. Keeping files that could and should have been deleted means they can be discoverable in the event of a lawsuit. In addition, the cost of eDiscovery is significant – having to sift through piles of irrelevant information takes further time, costs more money, and is often completely unnecessary. The risk impact is bigger than this, however. A disjointed, disparate data management strategy results in files stored in a variety of different locations, making it exceptionally difficult to keep track of who has access to this data. This risk is compounded by mobility, cloud-based file sharing and more, making it easier than ever for data to be leaked.

Success organisational security

Successful information governance requires insight into your data, in order to identify that which has value or must be retained, and that which can and should be safely deleted. This approach to information governance allows organisations to move from a strategy focused on storage footprint to one focused on intelligent data management, which then empowers analysis and more informed decision-making. Insight allows organisations to gain visibility into their data and any governance challenges, implement effective data management policies, and improve data management practices in order to reduce risk and optimise time and money spent.

Insight into data allows organisations to protect the data they need to retain, and eliminate the data they do not – something which is increasingly essential with growing data volumes. Sound information governance is critical in a world where data continues to grow in an exponential fashion. There are many steps that can be taken, from the implementation of age-based policies and archiving strategy to automation of information management processes, to the routine management of volumes of unstructured data. Information governance is a journey that all organisations should embark on sooner rather than later to save time, money and improve their data insight. ■

– Fred Mitchell, Security Software Division Manager, Drive Control Corporation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How UCS Solutions achieved PCI DSS v3.0 audit certification with technical support from Galix

UCS Solutions, a provider of IT services to the retail industry, achieved Payment Card Industry Data Security Standard (PCI DSS) v3.0 audit certification during Q3 2015 with the assistance of Galix, a certified PCI Qualified Security Assessor (QSA). The certification ensures that UCS Solutions' clients have access to best practices and that security measures are in place to protect sensitive cardholder data.

PCI DSS is a standard that was established by the major card issuers – American Express, Visa, MasterCard, Discover and JCB International – to govern the use and security of payment card information. PCI DSS adherence is mandatory for any service provider that stores, transmits or processes any credit or debit card information. UCS Solutions IT executive Glen Khan said, "With the PCI DSS audit and certification, we have put the best practices in place that will help us maintain the highest levels of information security. It gives our clients peace of mind that their data is safe and secure."

This is the first PCI audit that UCS Solutions has undertaken. Khan added, "It was an intensive process – one that Galix's professionalism, highly skilled team and service-oriented approach helped make seamless. Their personalised approach and advice helped UCS expedite the process whilst maintaining the highest standards."

Starting early, working together

As a provider of IT and payment processes, UCS Solutions requires a licence from the Payment Association of South Africa (PASA). To receive this licence, UCS Solutions must be 100 per cent PCI-compliant. With v3.0 of the standard to receive the licence having come into effect in January 2015, UCS Solutions began preparation for its first PCI audit early.

Simeon Tassev, director and QSA at Galix said, "There is much preparation and considerable effort required from the whole organisation and, once achieved, there is a rigorous maintenance schedule that must be kept up."

Readiness assessments began in 2013 with workshops and meetings being held across lines of business and within IT divisions to gain an understanding of the scope and coordinate the responses. This is a critical part of the process. PCI DSS creates a framework that reaches across software, hardware, people and processes. It requires support from the whole organisation, especially as it must be maintained.

Galix added, "Our goal is to ensure the best, most beneficial approach for the business, but also the most secure approach that will facilitate compliance."

The audit

In November 2014, the audit began. Much of the preparatory work had been done but deadlines remained tight. Documents, processes and procedures needed to meet audit standards and, in some instances, be re-engineered to comply with best practice guidelines. Penetration tests and vulnerability scans were also undertaken. Workshops continued throughout the audit to ensure engagement and interaction within the business.

Glen Khan, IT executive at UCS Solutions, with Simeon Tassev, director and QSA at Galix

"The PCI DSS standard covers every system within the business that has anything to do with credit card information – how the data enters and exits an organisation, who has access to it or handles it, how it is used, transported and stored. The standards also cover every aspect of systems – the people, processes and technology (software, hardware, network security) and physical facility – as well as every other system that intersects with these systems," Tassev said.

PCI DSS encompasses 12 specified requirements and 240 sub-requirements. The 12 requirements are categorised into six control objectives, namely to build and maintain a secure network, protect cardholder data, maintain a vulnerability management programme, implement strong access control measures, regularly monitor and test networks and maintain an information security policy.

To achieve certification, the organisation needs to be 100 per cent compliant. Yearly validation, which comprises a full audit of all 240 sub-requirements, is done by a Qualified Security Assessor (QSA).

USC Solutions achieved PCI DSS v3.0 audit certification in April 2015.

The business advantage

UCS Solutions' certification provides it with a business advantage, making it an attractive service provider option to retailers. Tassev explained, "PCI DSS 3.0 will enforce almost 100 changes to version 2.0. The biggest change, however, is that v3.0 makes the business, i.e. the retailer, responsible for compliance with all 12 requirements, regardless of whether it has outsourced payments to a third party. This means that the business now has to be 100 per cent sure that its payment provider is not just PCI DSS aligned, but compliant with all 12 requirements, or face regulatory fines. With this certification, UCS Solutions positions itself well in the payments sector."

Galix will assist UCS Solutions manage quarterly assessments and audits to maintain the certification. Khan said, "PCI DSS v3.0 certification proves to our clients that we adhere to best practice and international standards. More importantly, our clients are assured that their data is safe and secure. This was a good team effort and great achievement."

NCC upgrades its surveillance system

The Nigerian Communications Commission ramps up security infrastructure to keep a better eye on the premises and activities of outsiders

The Nigerian Communications Commission (NCC) has awarded a surveillance tender to Servicetex-Sybernautix Nigeria Ltd to upgrade its existing surveillance solution to incorporate the Axis Camera station

Chris Adigwu, managing director and CEO of Servicetex-Sybernautix Nigeria Ltd., said, "Axis cameras are renowned for image clarity, reliability and performance, and as an Authorised partner to Axis, we consistently work with its cameras in surveillance deployment. Having previously used other brands, I can confidently recommend Axis Communications as the number one camera vendor of choice without question."

After witnessing a host of security breaches, the NCC decided to ramp up its security solution within and outside its premises. The Axis surveillance solution , comprising 35 cameras, provides superior quality images and monitors high-risk areas. NCC has deployed the Axis Camera Station to manage the pan-tilt-zoom (PTZ) cameras as well as the fixed network cameras.

