Issue 3 2018
Édition 3 2018

Communications Africa Afrique

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The challenges facing operators

Backhaul

Controlling the costs

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CONTENTS

FEATURES

A note from the Editor

WE EXPLORE NEW opportunities and challenges affecting Africa's communications sector in the latest issue. This edition focuses on the ICT industry - including the growth of cloud computing in Botswana and the benefits this brings. Also in the ICT sphere, we have an event-preview of the upcoming ITU Telecom World show taking place in Durban, South Africa and a look at artifical intelligence, one of the topics to be covered at the event, and how it can unlock scale and opportunity to deal with challenges facing the sector.

Une note du rédacteur

NOUS EXPLORONS DE nouvelles opportunités et défis affectant le secteur des communications de l'Afrique dans le dernier numéro. Cette édition se penchera sur la croissance de l'informatique en nuage au Botswana. Toujours dans le domaine des technologies de l'information et de la communication, nous avons un aperçu de l'événement ITU Telecom World qui se tiendra à Durban, en Afrique du Sud. Nous examinons également l'intelligence artificielle, l'un des sujets à traiter à l'UIT et la façon dont elle peut débloquer l'échelle et les opportunités pour faire face aux inconvénients.

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Subscriptions: circulation@alaincharles.com
Chairman: Derek Fordham
Printed by: Buxton Press **Printed in:** May 2018
Communications Africa/Afrique is a bi-monthly magazine
ISSN: 0962 3841

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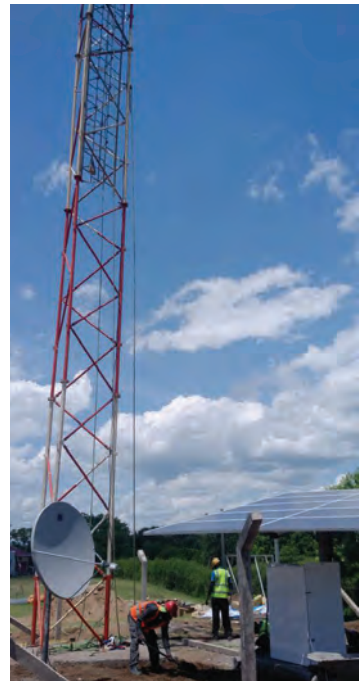
Uganda Joins Forces with Intelsat, ITSO and MTN

INTELSAT, OPERATOR OF the world's first Globalised Network and leader in integrated satellite solutions, announced that Uganda's Communications Commission (UCC) will utilise Intelsat satellite services and Gilat Satellite Network's ground infrastructure to advance the roll out of 3G wireless communications infrastructure and expand high quality, affordable broadband access for businesses and communities in rural areas of Uganda.

Under a pilot programme, the UCC will use IntelsatOne Mobile Reach Solar 3G satellite services delivered via the Intelsat 37e satellite and Gilat's SkyEdge II-c multi-application platform to provide high-quality, resilient and affordable broadband connectivity to two communities – Bufundi in Rubanda and Kibuku in Ntoroko. The improved performance, efficiency and lower total cost of ownership delivered by Intelsat 37e, the fifth of the Intelsat EpicNG satellites and one of three serving Africa, will enable Uganda to quickly extend broadband connectivity to rural areas of the country in a cost-efficient manner.

The aim of the remote connectivity project is to demonstrate the ease of deploying the satellite solution, while also looking at the commercial viability and sustainability of the solution. This will support the acceleration of the Uganda government's broadband strategy, particularly its goal of achieving minimum broadband speeds of 3 Mbps and coverage of 100 percent of Uganda's rural areas by 2020.

The International Telecommunications Satellite Organisation (ITSO) is working alongside member states to achieve the United Nation's Sustainable Development Goals by 2030 and has played a key role in coordinating efforts and bringing the private and public entities together to benefit the two communities in Uganda.



UCC will use IntelsatOne Mobile Reach Solar 3G satellite services. (Photo: Intelsat)

"Extending broadband connectivity and delivering fast, affordable Internet services to everyone in Uganda remains one of the Uganda government's primary missions," said Godfrey Mutabazi, executive director of the Uganda Communications Commission. "With more than 80 per cent of our population living in rural areas, this has been a technological and budgetary challenge. With this combined effort and the innovative approach the companies are bringing, we believe citizens in some of our most isolated communities will experience the power of reliable connectivity and the economic and social benefits it delivers."

Ingencio partners with Paycode

FRANCE'S INGENICO GROUP has joined forces with payments technology company Paycode to help Zambia roll out a biometric system which is used to distribute subsidies.

Under the government programme, called Farmer Input Support Programme (FISP), Zambia provides beneficiary farmers with subsidized fertilizer and hybrid maize seed.

Farmers enrolled in the system have their fingerprints stored for authentication and are issued an electronic wallet. "We are proud to have served the Ministry of Agriculture by providing world-class technology that works in the remotest environments. We look forward to expanding our solution so every Zambian can have their money at their fingertips," said Gabe Ruhan, director of Paycode Zambia.

Creating a business culture in the cloud for the remote worker

WHAT SEPARATES A good company and a great company? More often than not, great companies have a strong identity and a strong business culture. However, for companies with remote workers and independent workers, that can be hard to achieve. The answer may be in the cloud.

Within the industrial sectors, oil and gas, and energy sectors, remote workers and small independent teams work everywhere for you. Particularly across the continents of Africa and the Middle East, and those who are based offshore, a handful of people will be hundreds of miles away from any of their colleagues. Of course, we have social media and promotional materials, but today, these are less effective, with colleague engagement decreasing over time. This is why targeted advertising using information collected off social media and web browser can be so crucial.

Across many of the sectors I mentioned above, we use cloud technology to improve efficiencies, operational strategies and production flow. This can be done with smart flow metres in refineries, Augmented Reality (AR) and Virtual Reality (VR) glasses and screens, and tracking and response apps on smartphones. But a business culture is harder to define, pin down, and quantify. In fact, many workers may not even realise that they are part of a business culture. Those isolated are in even more danger of losing sight of company goals and instilling business values and ethics into their own work.

For workers to understand what the company is trying to achieve, we can continuing to use cloud technology. In particular, we can harbour elearning resources that workers can access from anywhere in the world with collaborative tools to engage with their other colleagues. This can driven by both management and by colleagues to both promote a business culture and to engage with it. This can be done via a learning platform.

In practice, managers can speak to their team by recommending reading, videos, audio and other content, both produced internally and externally, to allow them to have a conversation and question their own business culture and education and engaged with the companies business culture. And because this is all done via the cloud, anyone, near or far, can be part of this conversation, galvanizing your workforce.

This is important for your workers for a number of reasons. First, a colleague exuding the companies ethos will sell the company positively to every client they visit. Secondly, they will be more involved within the company and will feel more valued, and therefore will value their employer more and third and finally, and probably most importantly, their complicity will increase, decreasing HSE risks, saving the company money. There are also benefits such as improving staff retention through growth opportunities and the ability to 'skill up.'

Cloud learning and communication has a number of benefits for remote workers. Its relatively low cost and potential cost savings could be vital to efficiencies. Furthermore, the inclusive mentality and a great business culture will help with staff retention, safety complicity and transparency and a greater manager employee relationship. For many businesses, this may be the answer to many potential issues that remote workers face.

By Kestell Duxbury, Knowledge Editor, BlueBottleBiz.com

Cloud learning and communication offers a number of benefits for remote workers.

"The AIS puts African innovators front and centre. They are the people working daily to identify Africa's challenges and develop appropriate solutions to create the continent we all want to see in the future

- Dr. Olugbenga Adesida
Co-director
AIS

"It is only by working closely with local governments, partnering with other stakeholders throughout the ICT landscape and sharing our knowledge through training programmes, that we will be in a strong position to provide all of Africa with high quality, affordable broadband connectivity."

-Stephen Spengler
Chief executive officer
Intelsat

"Coding for Employment accelerates investments in Africa's most valuable resource – its young women and men. That's why The Rockefeller Foundation is thrilled to join forces with the African Development Bank to help every young African reach their full potential

-Mamadou Biteye, OBE
Managing director for Africa
The Rockefeller Foundation

"Our vision is a world in which every single person can freely share in the sum of all knowledge. We believe that knowledge belongs to everyone, and that people from diverse backgrounds should be empowered to participate in the collaborative creation of knowledge."

-Katherine Maher
Executive director
Wikimedia Foundation

Impact of cryptocurrencies on financial services and security

NO ONE REALLY knows what the future holds, especially when it comes to threatening or enhancing security around current financial services systems. More importantly, are cryptocurrencies the real deal.

OneChannel CEO Bernard Ford presented a paper titled 'Impact of cryptocurrencies on financial services and security' at the Digitisation & Cyber Security Conference 2018, which took place at the Indaba Hotel, Fourways, Johannesburg on 16-17 May 2018.

The conference highlighted the concerns of operating in the digital sphere, especially with financial service providers' need to ensure network and cyber security systems that keep up with rapidly adapting security threats facing African markets.

Financial Institutions are quick to implement digital platforms without accompanying cyber security as part of their focus. Often when banks implement digital opportunities to better assist their customers, new risks emerge and banks need to adopt intelligent risk-based approaches towards cyber security.


Photo: Adobestock

The Digitisation & Cyber Security conference took place in Johannesburg, South Africa.


Photo: Adobestock

A paper titled 'Impact of cryptocurrencies on financial services and security' was presented at the event.

With a focus on the Southern African perspectives surrounding bolstering cybersecurity frameworks, developments in combating cyber-crime and key concepts to building a secure and resilient cyber-ecosystem, the two-day programme featured more than 15 speakers who gave delegates a run down on strategies, challenges, developments and trends affecting cyber security in the banking industry.

The event also included a discussion panel assessing the landscape of cybersecurity in South Africa featuring expert panellists.

This year's conference focused on the banking industry and delegates were able to network with other industry professionals. At the same time, they could share and gain valuable insights into elements of cyber security, how industry is reacting to the latest developments in cyber security and discover the main threats.

Botswana: Poised for cloud growth

With Internet penetration hovering at an estimated 28 per cent and the number of mobile subscribers showing more than 2,000 per cent growth from 2000 to 2011, Botswana is ideally poised to benefit from the opportunities that cloud computing provides.

THE BOTSWANA GOVERNMENT is committed towards developing the country and looking for more efficient and modern ways to service its citizens.

An example of this are the Public Sector Reforms designed to usher in the digital age. Part of the government's efforts include consolidating services and providing modern and specialised software. This will result in a better experience for thousands of civil servants. In turn, these workers will be empowered to deliver high quality and efficient services that will boost the economic productivity and competitiveness of the country.

In 2015, the government established the ICT, Research, Innovation Science and Technology sector committee to ensure the burgeoning economy has the skills in place to meet demand in the sector. However, as with many other countries in Africa there is still a significant disparity when it comes to urban and rural access to ICT services. But thanks to fibre and satellite rollouts, things are already changing. In a large part, this can be attributed to an increased public and private sector understanding about the importance of providing reliable access if the country is to compete on a continental level.

Already, the private sector led by the financial services industry, retail and mining sectors in Botswana have shown a willingness to embrace technology innovation and utilise it to build momentum in a competitive marketplace. And then there is the Nteletsa II programme (designed to increase rural access to mobile ICTs), which, according to Research ICT Africa, has been labelled a success in bringing about a more competitive telecommunications environment.

With improvements made in mobile connectivity and more people accessing information from their devices, the stage is set for the country to enter the next phase of ICT development and capitalise on cloud computing.

Drivers for growth

With the latest generation of enterprise cloud applications, built on high-end security technologies and based on industry best practices, collaboration tools, mobile apps that enable civil servants to take actions wherever they are using smartphones or tablets, and embedded business intelligence with thousands of reports and dashboards out-of-the-box, the government will be able to improve the citizen experience. This is especially the case when it comes to accessing services such as education, healthcare, public safety, justice, immigration, and many others.

Photo: Oracle

Ricardo Flores, senior regional manager of SADC Applications at Oracle

Having access to online storage and backups might seem quant in an age where machine-learning and augmented reality are becoming the norm. However, they present key cornerstones of the cloud journey. In turn, this leads to more cost-effective business solutions, being able to access virtualised offerings, and embracing the likes of Software-as-a-Service and Infrastructure-as-a-Service (and, more recently, Everything-as-a-Service).

Couple this with the government's commitment to accelerating ICT skills development, and you get an empowering environment that pairs international best practice with the unique African way of adopting technology to suit the specific market conditions of a country. The Botswana story is one that is shared by so many other countries on the continent.

We have seen that once the infrastructure is in place, the solutions and services will follow around it. An increased willingness by organisations across industry sectors to capitalise on the cloud will result in a more competitive environment.

It is also important to expose the youth to the latest cloud technologies in the early stages of their lives. This is where education plays a vital role in both urban and rural environments, making it critical for the country to modernise and improve its economic and social competitiveness. And it is not just the government that is responsible for this, but the educational institutions themselves as well as the private sector and even the citizens of the country.

Botswana, much like the rest of Africa, should be viewed as a mobile-first environment. And with undersea cables continuing to link Africa to the rest of the world, connectivity will only improve as costs start to come down and more people have access to ICT solutions. Once the public sector can fully embrace cloud-based services, the citizens of the country will have an effective way of accessing e-citizen services.

With more private sector organisations embracing a hybrid cloud model and people getting used to accessing information remotely, the cloud environment has shown just some of the extent at which it can change lives. Now is the time to embrace it fully and create an enabling environment for business diversification in Botswana to grow in the digital world. ✆

By Ricardo Flores

Integrating data for cloud-focused businesses

CLOUD INTEGRATION IS quickly becoming one of 2018's top software trends, according to Andrea Tucker, Business Applications Head (R&D) at e4. She argues that developing data integration is proving to be a 'must-have' for cloud-focused enterprises and service providers. There is a universal understanding that the more a software system is integrated, the better it functions, and it is on this basis that data strategies need to be developed.

Gartner, in its 'Magic Quadrant for Enterprise Integration Platform as a Service' report, discusses the rise of iPaaS (integration Platform as a Service) and its boost in market share within the data integration sector. "It essentially negates the need for any hardware or software needed between applications. By applying an iPaaS approach, the system and company becomes more agile and highly scalable, says Tucker.

Digital Nirvana showcases service offering for Insights-As-A-Service provider at AMEC Global Summit

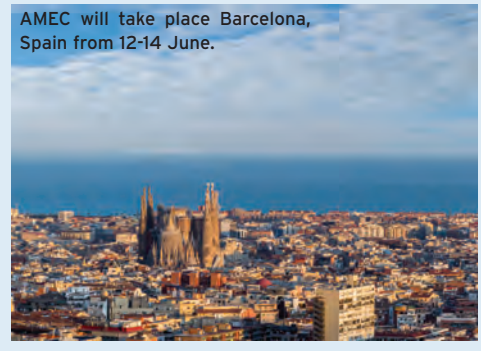
DIGITAL NIRVANA, A global provider of smart media monitoring and measurement solutions, announces its participation at the upcoming AMEC, International Association for Measurement and Evaluation of Communication, Global Summit. Digital Nirvana is a Summit Silver Sponsor for the AMEC Global Summit, which takes place in Barcelona, Spain from 12-14 June. Key emphasis of the media measurement conference will be on the 3 I's; Insights, Innovation, and Integration driving the future of the industry.

"For the past two decades, Digital Nirvana has been providing business management solutions for an increasingly media-centric world," said Hiren Hindocha, CEO of Digital Nirvana. "Our solutions enable more efficient workflows for broadcasters and content creators all over the world. The AMEC Summit is helping to drive the trends of the measurement industry, and we're looking forward to being a part of the event again this year."

Digital Nirvana will demonstrate its media monitoring and measurement services portfolio at the AMEC Summit, which includes media monitoring, media analysis and coding, broadcast logging and summary alerts, transcription, and media content management. Other services offered by the company include investment research services as well as learning management solutions.

According to Vinay Kumar, EVP & Business head of digital Nirvana, "AI is not a replacement to human, but an enabler. Our media monitoring and analysis team has gained measurement expertise working with various media corporations. We have the experience of covering over 5,000 corporate globally across 65+ industry verticals. We have helped small, mid, and large media monitoring and measurement companies provide superior quality service to their corporate customers and significantly optimized their operational expenditure. We have also helped in eliminating wastage in the media intelligence industry by optimizing duplication of monitoring efforts."

Now in it's 10th year running, AMEC is the growing global trade body and professional institute for agencies and practitioners who provide media evaluation and communication research.



AMEC will take place Barcelona, Spain from 12-14 June.

Photo: Adobe Stock

Orange, Google seek joint investments

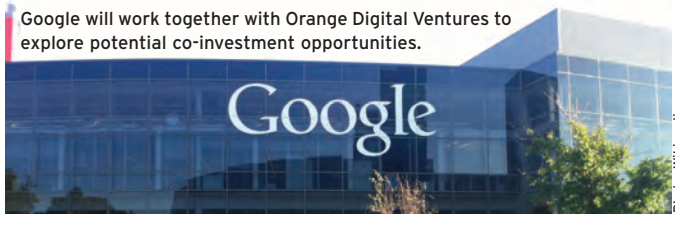
FRANCE'S ORANGE HAS announced that it has partnered with search engine giant Google through the company's venture capital arm, Orange Digital Ventures (ODV), to explore investment opportunities in Europe, the Middle East and Africa.

ODV and Google will look at start-up companies in areas such as new connectivities, IoT, cybersecurity, cloud, AI and fintech. They will also look to invest in companies with new business models in the Middle East and Africa.

Large legacy companies are increasingly looking to invest in up and coming products and businesses in areas such as IoT and AI, which are expected to see fast growth in coming years.

"We are very proud to announce this partnership which will enable start-ups supported by Orange Digital Ventures to explore potential co-investment opportunities with Google. Through this partnership, we stand to reinforce Orange Digital Ventures' "Smart Money" value-proposition by offering entrepreneurs with whom we work much more than just financing," said Stéphane Richard, CEO of Orange.