Specifically, Axis chose to deploy the AXIS M3024-LVE Network Camera and AXIS Q6042-E PTZ Dome Network Camera for the NCC's needs. The affordable AXIS M3024-LVE is a vandal-resistant HDTV fixed mini dome for exceptional video during day and night conditions, while the advanced, outdoor-ready PTZ dome, the AXIS Q6042-E is also vandal-resistant and offers 36x optical zoom, plus fast and precise pan/tilt performance for wide area coverage and zoom-in detail.

"Now that we have a birds-eye view of those areas that were previously our high-risk security areas on our premises, we can truly rest assured and focus on the business of our business. We are super impressed with the high resolution images that these cameras are able to capture. We're also pleased with the professional approach taken by Servicetex-Sybernautix. We look forward to working with them when further expansion becomes a reality," said Godwin Owoh, chief security officer of the NCC.

With the onus of managing one of the fastest growing telecom industries, NCC has experienced a range of security challenges of late, such as the presence of unauthorised personnel and theft of cables. Moreover, Nigeria has been on high alert due to terrorist activities and insurgency. Following these developments, NCC decided to issue a tender to upgrade its existing surveillance systems. ■

Encouraging energy entrepreneurs

The introduction of a new generation of solar power boxes is stimulating economic growth in South Africa

South African donor organisation Community Chest has come up with an innovative way to solve the issue of providing electricity to impoverished rural communities, with the distribution of hundreds of specially designed portable solar power boxes to households and unemployed people in the Western Cape province.

Community Chest, which has long been involved in providing long-term sustainable solutions to South Africa's most pressing problems, is running the initiative through its Amandla! Project, which was established in January 2015 thanks to US$150,000 worth of funding from In2Brands and Capitec Bank. Run under the slogan 'Power your Home; Empower your life', the Amandla! Project's strategy encourages entrepreneurs to look at their community and identify needs for various projects or services.

The Ecoboxx Entrepreneur Kit is fitted with two solar panels that provide up to 50kWh of power per charge, generated through unique lead crystal batteries. The package includes two bright LED lights, a USB-driven fan, a pair of hair-clippers and a multi-device cellphone charging cable. Easily transportable, the box can be instantly used at any locale, providing aspiring entrepreneurs the chance to open barber shops and set up cellphone charging points for their communities.

Community Chest is pairing the boxes with basic business training for entrepreneurs, in a bid to reduce South Africa's high unemployment rate, which currently stands at 25.2 per cent. Manufactured by South African technology company Sungrid, the solar device retails for approximately US$300, but Community Chest is making them available at only US$15 each. Five hundred and sixty three entrepreneurs have so far been trained to use the kits, while another 400 will be trained in 2016.

Community Chest CEO Lorenzo Davids says that access to power means access to communication, improved education, better health and employment opportunities, creating a favourable environment to do business. He points out that projected earnings from utilising the kit are substantial, much more than the income for the average South African household.

The CEO adds that a portable, cheap and renewable energy solution is needed for rural areas in South Africa. "This green alternative has benefits not only for the developing world but also for the developed world by reducing deforestation, global warming and decreasing pollution."

Sungrid director Hugo Blaisse explains that the device is highly durable, with double the lifespan of alternative products. "Ecoboxx is a powerful, innovative solar product, providing free electricity to those who need it the most and helping to solve Africa's ongoing electricity problems," says Blaisse.

The Ecoboxx Entrepreneur Kit is fitted with two solar panels that provide up to 50kWh of power per charge, generated through unique lead crystal batteries.

South African electricity provider Eskom says that they appreciate efforts by outside parties to assist with alleviating the issue through the use of renewable energy.

"We are highly appreciative of other parties that are seeking to provide renewable energy to rural households. South Africa's goal is to provide universal access to electricity by 2025, so anybody who is doing their bit to ensure this is doing a good job," says Eskom spokesperson Khulu Phasiwe.

Providing solar power to the poor will also be useful in replacing candles and kerosene lanterns which pose a significant fire risk to South African townships, says South African energy expert Chris Yelland.

Sungrid has also made various models of the Ecoboxx available to members of the public on online shops and retail outlets countrywide. "With no end to our country's energy crisis, consumers everywhere are looking for a solution that will put the power back in their own hands, allowing for more sustainable and productive lives," says Blaisse.

In the interests of spreading its solar power solutions across Africa, Sungrid has established 'Switch to Portable Solar Power' partnerships in Nigeria, Namibia, Cote d'Ivoire, Senegal, Mauritius, Botswana, Mozambique, Malawi, Togo, Ghana, Kenya, the DR Congo and Tanzania. ■

— By Dale Hes

Connections to come for remote communities

The continent's rural poor await the benefits of investment in access to grid connectivity

With much of sub-Saharan Africa's population still enduring a rural energy-poor existence, the electrification of the region's rural area is undoubtedly one of the keys for its socio-economic development. In sub-Saharan Africa, 622.6mn out of an estimated 1.1bn people - 70 per cent - do not have access to electricity.

However, the overwhelming majority of those are located in the rural areas. Only 14 per cent of the region's rural area is electrified, compared with 60 per cent of its urban centres. And at least 50 percent of the entire population in 38 of the 49 sub-Saharan countries live without electricity.

The worst off countries are: Liberia, South Sudan, Central African Republic, Chad, Sierra Leone, Malawi - where 51.4mn of 54.3mn people (94.7 per cent) do not have electricity – and Tanzania. About 70 per cent of Tanzanians live in rural areas where electricity access is a mere seven per cent. The country as a whole has one of the lowest access to electrification rates in the world with only 24 per cent of the entire 45mn population accessing electricity. By contrast, fewer than a tenth of people in North Africa do not have access to electricity.

Lifting people into the light

So, the task of 'lighting up' rural sub-Saharan Africa and lifting its people out of poverty is particularly urgent. Recent reports from a number of bodies including the Rural Electricity Organisation and the Alliance for Rural Electrification (ARE) argue that the case for the Productive Use of Renewable Energy (PURE) and mini grids to act as a 'trigger development' in Africa's rural areas, is by now overwhelming.

Mini grids have been identified as one of the most important platforms to address critical electrification shortages across Africa. And a number of projects utilising different business models and technologies are now underway throughout Africa. But, as delegates at the 2015 Africa Mini Grids Summit held late in November in Nairobi, Kenya, heard, the task ahead is formidable as sub-Saharan Africa's off-grid population is still rising. The most pressing issues include: getting to grips with harnessing the different approaches to mini grids implementation; understanding the implications of the various alternative mini grid policies and regulations; encouraging the use of 'green mini grids'; involving local communities; managing investor risks; and adopting the most appropriate pricing schemes.