"We are delighted to support Orange's ecosystem of start-ups and innovation and to explore alongside them opportunities for co-investment in Europe, the Middle East and Africa (EMEA). Orange's ecosystem is consistent with Google's know-how and our ability to accelerate the growth of start-ups. This partnership is a way to enhance our collective contribution to innovation in this region," said Carlo d'Asaro Biondo, EMEA president of Google Partnerships.



Google will work together with Orange Digital Ventures to explore potential co-investment opportunities.

Photo: Wikimedia

WTL to provide electricity to rural Africa

WORLD TELECOM LABS (WTL) today announced that it can now provide electricity to villages in rural Africa. Vivada Wholesale (Village Voice and Data), WTL's multi-award winning 'Coverage-as-a-Service' system for building wholesale networks in rural Africa. Vivada can now be powered by solar in off-grid villages and areas with unreliable grid suppliers, added WTL. Villagers will benefit from being able to charge devices such as phones and powerboxes at the Vivada installation. WTL has strengthened its position as the company with the best commercially viable and sustainable system for building networks in rural villages in emerging markets by winning multiple awards including the Best Connectivity Solution category at the AfricaCom awards, the Best African Project category at the annual Global Carrier Awards and the Best Technology Deployment category at the Capacity Africa Awards.

Vivada Wholesale was developed so that wholesale carriers can build low OPEX, low-CAPEX networks in rural areas for use by multiple operators. The networks support all types of pre and post-paid customers with varying telecoms budgets including GSM for every type of handset; Wi-Fi connectivity for smartphones, tablets, laptops and PCs - and connectivity to cybercafes and hotspot call cabins.

Leigh Smith, MD of WTL, said "We have consistently been ahead of the curve with Vivada. It provides a complete solution for wholesale carriers to build a rural network – and can now be powered by solar with excess electricity shared with villagers."

WTL is now working with wholesale operators in five countries in Africa to build rural networks. The company said believes that the removal of the CAPEX cost of building a rural network will encourage previously reluctant operators to start offering services in these areas.Vivada includes a micro GSM and/or LTE base station, wifi routers, backhaul optimisation, billing and provisioning software, VoIP compression switches and SMS servers. The entire system runs on less than 200W which can be supplied by solar with battery back-up.

Events/Événements 2018

JUNE/JUIN			
11-15	**CeBIT**	Hannover, Germany	https://www.cebit.de/en/expo/
11-13	**Wire & Cable Guangzho**	Guangzhou, China	http://www.wire-cable-china.com
11-17	**London Tech Week**	London, UK	http://www.londontechweek.com
12-14	**ANGA COM**	Cologne, Germany	http://www.angacom.de
26-28	**Broadcast Asia**	Suntec, Singapore	http://www.broadcast-asia.com
27-28	**Smart Cities Global Summit**	Algiers, Algeria	http://www.smartcityalgiers.com
27-29	**Smart Tech Korea**	Seoul, Korea	http://www.smarttechshow.co.kr/
JULY/JULLIET			
10-11	**West AfricaCom**	Dakar, Senegal	https://tmt.knect365.com/west-africa-com/
AUGUST/AOÛT			
21-25	**BIRTV Beijng**	Beijing, China	http://www.birtv.com/
29- 1 Sept	**Tairos**	Taipei, Taiwan	https://www.tairos.tw/en/
SEPTEMBER/SEPTEMBRE			
13-18	**ITU Telecom World**	Durban, South Africa	https://telecomworld.itu.int/2018-event/
13-18	**IBC 2018**	Amsterdam, The Netherlands	https://www.ibc.org/
23-25	**Critical Communications MENA 2018**	Dubai, UAE	http://www.critical-communications-world.com

Bridging African tech industry with international tech ecosystem

AFROBYTES, TO BE held in MEDEF Paris from 7-8 June 2018, will discuss the latest trends in African tech industry, challenges and opportunities in Africa's digital ecosystem and future potentials for the African start-ups in all sectors of the global tech world.

As Africa is continuously emerging as a global trendsetter in revitalising tech enthusiasts across the world, the event is expected to unlock vast opportunities available in the continent in all fields of digitalisation such as big data, artificial intelligence, cryptocurrency, medtech, fintech, m-payments, blockchain, virtual reality and more.

Entrepreneurs, business executives, CEOs, academics, innovators, investors, venture capitalists, tech enthusiasts and media from across the world will explore business opportunities between the African tech ecosystem and players in the global tech world during the event.

Haweya Mohamed, managing director and head of communications at Afrobytes, said that the event aims to find the starting point of the African digital growth curve. It will allow the companies to address emergence and digital empowerment in Africa and provide with a vibrant framework for sponsors, speakers and attendees to connect, network and explore new business possibilities.

The event will also highlight the role of African women, who are at the frontline of education, agriculture, health and so on, in creating successful "problem solving" skills required for technological up scaling, said Mohamed.

Latest tech topics

Some of the major technical points of discussion during the event will be:

- The rise of African tech industry
- Emerging technological trends in Africa
- Mobile economy in Africa
- Exploring the intersection of fashion and technology
- Unlocking the potential of young African entrepreneurs

Some of the African tech industry leaders for Afrobytes 2018 are Ebele Okobi, public policy director for Africa, Facebook, the UK, Larry Madowo, business editor at BBC Africa, Kenya, Njoki Gichinga, senior strategic partnership and business development specialist at Safaricom, Kenya, Max Song, blockchain investor, advisor and researcher at Hkdaia, Hong Kong, Jean-Sébastien Decaux, CEO at Africa-Israel / CEO Southern Europe, Belgium and Luxemburg, Jcdecaux, France, Adama Bari Diallo, Next Billion Users, head of business development for Africa Google, the UK, Robert Greenfield, global social impact technical lead at Consensys, the USA, Tunde Ladipo, head of partnership at Stellar.org, Kenya, Viola Llewellyn, co-founder and president at Ovamba Solutions, the USA / Cameroon, Okendo Lewis-Gayle, founder at Harambe Entrepreneur Alliance, the USA, Ade Adefeko, vice-president corporate and government relations at Olam International, Nigeria and many more.


Photo: Adobe Stock

The event will highlight emerging technological trends that are reshaping Africa's digital market.

Afrobytes 2018 is set to:

- Increase brand recognition and stand out as a market leader among other major industry stakeholders
- Reach and network with a highly targeted international and African audience
- Support young emerging professionals who will play key roles in the future of African Tech

Bringing Nigerian farmers and investors together online

Nigerian diaspora have an exciting opportunity to invest their money in farms back home via Farmcrowdy, a new online financial platform that aims helping to boost the £30bn agricultural sector in Nigeria.

THE NIGERIAN GOVERNMENT is referring to agriculture as the "new oil" and companies, such as Farmcrowdy, are taking advantage of this new opportunity.

The company's ethos is to simply bring farmers and investors, so-called sponsors, together through the use of digital technology. Whereas in the past, investment into agricultural projects may have gone amiss for one reason or another, stemming either from mistrust or dishonesty between parties involved, Farmcrowdy is offering sponsors a transparent system through a mobile phone app where investors can see first-hand how their investment on a farm is progressing throughout the cycle.

It is a win-win situation all round. When the yield is sold at harvest, the sponsor receives their original investment plus 40 per cent of the profit while the farmer and Farmcrowdy receives 40 per cent and 20 per cent respectively.

The main farms currently in operation across the nine states in Nigeria are producing rice, cassava, poultry and maize. Already the company has registered 7,000 farmers since its launch in 2016 and aims to increase that number to at least 50,000 by 2020. To reach this goal, however, it wants more of the Nigerian diaspora living across the world, notably the UK, US and UAE to become a sponsor, especially those who have a passion for agriculture and want to make a socio-economic impact in their communities back home. To date, the Farmcrowdy platform has amassed more than 1,000 sponsors and total investments from Nigeria and its diaspora, now reaches in excess of £1.62mn with a growing number of sponsors in the UK.

Sola Oyawale, VP investment and corporate governance at Farmcrowdy, which has headquarters in Lagos, said he was upbeat about the level of response he had received from some potential Nigerian investors based in the UK. He said, "Nigerians understand how dominant the agricultural market is in the country, but there hasn't been a reliable route to market, in terms of sourcing farmers and making/receiving payments. This is the challenge Farmcrowdy has set out to conquer and we've recorded some strong interest already, not only from sponsors in Nigeria, but also from the diaspora. Some people have a genuine passion to create an impact in their country while others have a renewed enthusiasm for agriculture and the potential for achieving strong returns on investment.

Rural farmers contribute the largest amount of food crops that are grown in Nigeria's economy.

Photo: Farmcrowdy

"What makes our business different to other agri-tech firms is that we are more sensitive to the concerns of the farmers and wanting to make their lives better."

Tope Omotolani, VP Operations and co-founder, and her team of specialist agents on the ground look after 3,000 farmers in Nigeria. She said, "Rural farmers contribute the largest amount of food crops that are grown in Nigeria's economy, yet they have the least amount of resources to cultivate important food crops. In order to increase food production in Nigeria, we have set a goal to work with 50,000 farmers by the year 2020. This is no small goal by any means but we also understand that the impact these would create in the lives of the farmers, their community and in the country as a whole would be remarkable."

She said the company is working hard to equip the farmer as much as it can so that their passion for farming will continue for years to come.

"One of our incentives is that we pay the farmer to work on his farm so they don't have to wait until the end of the cycle." She continued. "We also partner with a range of companies to help the farmers. ASTC, for example, provides tractor services for our project in Jos and a team from Notore works with farmers and advises them about the type fertiliser that should be applied. We also help them to sell their crops for a better price rather than just selling crops for their family to survive."

Farmers have already seen the positive economic difference that Farmcrowdy has made to their lives.

Omotolani added, "One of our farmers told us that she was able to put some money aside to be able to go back to school, so that for me it was a testimony that would not have happened without our intervention."

Farmer Dayo Adeoye said, "Farmcrowdy has made things easy for farmers and has helped increase our production by 50 per cent. I like the flexibility, transparency and integrity. They are also open to feedback and make necessary changes. I am already recommending Farmcrowdy to people and I will continue to do so."

Meanwhile, tractor manufacturer, John Deere and Alluvial have also boosted farmers' confidence in Nigeria after agreeing to lease up to 300 tractors to at least 100,000 farmers in the Niger Delta region. The scheme will help turn subsistence farming into a commercial business by allowing farmers to rent tractors to plough and harvest the land at a competitive rate.

Dimieari Von Kemedi, the founder of Alluvial, told the Financial Times, "This deal is providing mechanisation to smallholders without them having to invest in tractor themselves. This could be an example not just for Nigeria, but for all of Africa."

With such developments taking place, it looks as if the future in agriculture in Nigeria looks very bright indeed. ✆

For more information on Farmcrowdy visit www.farmcrowdy.com

La transformation numérique impose une vision organisationnelle claire

Vos employés sont indispensables à la réussite de votre processus de transformation.

La transformation numérique présente de nombreuses nouvelles opportunités de croissance et d'expansion dans le reste de l'Afrique.

Photo: foxaon/AdobeStock

LA QUESTION DE la transformation numérique n'est pas nouvelle ; en général, elle est liée aux grandes tendances technologiques à venir, comme le cloud computing, la mobilité, les Big Data, l'intelligence artificielle (IA) l'Internet des objets (IdO), la robotique et les plates-formes sociales. Il est évident que la connectivité grandissante entre les personnes, les machines et les entreprises a modifié les demandes du marché, et les organisations doivent, pour préserver leur compétitivité, s'adapter en numérisant leurs procédures et leurs modèles d'entreprise. Selon Mandla Mbonambi, le PDG fondateur d'Africonology, la transformation numérique ouvre de nombreux horizons de croissance et de développement dans le reste de l'Afrique.

« Les organisations doivent adopter une nouvelle méthode pour tenir les promesses de leur marque, en garantissant un engagement efficace des clients, en déclenchant des modes de réflexion totalement nouveaux et en permettant à l'entreprise de prendre des décisions bien informées collectivement », précise-t-il. « La transformation numérique n'est plus facultative. Dans le monde entier, et sur le continent africain, les organisations doivent adopter la transformation numérique pour dynamiser l'innovation et favoriser des progrès continus qui se traduiront au final par une croissance de l'entreprise. »

Selon M. Mbonambi, cette transformation est particulièrement importante pour les organisations africaines car elle permet de pénétrer sur des marchés nouveaux, d'atteindre des bases de clients nouvelles et de trouver d'autres moyens de fournir des produits et services adaptés aux demandes des marchés. « Par ailleurs, les organisations africaines ont besoin de la transformation numérique pour stimuler leur profitabilité, améliorer la satisfaction de leurs clients et accélérer la commercialisation de leurs produits tout en partant à la conquête de nouveaux marchés ouverts au sein de la diaspora africaine et au-delà. Cela étant dit, seule une vision organisationnelle claire peut garantir une transformation numérique efficace et rentable. »

Pour améliorer la compétitivité des organisations africaines à l'échelle internationale, celles-ci doivent tout d'abord redéfinir leurs stratégies et leurs modèles d'entreprise afin qu'ils soient valables dans le contexte commercial actuel et sur les marchés sur lesquels elles opèrent. « Ensuite, elles doivent identifier la technologie qui convient à la stratégie qu'elles ont établie par rapport à leurs produits et services, puis exploiter cette technologie pour renforcer leurs capacités d'innovation et de flexibilité aussi bien au niveau des produits et services offerts qu'au niveau de la méthode employée pour livrer ces produits par les différents canaux numériques, » précise-t-il.

« Pour réussir sa transformation numérique, une organisation doit également cesser de s'appuyer sur une technologie autonome et adopter des solutions qui lui permettront de responsabiliser ses employés et de les aider à prendre plus rapidement des décisions mieux informées et plus efficaces, » indique M. Mbonambi. « Nous ne pouvons pas modifier les volumes de données qui nous parviennent, mais nous pouvons améliorer la capacité de nos employés à exploiter ces données et à les transformer rapidement et avec précision en informations pour venir appuyer le processus décisionnel. Bien que la transformation numérique soit en général décidée aux échelons supérieurs de l'organisation, il est primordial d'impliquer vos employés tout au long du processus. Il est donc nécessaire de modifier les mentalités et les formations afin qu'ils acceptent le modèle d'entreprise repensé et un programme de gestion en profondeur du changement étant donné que la culture de l'organisation sera également affectée. »

On ne saurait insister suffisamment sur les risques liés à une absence de transformation ou à l'obligation de se transformer correctement. « Si les organisations retardent leur transformation numérique ou ne se transforment pas du tout, elles pourraient être évincées par la concurrence, ce qui entraînera une perte de parts de marché, de revenus et, dans le pire des cas, une faillite, » selon M. Mbonambi. « Au sein de cet environnement où l'amélioration et l'innovation constantes sont indispensables pour garder une longueur d'avance, il est simplement impossible de prendre un tel risque. Plusieurs organisations ont déjà fait faillite ces dernières années car elles n'ont pas réagi assez vite ou n'ont pas réagi du tout. »

Il précise qu'il ne s'agit pas de crier au loup, mais plutôt de souligner la nécessité de procéder à une transformation stratégique et hiérarchisée. « Nous savons que les organisations qui ne veulent pas changer risquent d'être dépassées ou de mettre la clé sous la porte. Il faut veiller à embarquer l'organisation toute entière dans le processus de transformation. Ainsi, l'organisation pourra déployer le plein potentiel de ses produits et services, tout en saisissant l'occasion d'attirer de nouvelles bases de clients au fil de leur évolution, » déclare M. Mbonambi. ✆

Les organisations africaines ont besoin d'une transformation numérique pour stimuler la rentabilité, la satisfaction de la clientèle et accélérer la mise sur le marché ainsi que l'entrée sans frontières dans de nouveaux marchés au sein de la diaspora africaine et au-delà.

Innovation for a smarter world: ITU Telecom World 2018

Creativity and innovation have driven human development throughout the course of history. From agriculture to industry to the information age, revolutionary innovations in technology have marked major leaps forward in the development of our societies.

AS THE PACE of technological innovation increases, the gaps between those revolutions reduce, so that today, just ten years after the arrival of the smart phone, we are already on the cusp of the next major leap: the smart revolution.

Two aspects of the smart revolution stand out as significantly different. It provides the possibility for less developed markets and nations to leapfrog in developmental terms, not just to leap forward. And the creativity and innovation driving it will not only be human.

Artificial intelligence (AI) is one of the great enablers of smart society. AI is a blend of advanced analytical and machine learning applications which can perform processes or actions that would traditionally require human intelligence – and at an often greatly accelerated pace. The use cases and benefits of AI are multiple, varied - and developing rapidly, with tremendous potential to serve purposes and provide solutions to problems we are not yet aware of, in ways we cannot yet imagine.

One key aspect is AI's ability to swiftly and effectively analyse the ever-increasing wealth of sensor data available as the growing power and falling costs of computing provides for much faster and richer data analysis. Practical outcomes include identifying and treating disease, accelerating financial and machine to machine transactions, enhancing public safety, and improving city services, from provision of utilities to driverless public transport and city management. The aim is to save energy, time and lives through AI-enabled smart solutions.

AI will not be working alone, however. The data it feeds from is set to grow exponentially in volume as the Internet of Things continues to connect billions of sensors and devices to each other, to the Internet and to humans. As the IoT develops and refines, it opens the door to innovation across all vertical sectors, including health, media, transport and energy – and manufacturing, as the paradox of personalised mass production increasingly becomes a reality. Innovation needs new tools to thrive, and 5G software-defined networks promise a rich playing field for creative minds. The exponential increases in bandwidth, speed, reliability and flexibility offered by 5G will create a powerful critical infrastructure capable of providing solutions to the economic, social and environmental needs of an expanding and increasingly urbanised global population.