Successful projects

Despite the difficulties, some genuine progress is being made. In Ghana's Brong Ahafo, Ashanti, Central, Eastern, Western, Volta and Northern region, EnDev - a multi-donor programme – is succeeding in transforming the country's rural electrification profile. The challenge was to narrow the gap between the electrification rates that are currently in place for Ghanaian households, and the electrification rates for the many micro, small, and medium enterprises (MSMEs). Household electrification, at 80 per cent, is relatively high. But the many MSMEs that account for more than 60 per cent of employment in the country, struggle to get by with little or no electricity. The project has succeeded in providing access to energy for agriculture and small scale manufacturing through: grid electricity for irrigation, solar PV pumps for irrigation and improved cookstoves (ICS).

The project focuses on removing barriers to access to energy through supportive subsidies for small-scale farmers. Farmers can either be connected to the grid or helped with the finance to purchase a decentralised power generation source, such as a solar irrigation system.

Through 2015 EUR1.5mn (US$1.6mn) has so far been allocated to the project's current phase, which EnDev describes as being "very successful". A total of 1,000 MSMEs have either been founded or relocated through the programme and 3,000 employment opportunities created.

Meanwhile, on the other side of the sub-Saharan region, in Tanzania and Rwanda, the Berlin-based social business Mobisol, is assisting rural electrification by delivering solar home and business systems for low-income customers. The business reports that it has installed "over 3MW of capacity and equipped more than 30,000 rural homes and businesses with solar energy". Through 2016, Mobisol aims to provide a total of 100,000 households with access to affordable solar energy, amid an accelerated scale-up. Its eventual target is to bring solar energy to "approximately ten million households" in both Africa and Asia by 2020. Thomas Gottschalk, founder and CEO of Mobisol Group, proclaimed, "Mobisol is now a key driver of rural electrification in Africa."

He claims that Mobisol's micro-financed rent-to-own payment plan allows customers to purchase high-quality systems that are powerful enough to run small businesses.

Further north, in Somaliland, Germany's Phaesun GmbH based in Memmingen is providing off-grid photovoltaic and wind power systems in partnership with the local solar company Horn Renewables. Both partners are engaged in the Phaesun Business Opportunities with Solar Systems (BOSS) solutions projects that is specifically targeting the commercial sector of rural areas.

Solar charging stations for mobile phones have been set up as well as LED lamps with integrated battery for rent, and solar cooling and freezing kits based on the solar fridge Steca PF 166. As of second half 2015 more than 30 solar charging stations for cell phones and lamps have been opened. ■

Nnamdi Anyadike

FG Wilson's milestone in genset industry

Genset manufacturer FG Wilson is set to celebrate the iconic half century milestone in 2016

The company, founded in 1966 by Fred Wilson, supplies a range of diesel-fuelled gensets that are developed in Europe, Asia and Latin America. The gensets range from 6.8 to 2,500 kVA, catering to a wide range of utilities and industries at large. The company's gensets can be found in more than 150 countries, in hospitals, banks, airports, data centres, factories, construction sites, hotels, offices and telecommunication network centres.

While standard products are available in a wide range of options, special solutions for large projects are handled by the FG Wilson Power Solutions Team. Along with the customer, the team works on customised diesel, gas, bi-fuel and high voltage gensets on a project-by-project basis. In addition, the company's products can be customised with bespoke enclosures, cooling systems and specialised control systems. The 50 deg C package option ensures efficient operation in ambient temperatures.

The company is able to reach out to its vast customer network with ease through a network of 370 dealers spread across 150 countries, who provide products, install them as well as service them. Right from genset sizing tools to product data sheets, the dealers are equipped with the latest tools and technology to assist customers with competent prices, specifications and quotations.

Additionally, a team of mechanical and electrical engineers also provide assistance with gensets for specific operations, install the equipment and fix technical snags. A steady supply of stock parts with the dealers ensures they are as ready as can be to deal with crises. FG Wilson has a parts facility in Desford, Leicestershire, UK that ships more than three million parts globally each year.

To have a long-standing reputation as an industry leader comes with a considerable level of preparedness. FG Wilson products all undergo prototype testing on load acceptance, cooling, vibration, noise and water ingress. The facilities to carry out quality checks and tests are located in Europe's largest hemi-anechoic chamber in the company's main facility in Larne, Northern Ireland, which has state-of-the-art acoustic research and test capabilities. Eleven witness test cells execute specialised testing of open and enclosed gensets. High voltage testing and string testing can be offered to simulate conditions where gensets are installed in the field. ■

Precast concrete sector set for growth in 2016

Expansion and improvements in quality and production enable PMSA to retain its leading position in concrete machinery and equipment

Despite leading earthmoving equipment, pipe and electrical equipment manufacturers, together with suppliers, all reporting a significant reduction in sales over the past year, all is not doom and gloom. The negative economic trends experienced in 2015 had abated somewhat by August, with a positive outlook anticipated by year-end.

For PMSA, prospects have improved on already successful performance. As PMSA sales and marketing manager Quintin Booysen said recently, "In the precast sector, we were fortunate to have had a good 2015 and expect a positive start to 2016, with significant orders already being placed for 2016 deliveries. Clients who have always done well are still investing, although looking for new technology and added features, especially for improving plant efficiency by increasing output with the same human resource complement."

Corporate challlenges

PMSA MD Walter Ebeling maintains this view, and noted, "2016 will no doubt have challenges. Companies need to ensure they retain sufficient cash for any continued downturn next year. Companies also need to look at more efficient ways of doing business, from marketing to production methods. The global fundamentals are still shaky and the stability of the rand, along with other emerging market currencies, remains questionable. This instability makes planning difficult. PMSA is therefore fortunate to be opening 2016 with significant plant orders for existing and new clients."

Innovating market conditions

Through innovative plant configurations and new engineering techniques and designs, PMSA is able to offer fully-automated, large-capacity plants that can compete with imported plants, while offering a better technology and quality over imported plants at a more cost-effective price.

The company is celebrating its 40th anniversary in 2016, a significant period that has seen extensive development of optimal and cost-effective solutions for African operating conditions. Booysen said, "We have spent the last five years consolidating our industry-leading position, and ensuring that we are able to offer the best value for money, customisation and service and support back-up. PMSA plants are built to last, with no compromise in terms of quality of plant build, in order for us to be able to offer more cost-effective plants to the market. In 2016, we expect to grow and continue to dominate the market. This is because we are the only concrete equipment producer and supplier able to provide leading technology, full support, training, commissioning, back-up and spare parts across a range of concrete equipment and brick and block plants, from start-up to high-capacity 190,000 bricks-per-shift, fully-automated plants."