Our smarter world will be enabled by these three key technological developments, in parallel and in overlap: AI, IoT and 5G. Three acronyms driving innovation, with the potential to drive human development at a greater speed and with greater impact than ever before. In developing markets and nations in particular, smart can power the leapfrog effect, bypassing earlier stages of development, taking villages in Asia or Africa straight from no connectivity to 3G or 4G networks, from no access to education or health to world-class professionals available online, providing entry to the knowledge economy for the millions of digitally disenfranchised.

Our smarter world will be enabled by these three key technological developments, in parallel and in overlap: AI, IoT and 5G.

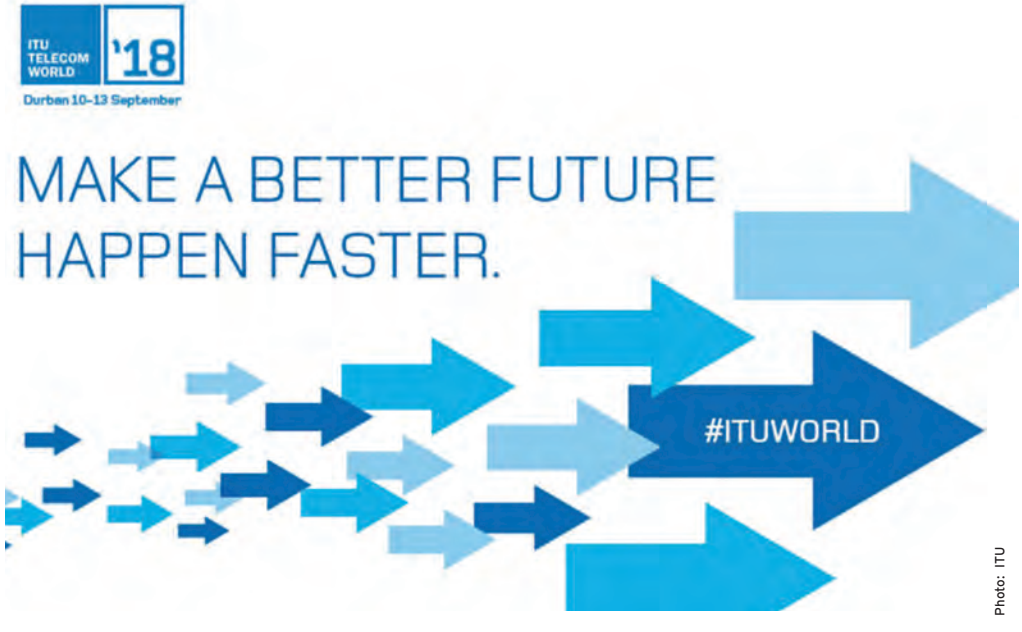


Photo: ITU

ITU Telecom World 2018 will explore developments in the ICT industry and the drive towards a smart digital world.

But for innovation to flourish, it needs to work in a supportive and positive environment. And for innovation to be fair, it – and the services, applications and products it ultimately produces – must be open to all. Providing modern and fit-for-purpose regulatory frameworks as far as possible throughout the world of tech is critical to the success of smart innovation.

Taking ideas to scale and maximising impact can only happen with international standardisation. Privacy, security, trust and reliability are all huge issues when discussing or dealing with data as the life blood of innovative products and services. And the debate on ethical and regulatory frameworks for AI has only just begun. Making a smarter world for all, not just for the elite minority, is an even greater, multi-faceted challenge. It starts, of course, with connectivity for all as a basic human right. Just providing access to the internet and the benefits of the services, applications and knowledge it offers, is not enough, however - even if this can be done at affordable prices, with available devices. There is an urgent need to create awareness of, and demand for, the internet; to provide apps and services in local languages, with local contexts and the needs of local communities at the forefront; and to train, educate and develop the skills to use the internet and bring whole new populations and generations online, releasing untapped human potential for innovation across the world.

As an important regional commercial hub with a diverse, multicultural outlook and a dynamic, growing economy, Durban offers an invaluable perspective as a venue for experts and leaders from public and private sectors around the world.

Exploring the innovations in technology, policy, and strategy that are driving a smarter world – and the challenges we face in getting there - is at the heart of ITU Telecom World 2018. The leading tech event for governments, large businesses and SMEs, it is organized each year by ITU, the UN's key agency for ICT matters. This year's event will be held at the Durban International Conference Centre, Durban, South Africa, from 10 – 13 September, 2018.

The event features an international exhibition of tech solutions and projects, a world-class forum of interactive, expert-led debates, a networking programme connecting organizations, individuals and ideas, and an acclaimed Awards programme recognising innovative ICT-based solutions with real social impact.

As an important regional commercial hub with a diverse, multicultural outlook and a dynamic, growing economy, Durban offers an invaluable perspective as a venue for experts and leaders from public and private sectors around the world. And given ITU's key role in allocating spectrum and establishing international consensus on industry standards, as well as supporting the critical role of ICTs and smart technologies in meeting the UN's Sustainable Development Goals, the event is certain to provide informed, interesting and valuable input on the power of innovation to drive a smarter world.

ITU's authority and expertise enable it to convene a unique and influential global audience. Heads of state and government will come together with ministers, regulators, leading industry CEOs from major players and SMEs, organizations, associations and consultants. As a UN event, it delivers a truly international perspective on innovation in technology, policy and regulation from emerging and developed markets from all around the world.

Visit telecomworld.itu.int to find out more ITU Telecom World 2018 and how to take part in Durban this September. ✆

Photo: michaeljung/AdobeStock

ITU Telecom World 2018 will take place in Durban, South Africa in September.

The AI moment: preparing for the revolution

Artificial intelligence, AI, is the next big technology to have entered mainstream consciousness. The growth of autonomous driving and the popularity of smart speaker systems such as Alexa or Google Home – AI is everywhere.

AND IT'S COMING for our jobs, white collar and blue, threatening massive social and economic upheaval.

But what is AI really? Why has it suddenly become so popular? Why is everyone so excited about its tremendous potential? Will it really replace humans – and should we welcome it with open arms, or fear for its impact?

Far from being an omnipotent, autonomous robot, AI is at heart simply a machine programmed to make sense of data on a scale humans can't deal with. It is the king of the algorithm, a machine learning from its own experiences, objective-oriented and highly intelligent, producing logical conclusions based on input. As part of the digital technology connecting people, things and machines on a big data platform, it has the potential to enable solutions saving time, energy and lives, opening up opportunities as yet undreamt of. And it is still in its infancy in its real world deployment.

Photo: ShvetsovaDesign/AdobeStock

The use of AI is growing dramatically right now in response to extraordinary increases in the amount of data produced daily.

AI can unlock scale and opportunity to deal with the grand challenges facing the world today, from ageing populations to sustainable urban living.

Photo: Christopher_Logan/AdobeStock

It is predicted that up to 75 per cent of all jobs will be impacted by AI over the next ten years.

The use of AI is growing dramatically right now in response to extraordinary increases in the amount of data produced daily, as powerful computing has become available at lower costs. Humans alone simply cannot process the complexity and ongoing volume of data from people, devices, sensors and machines. In parallel, there is a growing awareness of the tremendous potential of AI technologies to solve problems across all industry sectors and the entire spectrum of human life.

AI can unlock scale and opportunity to deal with the grand challenges facing the world today, from ageing populations to sustainable urban living, access to food, healthcare, water and education, reducing poverty and increasing gender equality. Physical AI will be able to free humans from mundane, routine tasks, allowing them to concentrate on more important, higher-end work, releasing creative potential.

In emerging markets and smart cities alike, AI can help overcome natural limitations to growth such as geographic size or lack of natural resources, creating new markets and new value, rather than merely improving on existing models.

Improvements on current models will, however, be where the power of AI is first felt, in its promise of enormous cost savings, increased productivity, lower production cycles and improved back end or internal processes. Within the telco industry itself, AI will accelerate the evolution of network operator infrastructure into intelligent networks able to offer smarter,

faster and more scalable services. Using the engine of big data, AI will enable multiple, diverse and often sector-specific demands to be met through highly-tailored network slices managed in real time.

In the financial services sector, for example, AI can reduce the hundreds of thousands of hours needed to carry out regulatory compliance to a matter of seconds; or the time, effort and investment necessary for a mortgage to a few minutes. New financial services may include mass market personalised services, opening an enormous market of lower earners, or microfinancing for the unbanked. In call centres across a range of industries, AI can work either alongside humans analysing complex data sets in parallel to the human customer-facing contact, or take calls as a co-worker as far as possible before passing on to human expertise.

In all cases, AI is a tool to augment human abilities rather than replace them. And it is only as good as the person inputting information and parameters into its system.

This is one of the principal challenges: ensuring that AI is provided with initial information in a way that does not reflect and perpetuate inherent bias, unconscious or not. It is critical to be aware of, and work to avoid, replication of existing divides and inequalities: on gender, race, geography, the urban/rural split, access to education, investment in infrastructure, the availability of talent, the provision of adequate cyber security. Without action, AI will prolong or deepen these divides. There is a very real danger that the powerful impact of algorithms actuated by AI will remain limited to the developed world due to a lack of infrastructure, advanced networks, open data or data scientists.