Sanjay Panoya, ESL, Nunzio Putifarri, Fiori and PMSA sales and marketing manager Quintin Booysen

With regard to the ample opportunities availlable, Booysen added, "Companies need to broaden their marketing and sales focus to ensure they capture their share of the expansion and infrastructure projects on the continent. As cement costs continue to rise, precast producers are seeking ways of saving on input costs. "One of the easiest methods in this regard is effective curing solutions, whereby manufacturers can maximise cement usage by increasing cement hydration and thereby maximising the strength of the end products. More effective curing of concrete products also means lowering a company's carbon dioxide footprint by effectively using the cement to it maximum. Customers using full curing solutions have reduced their cement usage by up to 30 per cent. With cement being the single biggest cost factor for most concrete producers, this results in significant savings for their operations."

PMSA continues to hold industry training seminars whereby industry participants are invited to learn about the leading trends in concrete equipment. Booysen commented, "PMSA believes in giving back to the industry to ensure it has the latest cutting-edge technology when it comes to concrete equipment."

The company plans to hold six seminars in 2016.

Booysen added, "PMSA is proud to be celebrating so many decades of successful business in Africa, with 2016 anticipated to be another great year of providing solutions and technology to the concrete equipment sector," ■

Smart storage in SA

A South African specialist in brick- and block-making machinery, Hydraform has completed a unique South African project. The Hydraform Building System is being put to use to build much-needed storage space just north of Johannesburg.

A local businessman, Gavin Stanton of Stanton Properties, who owns a parcel of land near Lonehill, found a niche in the market for storage space in the affluent northern suburbs of Johannesburg. With its high land prices, the area has a severe shortage of space for this purpose, so he married circumstance with opportunity and set out to start his own storage business. However, the costs associated with building the sheer volume of storage units he had envisioned were prohibitively high and at first glance, made the project less than feasible.

"The cost of transporting raw materials or even bulk purchases always impacted on the viability of the project," Stanton said. But he soon came upon a solution that could help make the project a reality.

Stanton invested in a single Hydraform block-making machine and a few bags of cement. He used this with the soil and water from his own building site to manufacture his own dry-stacking interlocking blocks and the project was soon well under way.

"We looked at several options for sourcing material and equipment to reduce the costs, but the Hydraform system made total sense," Stanton observed. "It gives economy of scale by using the soil on my own property and also gives me full control over the quality of the bricks I manufacture. The system negates excessive transport costs, can be used by unskilled labourers and the speed of construction using dry-stacking blocks is truly impressive, not to mention the low cost."


Hydraform has proven its mettle in yet another unique South African project

Secure units

The first storage building, containing 57 individual storage units, was completed after only 18 months, a timeframe which included training unskilled labour to use the Hydraform equipment and also establishing a 'brickyard' in close proximity for curing the blocks. Once the project is complete, the storage complex will include four double-storey buildings, each measuring in at 16 by 36 metres, and will be roofed with a waterproofed concrete slab for extra security. Solar panels will cap all four of the buildings, which will help mitigate up to 17.5kW hours of electricity against the building's total energy usage.

A boundary wall and guardhouse as well as control room for a cellular phone base tower, which is also part of the site, will all soon be completed using Hydraform technology for a consistent look and feel.

"At the current speed of construction, I expect the remaining three units will be completed in about two years. After that, the equipment will be put to further good use on a few other projects I have in mind that could do with the Hydraform touch," Stanton said.

ELKON's new mobile unit

With construction setting off on a rapid pace across the continent, *African Review* caught up with Serkan Ozkan of ELKON Concrete Batching Plants at The Big 5 in Dubai to see what the company is offering African customers

What brings you to The Big 5 this year?

We have been participating in The Big 5 exhibition for about 15 years now. It has become an international and prestigious exhibition, and not only for the Middle East market. We have the opportunity to meet a lot of our customers from African countries. That's why we are here, to show customers some of the new products from our company and to explain to them our new technologies we are offering world-wide.

What new product is ELKON showcasing here?

We have a new product that we call the ELKON Mix Master-30. It is a new mobile concrete batching plant and as far as I know, it is the only plant in its segment at this exhibition. This new concrete batching plant provides many advantages to its users. For instance, all concrete batching plants normally need installation but this mobile unit does not need any installation. That makes it possible to use the same batching plant to produce concrete at different job sites in the same day, even if they are 50 or 100 km away from each other.

The unit is designed on a unique chassis which has tyres and axles on it, and in addition to mobility and ease of setting up, the concrete produced meets international standards. It also has certified and accurate weighing and mixing systems.

We have established this batching plant in the recent months, and have already sold many units in Ghana, Nigeria, Ethiopia and Kenya.

How does the output of the mobile unit compare with conventional batching plants?

Actually, the unit has been designed especially for small projects and small contractors. However, the capacity is 30 cu/m per hour, which is not low. Even our earlier mobile batching plant had the same capacity but it was bigger and more expensive. We have used a unique design with a new mobile chassis to make this unit cheaper and smaller.

The automated welding robot at work in the ELKON factory

ELKON Mix Master-30 being transported between sites in Ghana

Is there any other area of focus for the company, looking at the African market?

Along with the mobile concrete batching plants, ELKON Quick Master series compact concrete batching plants are also sold quite well in Africa because of their transport advantages. The compact plants are especially designed to fit into a minimum number of containers, making it very cost-effective to ship them to overseas countries. Along with transport advantages, these plants can be quickly installed, require minimal foundation cost and area and are easy to maintain as well.

How have you been upgrading the manufacturing side of your operations?

Over the last few years, we have started to use automated welding robots in the production of our batching plants. At the moment, we have 10 units of automated welding robots and these robots are now used to do about 85-90 per cent of our total welding work for the concrete batching plants in our company. We use the robots for welding our other products as well.

We will continue to make technological investments with the vision of having the world's most technologically advanced concrete batching plant factory.

How is the use of automated welding robots advantageous to production?

The technology is precise and accurate and provides the highest level of quality for the finished products. These robots perform not just the welding after welding, they take photos and non-destructive measurements of the welding, and give a complete quality report after finishing the process.

Using the robots has also helped us increase our production capacity. We are selling 300 concrete batching plants annually and our production capacity is 500 units per year now. ■

Integrated architecture

The grid – the infrastructure that delivers electricity from our local utility and municipalities to buildings – is over-taxed. Because of increasing demand during peak time periods and the imminent output of renewable energy sources such as solar and wind when South Africa's Independent Power Producers (IPPs) start contributing with supply, the grid is less able to provide a stable energy supply. However, by linking all supply and demand elements through intelligent two-way communication, the grid could constantly monitor demand and adjust delivery accordingly. That's the idea behind the "smart grid." For example, by interfacing with home appliances or building controls, the smart grid could allow those energy-consuming devices to operate in off-peak periods and disable them during peak periods to save energy, reduce strain on the grid and enable users to consume electricity when it is least expensive.