Providing open public data and open APIs to allow private companies and individual developers to create solutions for public and commercial services is key to democratising AI – and fast-tracking its deployment. Accessing large data sets in the ecosystem to improve quality of life must be balanced against data protection, privacy and security issues.

AI is a tool to augment human abilities rather than replace them. And it is only as good as the person inputting information and parameters into its system.

Preparation in general – and education - is critical. The international community, government, businesses and individuals should be as ready as possible for the seismic changes that the widespread adoption and deployment of AI will bring with it.

The big one, of course, is the transformation of the existing labour market. It is estimated that up to 75 per cent of all jobs will be impacted by AI over the next ten years – and these will not just be routine, low-skilled jobs, but also traditional blue collar sectors such as journalism, law or financial services. Productivity and revenue should rise as costs are cut, but the societal disruption will be enormous.

AI is often invisible, raising issues of transparency and accountability. It is itself a neutral tool, without morality, but the ethics of its use are complex. Establishing codes of conduct and social norms as the first step to any regulation is urgently necessary at intergovernmental, international level. Regulation – as well as the standardisation necessary for it to function in a multi-vendor ecosystem environment - is further complicated by AI's inherent structure as an active machine, learning in real time with real data.

AI is here – and growing fast. There is an increasingly urgent need to bring together key stakeholders from government, industry and academia to debate its impact on a neutral platform such as ITU Telecom World 2018, the leading tech event organised by ITU, the UN lead agency for ICTs. Making AI democratic, fair and equitable is a challenge that cannot be met by any one single stakeholder.

Experts at ITU Telecom World 2017 last year felt that its first use cases and greatest impact would be economic rather than social: AI will go where the money is, or can be made. In some sectors, if you are not yet using AI, you are two years behind the curve. But the size of the opportunity is so great, the potential so huge, that it is far from too late.

The potential negative effects of AI include social and economic disruption, in particular in the job market; the deepening of inequality; the danger of inherent bias; major issues of transparency, security and accountability; the lack of an internationally-agreed ethical code. Now is the time for contingency plans, for preparation and education throughout governments, industries and societies.

There is downside, after all, to both deploying AI and not deploying it.

AI will be a key component of discussions at ITU Telecom World 2018 in Durban, South Africa, 10 -13 September, providing the diverse perspectives of international experts from government, industry, SMEs and academia. ✆

Find out more at http://telecomworld.itu.int/

Photo: everythingpossible/AdobeStock

AI can unlock scale and opportunity to deal with challenges facing the world such as healthcare.

Building a better supply chain in Africa

It's well known in the logistics and supply chain game that the last mile of a shipment's journey is inevitably the most expensive - possibly accounting for more than 50 per cent of total delivery costs, according to a 2016 report by McKinsey.

IT'S WELL KNOWN in the logistics and supply chain game that the last mile of a shipment's journey is inevitably the most expensive – possibly accounting for more than 50 per cent of total delivery costs, according to a 2016 report by McKinsey.

Now imagine that last mile is in Africa. It may very well be a pot-holed dirt road, set in the middle of one of the continent's many informal, low income areas, where even a ballpark guesstimate of consumer demand is incredibly hard to come by. Many companies are already pushing their products into these emerging markets, yet most experience expensive blind spots in understanding exactly who they are reaching and where their markets lie. This lack of transparency can see distribution operations sink to new lows when it comes to supply chain inefficiency.

While companies expend much time, energy and resources in finding better ways to reduce excess inventory and maintain desirable stock turnover, understanding and managing demand remains a problem. Refining the supply chain to its most effective form is an ongoing challenge for logistics practitioners, and in today's hyper-competitive and globalised business landscape, finding a way to do so will likely mean the difference between success and failure for many businesses.

And yet, despite these costly frustrations, there's hardly a global business (especially in the retail and FMCG sectors) that doesn't have at least one eye cautiously trained on the continent and its fast-rising potential. Africa already has more cities of more than one million people than North America does, and despite widespread poverty, spending power on the continent is in the midst of a rapid rise that can't be ignored by the international business community. Africa is home to 1.1bn people and will account for one-fifth of the world's population by 2025. Critically, more and more citizens are entering the consumer class, with tens of millions only recently emerging from poverty and flexing their discretionary income for the first time.

But how do the Unilevers and Procter & Gambles of this world mitigate the challenges of logistics in Africa? How do they assess the size of a certain catchment area, which products are in high demand, and how much people are willing to pay? How do they ensure that just the right amount of that product is delivered to the right communities, at the right times, and at the right prices, to make a move into Africa worth their while? It all comes down to having as much consumer and retailer data as possible – and that's another area where most of Africa presents a tangled conundrum.

With the exception of South Africa (whose citizens purchase around 75 per cent of their groceries from supermarkets), most retail throughout the continent is informal. Trading occurs at kiosks and in community markets with precious little computing power to gather the point-of-sale and stock-control information that is so essential to an efficient supply chain. Our experience working on the continent has taught us that it is a combination of traditional and alternate data collection that creates the most complete consumer picture.

What can you tell about a population by analysing a photo taken from space? If you know what you're looking for, plenty. Satellite imagery is one of the data forms that has the most to offer regarding informal areas. Levels of night-time illumination, road access, traffic patterns, building density, and even the materials used to roof the houses in a particular area, can all form valuable pieces of the consumer puzzle – and help businesses more accurately paint a picture of their potential customers. Viewed in combination with traditional household survey methods, as well as some digital input in the form of access to mobile phones and online spending behaviours, the picture becomes clearer still. Fed into machine learning models as a series of data layers, previously unnoticed associations, patterns and trends begin to emerge, all of which can be used to ensure speed, accuracy and efficient use of resources along the entire length of a globalised supply chain. This is especially useful as both traditional and digital retail continue to boom on the continent.

Africa's historic legacy of limited or incomplete consumer data has often tempted organisations into making do with market research based only on the inhabitants of its largest cities, but a more granular view is needed if markets are to be carved up accurately – and to maximum profit for international businesses. Disparate languages and cultures, poor infrastructure, widespread inequality, and a rapidly expanding middle class means that data needs to be sharp and refined down to the square kilometre if the supply chain is ever to be fully optimised. All businesses need to do so is to know where to look – and what to look out for. ✆

There is an increasing trend in West African businesses adopting digital infrastructure.

Photo: Adobe Stock

Exploring West Africa's digital ecosystem

With consumers and enterprises embracing new digital innovations to boost business, West Africa Com is all set to make sense of how the telco value chain can leverage its assets to deliver low cost broadband connectivity and digital services across West Africa.

AS THE CALL for connecting West Africa to a new digital market increases, investment into telecom, broadband infrastructure and related sectors are on a rapid pace, with major players racing for position to meet this rising demand for data across the region.

This has led to the creation of mergers, acquisitions, IPOs, investment and financing activity, to expand broadband connectivity as well as new digital market trends to develop infrastructures and services that will connect West Africans to the digital economy. As broadband becomes much more reliable and cost-effective, West Africa continues to adapt new and advanced infrastructure facilities to have access to a fast Internet service, allowing individuals and families to use opportunities that are not otherwise possible.

In light of this and in order to address challenges and opportunities in digital economy sector in West Africa, Informa PLC, is going to organise West Africa Com in Dakar from 10-11 July 2018. The event will discuss increasing trends towards embracing digital economy in the region and also play a vital role in bridging the digital divide among the West African nations to achieve sustainable develop agenda.

Creating a Sustainable Digital Infrastructure

West Africa Com aims to make sense of how the telco value chain can leverage its assets to deliver low cost broadband connectivity and digital services to the consumers and enterprises of West Africa.

The event is all set to bring together industry leaders across Francophone and Anglophone Technology, Media and Telecoms, all focused on bridging the digital divide and boosting their bottom line. It is designed to enable operator attendees to develop their commercial strategies, technical operations and consumer facing businesses across all segments of the ever-evolving digital ecosystem.

As the decision in IT infrastructure that customers make can greatly impact business efficiencies, security and value added services, the CIO strategy content in the event will equip the businesses to make these critical decisions smarter and faster, said the organiser.

Fintech revolution, impact of cloud-based services to transform enterprises across the region and building regulatory frameworks to accelerate digital transformation will be centre of attraction

Hot New Topics

Strategic insights into the latest TMT trends will enable the visitors and businesses to identify new opportunities and stay ahead of the game.

Some of the up-to-the-minute trends in global digital market will be the centre of attraction during the event. These include driving innovation and entrepreneurship in West Africa's digital sector, the fintech revolution, impact of cloud-based services to transform enterprises across the region, building regulatory frameworks to accelerate digital transformation and many more.

Furthermore, the event will also focus on the cybersecurity challenges as network integration and cloud services transform enterprise, financing fibre backbone and other new infrastructure projects, developing an effective know your customer (KYC) strategy etc.

Some of the speakers attending the event include: Bitilokho NDIAYE, technical advisor at Ministry of Posts and Telecommunications in the Republic of Senegal, Amadou Makhtar Fall, general manager and head of economic regulation, products and services, compliance at Airtel Africa, Souleymane Diallo, CEO of ATEL Mali, Sasha Rubel Diamanka, regional advisor for communication and information at UNESCO, Sam Koranteng, senior manager, regulatory and compliance at MTN Ghana, Malick Sylla, head of service quality monitoring and operators at telecommunications and postal regulatory agency (ARTP) and many more.

Speaking ahead of the event, Khadim Rassoul Diop, field operation director at Expresso Senegal, said, "As a telecom operator, it'll be very beneficial for us to get involved with the local vendors as we have done in Speed Networking. Presenting and working with the providers in the telecom field will help us to continuously keep the connection between the companies." ✆

ETL Systems reduces signal loss for Liquid Telecom teleports

A leading communications services and solutions provider, Liquid Telecom is active across 13 countries in eastern, central and southern Africa that serves carrier, enterprise and retail customers with high-speed, reliable connectivity and digital services.

LIQUID TELECOM HAS built Africa's largest independent fibre network, spanning more than 50,000 km, and operates state-of-the-art data centres in Johannesburg, Cape Town and Nairobi, with a combined 6,800 sq m of rack space. This is in addition to delivering leading cloud-based services, such as Microsoft Office365 and Microsoft Azure, and innovative digital content provision, including Netflix, NBA, TED and Kwese Play. Through this combined offering, Liquid Telecom is enhancing customers' experience on their digital journey.

Liquid Telecom has continued to invest and innovate in satellite services to complement its fibre network, ensuring it utilises the latest satellite technology in order to deliver a seamless and high-speed service to all of its customers.

The challenge of signal loss

Liquid Telecom was challenged with cross-site signal loss over long distances within its two earth station facilities at Teraco and Krugersdorp in Johannesburg. With a high priority on quality, it was naturally keen to implement signal links with resilience and reliability, ultimately ensuring the feed delivered to consumers was the best it could be.

VSAT hubs supporting 2500+ remote terminals

At Teraco, Johannesburg, Liquid Telecom's teleport is being used to support more than 2,500 remote VSAT terminals. The hub is providing Africa to Africa connectivity, delivering much needed broadband connections to consumers across the region. With a distance of 80 metres between the teleport cabin and the transmitting antenna locations, the potential for signal loss was high.

Kwese TV

Also at Teraco, Liquid Telecom's teleport is downlinking broadcast content for contribution to Kwese TV, Africa's first truly converged media company. Kwese TV is disrupting the African TV industry, providing affordable, premium content to the globally connected African viewer. Ensuring a good quality feed at all times was extremely important for this teleport, giving African consumers an uninterrupted viewing experience.

The African gateway to Intelsat EPIC

At Liquid Telecom's wholly owned and operated teleport in Krugersdorp, Johannesburg, this facility is providing the African gateway to the Intelsat EPIC satellite IS33e. Intelsat EPIC satellite is a next generation satellite technology that delivers high-performance connectivity.

Liquid Telecom contacted ETL Systems, whom they have a long-standing relationship with, to discuss their StingRay RF over Fibre solutions. After consultation to discuss key requirements and specifications, Liquid Telecom implemented 24 links across their two sites. A selection of indoor and outdoor chassis were installed, with the added resilience of 1+1 redundancy for uplinks and downlinks.

Keeping Africa connected: the outcome

The deployment of the ETL Systems StingRay units resulted in higher quality, resilient signal links and provided uninterrupted broadcasts for African consumers.

The versatility of the StingRay RF over Fibre allowed it to be used in a multitude of applications with Liquid Telecom, providing a premium service to its customers regardless of weather, power failures or other issues.

Tom Gleaves, group head of satellite engineering, Liquid Telecom, said: "We're extremely satisfied with the adaptability of ETL's Stingray products, signal performance is exceptional over multiple implementations across our teleports. Whether transporting MF-TDMA or DVBS-2X the features available mean easy setup and optimised transmission lines. With the reassurance of direct access to a responsive support team who are continually improving their products."

ETL Systems is working alongside Liquid Telecom to implement satellite equipment to reduce signal loss in Africa.

Photo: Liquid Telecom

Africa Tech Summit: Unlocking investment opportunities

For a third year running, Africa Tech Summit London provided insight, networking and business opportunities for African and international technology leaders and investors who want to drive growth in Africa.

Africa Tech Summit took place at Grange St Paul's Hotel in London.

FOR A THIRD year running Africa Tech Summit London (ATSL) provided insight, networking and business opportunities for African and international technology leaders and investors who want to drive growth in Africa. The summit launched in 2016 to share globally the growth in the tech ecosystem across Africa. The vision for the first Africa Tech Summit London was simply to bring together these great companies and initiatives across the continent and connect them with international ventures, investors and entrepreneurs who were truly focused on business and investment in Africa.

This year's event, held at Grange St. Paul's Hotel, explored the latest trends, connecting more than 250 key stakholders from across the continent through keynotes, breakout sessions and networking events. ATSL welcomed a host of speakers from MTN, YouTube, Ecobank, Draper Dark Flow, TPG Africa, Iroko, EchoVC, Ventures Platform, Uprise Africa, Cairo Angels, Kato Global, Yego Moto, Techpoint Nigeria, aKoma, Hope Tec Plus, Redsand Partners, Hive Colab and many more.

One of the speakers at the event was Karanvir Singh, CEO and MD of Yego Innovision, which has rolled out a cashless transport service called YegoMoto in Rwanda designed to address the challenges, which was launched in Kigali.

630 Moto Taxis were fitted with a rugged, waterproof and dust proof Yegomoto Meter. The Meters are constantly connected to the Yegomoto cloud-based IoT Platform, which monitors and controls the entire ecosystem. In the first four months Yegomoto delivered 42,382 trips and covered 1,591,659 km.

Besides bringing ease and transparency to the moto taxi experience by providing haggle-free rides and facilitating cashless payments, Yegomoto will revolutionise m-commerce by utilising Moto Taxis as a comprehensive logistics network to deliver goods, services and passengers at their doorstep.

A slideshow presentation from Dr. Edward George, country head UK representative office & head of group research at Ecobank explored how blockchain can transform the continent. He explained that blockchain is a type of distributed ledger technology. In the presentation he noted that by design the blockchain cannot be hacked. However exchanges that hold cryptos in e-wallets and transact them can be hacked - and have been repeatedly. According to George, since 2014 more than US$1.4bn worth of cryptos have been stolen from exchanges by hackers, including Coincheck, MT.Gox and BitGrail.

He also looked at Know Your Customer (KYC) and digital identity on the blockchain. Ghana has introduced 'Inclusive ID', a single identity verification API that connects unbanked Africans to the global economy and enables digital KYC AML compliance.

Bitrika, the latest FDI Digital Currency created by Satoshi Nakamoto, the inventor of Bitcoin Digital Currency and Blockchain Technology, has a pilot project in Ethiopia to create digital identifies for first-time Internet and e-commerce users, safeguarding their personal data digitally on the blockchain.

The event also welecomed a new launch by Nigeria-based firm VConnect. The provider of an online platform that allows users to hire local professionals for all service needs is now launching into Ghana with VConnect Ghana. Speaking to Africa Tech Summit organisers, VConnect founder Deepanker Rustagi said: "We are rolling out VConnect platform in Ghana. This has really helped as in scaling up - we have enabled users from Ghana to add businesses and grow the platform VConnect. So the key is the platform will now be available in more Anglophone countries, and to start with we are rolling it out in Ghana.

The Africa Tech Summit was an opportunity to discuss opportunities and challenges, Michael Simeon, CEO of payment processing company Vogue Pay told Africa Tech Summit organisers. He said: "I feel like it's a big opportunity for all the African focused technology companies to gather together, share ideas, celebrate our successes and discuss our challenges." ✆

By Hiriyti Bairu

The next summit will be held in Kigali, Rwanda 14-15 February 2019. For more information visit https://www.africatechsummit.com/kigali/

Taking on the hackers

Once there were very few telecoms networks and hacking into them was nearly impossible. Today neither situation applies. A major player* in security solutions explains what that means for the mobile networks of today - and tomorrow.

Photo: Adobe stock

Criminals usually attack telecom networks from hubs, often by mimicking a roaming connection.

INITIALLY TELECOMS NETWORKS were closed, ring-fenced networks – very large telcos just talking to each other. The move to IP this century was necessary for cost and efficiency reasons but it brought the network's SS7 protocol – used to pass calls between networks – into an IP network, where it was much more exposed.

Then, as Jimmy Jones, sales engineer – telecoms, with Positive Technologies, a leading authority on telecoms security, explains, deregulation, a vast increase in mobile operators (and MVNOs) and pressure from end users to use phones almost anywhere, led to the need to create exchanges. Thus, says Jones, "the protocols are on IP. There are also hubs. If you access those IP exchanges – those hubs – you've got access to potentially every mobile operator in the world. That – and the inherent lack of security in SS7 – is the reason that the whole industry has changed."