Connecting the utility with the consumer

In South Africa, there is not a 'smart grid' per se, but the natural progression to the country's energy crisis is to implement the technology in order to connect demand to supply capabilities and deliver bi-directional information between the utility and the consumer. It will drive consumer usage and behaviour through 'time of use' billing and enable facilities (and consumers) to reduce their consumption during peak periods. Facilities will be able to control their energy loads by having them connected to a smart grid and enable companies to manage their own load-shedding. This will deliver significant financial benefits to organisations and assist the utility to manage demand better. To deliver all the benefits the smart grid has to offer, smart buildings need to be connected to it.

A smart building provides some or all of the following advanced capabilities:

- Optimised coordination of energy loads, on-site energy generation and energy storage.
- Fully integrated control of lighting, heating, cooling, ventilation, IT, and other energy consuming systems, using weather data and information from security, scheduling and other business systems to optimise performance.
- Advanced diagnostics and automated measurement, verification and reporting of energy and greenhouse gas emissions savings.
- Continuous two-way communication between the building and the grid.
- Automatic demand response to dynamic pricing signals from the grid. By utilising smart building technologies, owners and tenants can vary electricity usage in response to signals from the grid when prices change to consume electricity when it's cheaper, and they can reduce demand when the grid is reaching capacity.

This is known as 'demand response'. Smart building management systems can automate a short-term reduction in energy demand through load shedding or load shifting. For example, if the owner sets an electricity price threshold for the building and the grid signals that the price will exceed that threshold at a particular time of the day, the system would automatically reduce energy demand in the building at that time. The system could turn off non-critical loads, reduce lighting levels and let building temperatures float within limits or start the use of stored or on-site energy generation.

Responding to demand

Combining smart grid and smart building technologies improves reliability and security, while reducing energy costs and greenhouse gas emissions. Johnson Controls has been providing smart building technologies to customers for years and those customers are reaping the benefits. ■

Neil Cameron, general manager, Johnson Controls Building Efficiency

Taking better care in Tokai

Murray & Roberts Western Cape is building the Melomed Hospital in Tokai for the Melomed Group

Murray & Roberts and Melomed Hospital Holdings improve Western Cape healthcare with new facilities

A new 148 bed hospital is being constructed by Murray & Roberts Western Cape in the southern suburbs of Cape Town. The Melomed Tokai Private Hospital, estimated to cost R350mn (US$26.3mn) and create over 1,000 new jobs, completed before the end of 2015. The project marks a significant vote of confidence in the Western Cape economy and healthcare sector.

Melomed Hospital Holdings is the largest wholly black-owned and managed private hospital group in the Western Cape. The Melomed Group had its humble beginnings in 1989, with the Melomed Gatesville Private Hospital (also built by Murray & Roberts) being the first private hospital on the Cape Flats. Melomed then went on to acquire Melomed Mitchells Plain and Melomed Bellville hospitals and in 2014 the group established Melomed Claremont Private Clinic, which is a standalone psychiatric clinic in Claremont.

A fully-fledged facility

The 17,000 m^2 Melomed Tokai Private Clinic is situated on the corners of Main and Keyser roads, and will be the only fully-fledged acute medical facility in the immediate and surrounding community, which is currently underserviced with private hospital beds.

The hospital will also provide the first and only complete cardiac service for the immediate stabilisation and treatment of cardiac patients in the southern suburbs of Cape Town. This will be ably backed by Melomed24, the Melomed Hospital Holdings Group's dedicated emergency response ambulance service.

The services provided by the hospital will encompass the full spectrum of medical and surgical specialisations and will have 35 adult medical beds and 22 surgical beds. Facilities for babies and children will comprise five neonatal ICU beds and 10 cots. There will also be 15 beds for psychiatric patients and another 15 beds will be available for day patients. The facility will also offer speciality services such as renal dialysis, oncology units that cater for chemotherapy and radiotherapy, nuclear medicine, specialised radiology inclusive of MRI and CT scanning facilities and a pathology laboratory.

Knowledge-sharing for extended development

The Murray & Roberts Western Cape team on the project also completed extensions to the New Kingsbury Hospital, and their

A concrete pour at Melomed Hospital. Murray & Roberts Western Cape used 6,000 m3 of concrete on the project, which has a footprint of 3,000 m2 acquired knowledge is being shared with the professional team in a proactive manner in order to ensure that lessons learned are passed on and incorporated into the construction process.

As with any development of this nature, scope changes during the construction process are part of the reality, and Murray & Roberts Western Cape has worked closely with the client and professional team throughout the project in order to minimise the impact of such changes through innovative procedures and careful planning.

The client is also appreciative of Murray & Roberts Western Cape's commitment to health and safety on the project, and site agent Wesley Kent champions the ZERO HARM culture which has been inculcated in all stakeholders associated with the construction works. The project has run for 15 months without a lost time incident and all workers understand their individual and collective responsibilities to maintaining a safe environment. ■

A concrete pour at Melomed Hospital. Murray & Roberts Western Cape used 6,000 m3 of concrete on the project, which has a footprint of 3,000 m2

Challenges on the project included working in constrained site conditions

Ensuring safety on and around scaffolds

What to consider when erecting, utilising and removing scaffolding from a project site

The business of erecting and dismantling scaffolds bears significant risks. Scaffolding companies and the constructors they serve have to consider several safety implications, not only to scaffolders and site workers, but to the general public.

Safe scaffolding operations

It is important to remember that a wide range of people ranging from clients through to the self-employed have responsibilities. In simple terms, it is a critical requirement of site operation that scaffolding work is properly planned so that work may be carried out safely on site. Moreover, When scaffolding operations are in progress, the public must be excluded from any operation area, and that there is a sufficient area of safety around the work site. Steps to ensure this would include establishing a temporary pavement or street closure whilst operations are carried out; operating during "quiet" periods (for example, early in the morning, at night or at weekends; incorporating fans, decks and tunnels as early as possible into a scaffold; erecting and maintaining barriers and signs, and diverting the public away from any site of operation; storing scaffold clips and any loose materials safely on the scaffold; and ensuring that any material lifting and lowering takes place away from public areas and at a safe distance from site workers. Additional consideration must be given also to proper access to scaffolding for any disabled persons working on site.

Ensure scaffolding operations are undertaken safely (Photo: Sean Nel/Shutterstock.com)

No fears at heights

Scaffolders work at height. Hence, scaffolders must follow safe work procedures to prevent falls. When lifting or lowering materials, for example, scaffolders must be clipped on or working within a fully-boarded platform, with guard rails and toe boards. In a safe working environment, a company will obligate workers to wear safety harnesses at all times and that they are fitted with a 1.75m length lanyard and a 55mm opening scaffold hook. When used, and where falls of four metres or more are possible, harnesses should be clipped to a secure point.

The scaffold must be tied in to a stable structure during the lifetime of deployment - for example, a ledger, transom or guard rail supported with load-bearing couplers, or a transom supported by ledgers in a lift above fixed at both ends by single couplers. At least one bay should be boarded out during the course of the work, and this section should be used for access by ladder extending to the full height of the scaffold, with safe access to the ladder established as early as possible when erecting the scaffold. On no account should scaffolders clamber up and down scaffolds without proper ladder access, or work with safe platforms on each lift.

Fixed floors for workers

It must be acknowledged that many scaffolds collapse. To ensure a scaffold does not collapse, to ensure a scaffold is stable and secure, there are several measures that can be taken. Ensure there are anchors to tie a scaffold to a structure, and that the anchors are suitable for the material they will be attached to,, and that they are attached correctly. Ensure that scaffold anchors (or ties) are attached as each stage of the erection work proceeds. Ensure, too, that attached anchors or ties are not removed early during dismantling. Do not overload scaffolds with equipment during erection and dismantling. Ensure effective and sufficient mentoring, supervision and monitoring on site, with a strong emphasis on preventing accidents.

Keeping a watch

Monitoring is a particularly important function for the scaffolding contractor. Reasonable steps must be taken to ensure that any work being carried out on site is undertaken safely throughout the lifetime of a project. Check the training levels of scaffolders, and be clear about who is to carry out supervision on site. Monitor scaffolders to ensure proper safety standards are being adhered to at all times. ■

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Controlling costs to meet project criteria

How expertise in project management and best practices can lead to cost certainty in African mining operations

A smart and accurate work breakdown structure, budget and schedule can cut up to 10 per cent off a project's final installed cost because key performance criteria can be simply and effectively tracked and controlled, says John Dixon, project manager at SNC-Lavalin. With its keen understanding of project management in an African context, including flagship projects in the Democratic Republic of Congo, Madagascar, Zimbabwe and Malawi. SNC-Lavalin is well placed to offer this expertise and know-how to its clients.

"We have carried out various studies and executed projects in the iron ore, copper, gold, and rare earths market sectors. One of the challenges facing projects in Africa in general is 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," Dixon said.

Dixon warns against the misperception that money is being spent unnecessarily on project management and controls. He said, "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. Compromising on this aspect

SNC-Lavalin's keen understanding of project management in an African context includes flagship projects such as Katanga Mining's Kamoto Copper Company expansion project in the Democratic Republic of Congo

SNC-Lavalin focuses on engineering for simplicity of construction, which often means modularisation and containerisation

can and often does materially increase the remaining portion of the initial capex investment by incurring lengthy delays, spiralling contractor claims or realisation of other risks."

Managing engineering man-hours

The ratio of management to engineering man-hours, and the relative contributions of the various engineering disciplines, can vary widely from one project to another.

"It is vital that the specifics of each project are well understood and considered when establishing project schedules and budgets in order to facilitate effective monitoring and control," said Dixon.

A major challenge is educating operational management 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," Dixon said. "More is 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. Leveraging low-cost procurement

The fundamentals for mining projects such as Katanga Mining's Kamoto project in the Democratic Republic of Congo remain lucrative and continue to offer opportunities, according to SNC-Lavalin

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

Commitment and responsibility

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. A half-hearted approach and commitment by owners and contractors towards these key reviews and responsibilities can have potentially dangerous consequences.

"It should always be remembered that engineers carry a legal responsibility to ensure that their designs are implemented faithfully, irrespective of whether they are appointed to oversee construction activities themselves or not. 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," Dixon said. ■

Hope for Obuasi Mine

Ghana's ailing Obuasi Gold Mine will get a new lease of life if ongoing joint venture talks between owner AngloGold Ashanti and South African miner Randgold Resources are conclusive.

Under a JV agreement signed to revamp the mine to a world-class, high-grade mine, there are conditions to be fulfilled, chief of which is an approval by the boards of Randgold and AngloGold Ashanti of the final development plan being prepared by Randgold and expected to be delivered to both boards by 31 January 2016.

Necessary approvals must also be received from the Ghanaian government for the implementation of the development plan, and formation of the JV on terms acceptable to the parties, including a revised stability plan.

AngloGold Ashanti's CEO Srinivasan Venkatakrishnan, who confirmed this in Accra, said, "Given the range of issues, we have to take a tough decision because you cannot fix the tires of a car in motion; you have to stop and examine it and you got to say, how do I actually modernise the mine? What this has done is that it has opened up a path way for Obuasi to be sustainable in the long-term, like 10 to 20 years'.

At the end of 2014, AngloGold Ashanti suspended its underground operations, placed the mine under care and maintenance and dismissed 4,300 of its workforce, which cost it US$220mn in severance payments. Despite the partial shutdown, the mine continued to process tailings and embarked on a feasibility study on the redevelopment of the mine. According to Venkatakrishnan, both mining firms will ensure the mine is revived. "What it means is we will open up the mine and solve historical issues which we have done, some of them when addressed will generate a promising return not just for Anglogold Ashanti, but all stakeholders."

Randgold's CEO, Mark Bristow, agreed with his AngloGold Ashanti counterpar.

Mr Bristow explained, "Obuasi is a world-class resource. We now have to see if we can convert it into a world-class mine. We have a long history of cooperation with AngloGold Ashanti and we look forward to working with them again on charting a new course towards a viable future for Obuasi."

This development has given rise to high expectations that most of the dismissed workers will be recalled.

Venkatakrishnan said that the opportunities were available for qualified personnel, adding, "We have to look at the feasibility studies and labour plans for restarting the mine, and it will be the case of the best person for the job. At the end of the day, you cannot run an operation in Ghana without Ghanaian workforce."

- Kafui Gale-Zoyiku

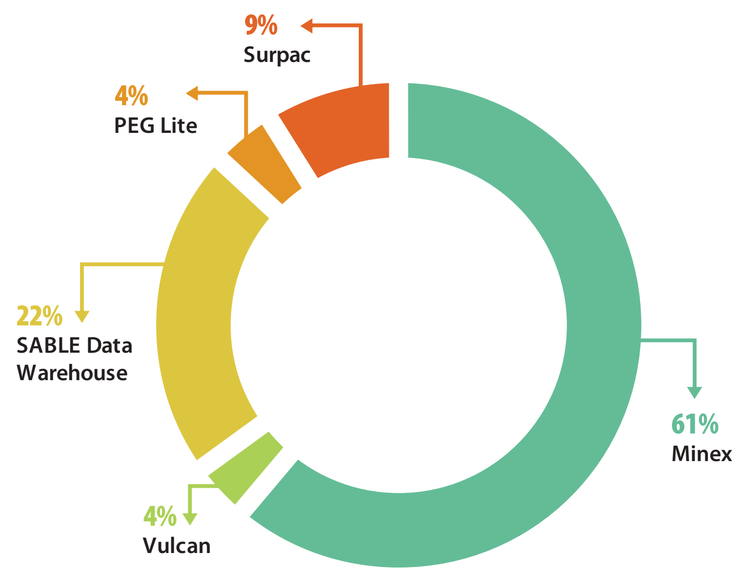
Optimising extraction operations

Understanding the rapid evolution of mine-planning software use

There are few fields of product development in the mining sector that have evolved as fast as mine planning software. That led Dr. Bekir Genc, a lecturer at South Africa's Wits University School of Mining Engineering, to conduct his PhD on the topic. He was interested in which software was, in practice, most relevant to each of the functions carried out by software developers and mine planners. His research, which earned him his doctorate from Wits earlier this year, now helps software users to make better decisions when purchasing new software or planning to upgrade the tools of their trade.

"Although the software companies are trying to feature as much functionality as possible, in many cases the software that is being purchased by the mining company is not adequate for the intended purpose," said Dr. Genc. "Every piece of software comes with limitations."

Geological Data Manangement Software Utilisation for Coal



Data for South Africa (Source: Dr. Bekir Genc/University of Wits, School of Mining Engineering)

Data-driven improvement

Given the wide range of applications for mine planning software, this is not difficult to understand. There is barely any aspect of the average mine which is not served by one or more specialist software programmes, and include the following: mapping; geological data management; geological modelling and resource estimation; mine design and layout; planning and scheduling; financial valuation; and mine optimisation.

"Bearing in mind that each software provider's product is not compatible with the others, it is difficult for customers who are trying to find a programme that addresses their particular needs – without having to acquire too many different products," he said.

To overcome some of these challenges, software vendors offer additional modules to the existing software. This, however, makes it more difficult to tell the core functionality of the software from the 'add-on' features.

What was required, said Dr. Genc, was a "methodology to evaluate mine planning software utilisation to enhance decision-making strategies in South Africa to improve efficiencies within the mining sector."

He populated a database with data from software providers, consultants and the Department of Mineral Resources, and created a framework to link South Africa's main mineral commodities with core functionality of softwares being used. This allows users to see which software is the most utilised not only for the function for which it is used (for example, geological modelling) but also for the commodity in which the user is engaged (for example, coal or gold mining).

"It is difficult to distinguish the actual reasons behind the acceptance of a particular mine planning software, as most software have similar features, but the relationship between software vendors and customers in the mining industry, as well as after-sales service and customer support play a very important role to decide which software to choose and use," he said.

A key issue is that choice of software is often based on individual user preference, which may change when a new planner is employed.

"The staff turnover within the mining industry is historically high, so competent mine planning software users tend to move around quite often," said Dr. Genc. "If the new appointee is not familiar with the existing mine planning software package, the mine may consider purchasing a new mine planning software package which the new appointee is familiar with."

Dr. Genc added that most mine planning software users prefer using a combination of software, which made his research more complex. His final study focuses on which software is most utilised in each of six mining functions, and within two commodities – coal and platinum group metals.

"When interpreting the obtained results for the functionality of geological data management in the commodity coal, for instance, we can see that Minex software clearly is the market leader at 61 per cent of mine planning software utilised, followed by SABLE Data Warehouse with a 22 per cent market impact," he said. ■

Visual cues for the workplace

KBC shows that miners can be taught safety practices in an engaging and interactive manner

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 recently 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, namely; 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.

Adhere to the regulations prescribed to working at heights

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. Ms 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."

Pitout is confident of future success. "Given the success of the programme in the mining sector, I believe 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 concluded. ■

Infrastructure

Taking on confined spaces with Tusker Low Headroom Hoist

The ultra-compact Tusker Low Headroom Hoist is reputed to be the lowest headroom hoist available in the market. One of the newest additions to the **Elephant Lifting Equipment** range, this steel wire rope hoist is suitable for lifting in areas where height restrictions or confined spaces are an issue.

This lightweight hoist's design allows it to be run on a smaller beam, without compromising any of its lifting capacity. The new hoist has been engineered with the crawl motor and the hoist motor balanced on either side of the beam and innovative engineering design sees the reeving system mounted in the centre of the unit.

Elephant Lifting Equipment managing director Grant Walton said, "This has resulted in a gain of 600mm, further reducing the space requirement."

Another unique feature of the hoist is that the hook itself can be retracted into the body of the hoist, further eliminating wasted headroom.

The unit is extremely competitively priced, making it accessible to all end users and is driven by an energy efficient motor, resulting in reduced energy consumption. It is supplied standard with a soft start, which reduces swaying, and it is equipped with overload protection.

Taking on confined spaces with Tusker Low Headroom Hoist

Simple to install and maintain, the Tusker Low Headroom hoist is designed to accommodate a wireless remote system with digital readout capability that indicates the hoist's load range limiting features for facilitation of optimum safety levels.

In addition, an advanced electro-mechanical braking system not only ensures minimum impact on the gearing when the motor stops, but also acts as an additional safety mechanism and ensures that in the event of a power failure, the hoist will stop automatically and the load will not run.

The Tusker Low Headroom Hoist is available in working load limits from 3.2 tonnes up to 12.5 tonnes and uses standard steel wire rope, which is available ex stock from the distribution network of parent company, Torre Lifting Solutions.

"Very importantly, as with all lifting equipment supplied by the company, there is full traceability to the original equipment manufacturer. This ensures the integrity of the product itself and allows for optimum accountability," Walton said.

Brokk's new breakers

A leading supplier of demolition robots, **Brokk** has launched a completely new product range, the Brokk Ex machines. These explosion protected machines are designed for use in hazardous environments, such as oil and gas industries, underground industries and other environments where there is risk of explosive gas being present.

The Brokk Ex machines are explosion-protected demolition robots, called 'Brokk Ex'. The Brokk Ex range is available for all sizes of Brokk machines, from the extremely compact Brokk 60 to the big and very powerful Brokk 800. These machines are all designed to be safely operated in environments where explosive gas might become present. The machines have the same induustry-leading performance and can use the same broad range of powerful attachments as the standard Brokk machines. The Brokk Ex machines are classified up to Equipment class 3G IIA T3, according to the ATEX 1994/9/EC directive. This means that they can be used in what the ATEX directive calls Zone 2, where explosive gas, vapor or mist is not likely to occur in normal operation, but could occur for short periods of time.

"This is an exciting new step for Brokk. We have received an increasing number of requests for explosion proof machines, where customers want to take the unique compact and flexible performance of Brokk machines to these kinds of hazardous areas", said Martin Krupicka, CEO of Brokk. For hazardous environments, the Brokk Ex machines are especially suited to applications within oil & gas, mining and tunneling industries, as well as applications in other hazardous and potentially explosive environments. All the benefits of Brokk machines that we take for granted, such as the compact size, powerful attachments, flexibility of the three-boom system, precise remote operation, and more are now available also in these hazardous environments.

Designed to tackle a wide range of different demolition task, the Brokk Ex machine brings safety, efficiency and versatility to almost any job.

"Yet again, this shows Brokk's dedication to continue push the boundaries of what is possible to do with demolition robots", says Mr Krupicka. "Over the last few years, we have added to the versatility of Brokk machines by introducing new attachments. Now we add a whole new area of operation."

Infrastructure

Virtual machinery purchase made easy through IronPlanet

Online marketplace for buying and selling used heavy equipment and trucks **IronPlanet** guarantees its customers on the veracity and quality of equipment condition, which strengthens a business relationship based on trust, according to the company.

"A key benefit that IronPlanet offers, unlike other auctions, is our guaranteed inspection reports," said Felipe Fernández-Urrutia Masco, vice-president, European Sales at IronPlanet.

On an average, the online portal has 135 countries participate at any one of its auction. The European-headquartered portal has a multilingual workforce with a call-centre that can handle calls in 13 languages and the website is available in English, French, German, Italian, Spanish, Polish and Russian.

"These inspection reports, backed by our exclusive IronClad Assurance, ensure that our buyers know the true condition of the equipment and can bid with confidence."

Detailed inspection reports for each piece of equipment in the auctions can be viewed on www.ironplanet.com. The reports include a visual inspection of key systems and components along with ratings and notes, images of the equipment, wear-related measurements and oil/fluid samples if and when appropriate. IronPlanet inspection reports are considered the industry standard by both buyers and sellers.

For the seller, IronPlanet has a number of advantages.

There are no transport costs to an auction house, the equipment stays on the seller's yard until paid for, and the buyer pays for disassembly and transportation. The worldwide audience and high bidder participation also highly increases the value of the sold items. IronPlanet holds weekly auctions in the USA and its monthly auctions in Europe draw an international audience of over 4,000 attendees per auction. The auctions feature a wide range of different machines, such as backhoe loaders, compactors, dozers, excavators, cranes, tractors, trucks and more.

IronPlanet offers inspection reports for buyers

"Six years on from IronPlanet's decision to expand into EMEA, the company has sold over US$3bn worth of used equipment worldwide - and the pace of this success shows no signs of slowing," Masco revealed.

Creating change in construction with the cloud

While technology continues to evolve, we often don't stop to think about why the world around us seems to be in a constant cycle of change. The reality is that keeping customers happy is what drives most innovation. Whether it is an app or something else in the cloud, the user experience is what matters most. This phenomenon goes further than most would expect and is even prevalent in construction as teams continue to grapple with large and unyielding construction projects, not yet realising that technology innovation can not only make things easier, but also ultimately lead to a happier team.

Collaborating to create impact

The challenge when it comes to any change in the construction industry, whether technological, process-based or other, is that as with most innovation, a learning curve is inevitable and disruption to the 'norm' can be expected. Change is a natural process and will always lead to a more evolved and efficient process, but requires the acceptance of a level of disruption to the established comfort zones in methodologies and mindsets, along with the associated growing pains.

According to John Haefele, managing director of **Onsite Control Systems**, the focus on construction projects today needs to shift and technology provides the way in which to do this effectively. Speaking recently on the subject, he observed, "Construction management is one area where the application of collaborative technology can make a significant impact on the end result of a project in terms of time, budget and customer satisfaction."

While the industry is not entirely open to change, the construction and project management arenas understand the value of collaborative interaction around issued information and toward that, one needs to improve how information is created and disseminated.

"A cloud-based project management system can address so many of the areas that have historically led to project issues and failures, very evident in the management challenges incurred by information being issued in the myriad of forms and routes used today," Mr Haefele said.

> **"Onsite Control Systems shows how connected technologies are driving African constructors in new directions"**

"People and relationships build buildings and this arena will always be one of relationship challenges leading to either proudly memorable, or sooner forgotten, stories of team-driven success or failure. A system like ours is designed to uplift and motivate team players in managing themselves and their teams more effectively, and to provide the support structure that gives all members across all disciplines a no-nonsense platform through which to work together. Allowing teams to co-ordinate, issue and manage their information, themselves and their teams in a significantly improved environment, reducing the excuse for disharmony leading to non-performance."

Profitable performance, optimal operator comfort

The **Caterpillar** 303E CR is designed for the user looking for productive and reliable performance in a functional design, at a low cost per hour.

With a maximum operating weight of 3,530kg, a width of only 1,550mm across the blade, and a compact radius design that limits the tail swing to 127mm, the Cat 303E CR mini hydraulic excavator is ideal for working effectively and safely on width restricted job sites.

An efficient working environment

The new model's 17.5kW Cat C1.3 engine is fuel efficient and combines with the load-sensing hydraulic system to provide smooth and precise operation. The 303E CR's operator environment is spacious and uncluttered with easy to use controls and the robust and simple instrumentation provides all vital operational information.

All operator stations, in cab or canopy configurations, are ROPS, TOPS, and Top Guard Level 1 certified, and the Cat interlock system, which prevents hydraulic movement when the safety bar is raised, adds further to operational safety, as do the standard travel alarm, automatic swing brake, and retractable seatbelt.

An automatic two-speed travel system enhances overall machine efficiency and ease of operation, and an automatic engine-idle system conserves fuel and reduces sound levels.

The 303E CR's hydraulic system uses low-effort, pilot-operated joysticks that provide more precise, more consistent control than mechanical-linkage controls. For operator convenience, auxiliary-hydraulic controls are integrated into the joysticks, making the 303E CR work-tool ready with both a one-way-flow circuit for tools such as hydraulic hammers and a two-way-flow circuit when using work tools with cylinders or bi-directional motors.

To increase operator productivity and efficiency, the 303E CR's bucket can rotate 200 degrees, providing excellent material retention at the top of the lift cycle when loading trucks and allowing for deeper flat-back trenches without repositioning the machine.

Cat 303 CR

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