It's the hubs that criminals usually attack from, often by mimicking a roaming connection. If the operator doesn't spot the threat the hacker has a number of options. First they try to understand a device's ID. Jones says: "There's something called an IMSI [International Mobile Subscriber Identity]; once you have that you have access to a mobile phone or device. From that I can craft different attacks – gather all your locations, intercept your SMSs or calls and so forth."

That information may then be used or sold on the dark web to criminals who can craft more complex attacks. Alternatively, interception can be allied to a so-called phishing attack, which tricks subscribers into revealing their bank account details. Then, if a bank sends an SMS authentication for money transfer and if that SMS can be hijacked, the hacker can simply transfer money to his or her account. Another profitable trick, where a jurisdiction permits premium rate numbers, involves the hacker forwarding a call to one of his or her own high-rate numbers and pocketing the money.

And those are only a few of the options open to attackers. Luckily, says Jones, operators have invested, in firewalls and SMS home routing equipment "and that has improved security". But every network is different, with different mixtures of subscriber offerings, so it's still possible to circumvent those defences. When it comes to threat levels, one of Positive Technologies's specialities, "We've always found something. The levels are going down, but there's still work to be done."

The point is, he says, that "there's no silver bullet. You can't just go and buy device X and it will secure your network." His company offers a monitoring product that allows an operator to see exactly what's going on in its network and budget accordingly. For a smaller outlay an operator can purchase an assessment that gives operators a clear view of exactly where they're vulnerable.

Positive Technologies can then help with the next steps – such as blocking functions. Or it can simply offer recommendations after an assessment. "We've discovered that over a third of all the problems we find are just configurational issues, so those recommendations are normally able to clear a third of the issues we find just by getting one of the guys within the network to change a setting," says Jones. He adds: "Our recommendation isn't "Buy Positive Technologies equipment"; it's particular advice for that particular operator."

Different regions have different security problems, he adds. Africa's big money transfer business that could appeal to hackers. "We're talking to a lot of operators there and they're taking [security] very seriously – particularly the large multi-nationals. I think it'll be somewhere we'll be looking to grow our business a lot in the future."

Meanwhile the global threat is, if anything, likely to grow. Take IoT. "Everything that has a SIM is potentially vulnerable and a lot of those SIMs are on 2G; they're quite easy to attack. If that IoT device is monitoring the pressure of a pipe or the heat in a furnace in some factory somewhere and I'm able to corrupt that and take that off line then potentially the problems could be disastrous."

Still, as a company that works in both telecoms and industrial cyber-security Positive Technologies may be better equipped than most to take on the IoT hackers of the future. ✆

**Positive Technologies is a leading global provider of enterprise security solutions for vulnerability and compliance management, incident and threat analysis, and application protection. https: www.ptsecurity.com/ww-en/*

The adoption of e-government in Zambia

Good governance has been identified as a cross-cutting issue and powerful enabler of the development agenda in the world. There has been a paradigm shift with governments realising the importance of e-government as a strong tool for responsive governance.

ZAMBIA HAS 'JUMPED on the bandwagon' with the programme being budgeted for in the Seventh National Development Plan (7NDP), the economic route to its Vision 2030 plan.

E-government has been defined as the delivery of improved services to citizens, businesses, and other members of society through drastically changing the way the government manages information.

It facilitates a fast track development highway by ensuring information exchange between/among the different stakeholders electronically. On 22 October 2015, President Edgar Lungu launched the Centre of Excellence for e-government and ICT in Lusaka. The programme was rolled out for the uptake and use of ICT through an effective national e-government for public service delivery.

"The government has established the Smart Zambia Institute to spearhead the transformation of government operations into a 'smart government'," stated Lungu.

He announced that the government was already implementing an electronic system across all government ministries, and that Cabinet business would soon be conducted in a paperless environment.

The e-government division, which is under the Office of the President, has been tasked to implement the e-Cabinet in order to show leadership and commitment to reforming the rest of the public service towards a Smart Zambia.

ICT training centres will be built in Lusaka.

Photo: Adobestock

Photo: Wikimedia commons

The Smart Zambia Institute in Lusaka aims to spearhead the transformation of government operations into a smart government.

This programme is aimed at improving coordination, implementation of information and communication technology projects, as well as ensuring that services required by citizens and other stakeholders from the government are automated.

Therefore, the government's move in its strategy for e-governance sets a good tone for both ordinary citizens and the private sector in a quest to bring significant improvement to public service delivery and also exploit the opportunities that arise from the technological developments in this competitive global digital economy.

The country's aim must be to leverage on e-government to increase productivity and reduce the cost of doing business by way of having a centralised and standardised government ICT infrastructure.

It is heartening to note that the e-government system is already being tested, helping government to save $7.1mn every month through the introduction of electronic payslips for civil servants.

According to the secretary to the Cabinet, Roland Msiska, government is spending $8.3mn (around K85mn) on the implementation process to train Cabinet liaison officers, end-users and other relevant officers in ministries and provinces.

"Soon, we should be running a more simplified Cabinet process system, a system which shall be completely paperless and without the usual movement of files from ministries to Cabinet Office and vice versa," Dr. Msiska noted.

E-government is being adequately tailored to enhance the implementation of programmes such as the social cash transfer, women and youth empowerment and e-agriculture. Additionally, the cost of doing business in both the public and private sector will be greatly reduced.

Indeed, Zambia is underscoring the importance of digital transformation across sectors evidenced by, inter alia, the Smart Zambia project, which seeks to accelerate ICT usage in the country.

Under the Smart Zambia phase one project, the government established the national data centre, an integral component meant to transform the country through ICT.

Phase two of the programme, valued at about $365mn, will involve the establishment of a computer assembly plant in Lusaka, ICT training centres and broadband deployment.

Through the Smart Zambia Master Plan, the government will invest in, and upgrade telecommunications networks to improve the flow of information among government institutions, entrepreneurs and citizens.

Zambia is indeed on the right truck in as far as technological advancements are concerned. ✆

Nawa Mutumweno

Through the Smart Zambia Master Plan, the government will invest in, and upgrade telecommunications networks.

What will drive Africa's digital economy

Access to technology changes people's lives, improves business and drives economic growth - that much is a fact of life. Universal access to Internet connectivity is even being punted as a basic human right.

ACCESS TO TECHNOLOGY changes people's lives, improves business and drives economic growth - that much is a fact of life. Universal access to Internet connectivity is even being punted as a basic human right.

Huawei's recently released GIV (Global Industry Vision) predicts that by 2025, the number of personal smart devices globally, will reach 40bn and the total number of connections will reach 100bn; creating a digital economy worth US$23 trillion.

Mobile broadband creates a better life for people, better business for organisations and better economy's for countries. It allows us as a company to bring digital to everyone every home and every organisation for a fully connected intelligent world.

But even as advances in ICT propels the world into a new digital era, the vast majority of people across Africa are either not connected, or only have access to slow internet connections. Currently, less than five percent of households across the continent have access to a broadband connection, while eighty percent of those who are connected have to make do with bandwidth of less than 2Mbp/s. Only half of the population is covered by a mobile network.

Research shows a 90 per cent correlation between ICT investment and socio-economic development in a country; and connectivity and digital services will play a major role in driving sustainable inclusive growth. Connectivity is not just about a voice service or faster internet, but gaining access to a variety of cloud services that enables participation in the digital economy.

As with other developing markets, the African continent provides opportunities for business to take part in this economy through providing a variety of digital products and services to end-users, with estimated growth of around 40 per cent over the next five years.

Growing demand for digital

This is especially apparent in an industry like banking, where infrastructure has been lacking. Shifting systems away from physical branches and onto people's mobile devices has seen a huge improvement in access to banking, especially in East Africa. Expansion of these services to include insurance and other digital financial products show that Africa continues to play a leading role in this area.

Another example of what is doing well in the African market is music; with operators, vendors and ecosystem partners working together to drive new business value and taking advantage of the growing demand for local content, which is often not available through international music streaming or download services. Apart from satisfying the tastes of local fans and playing a part in cutting down piracy, homegrown services also help local artist's monitise their music more easily.

Increasing digital literacy rates across the continent means that even more people will be looking to their mobile devices for access to affordable digital products and services, and there is already a gap between demand and supply.

Wireless Technology offers an opportunity for operators

Network operators face numerous challenges in their efforts to make connectivity more accessible. These include having to balance the high cost of deploying and maintaining fixed infrastructure with a lower average revenue per user, due to local geographic and economic conditions.

Wireless technology offers operators a cost-effective way to expand coverage and provide bandwidth of over 1Gbps, giving users the fibre-like experience needed for quality enterprise networks, video broadcasts, voice over IP (VoIP), gaming, and even 4K IPTV and virtual reality movies.

ITU statistics show that 148 countries around the globe have proposed national broadband strategies to enhance the broadband penetration rate and Internet experience, and innovative wireless solutions are expected to be a key contributor to increasing broadband penetration and connecting 'the next billion'.

Build on LTE to future proof networks

Within developed markets, the race to launch 5G, the next generation network is on. Early 5G standards and technologies are now established and it's expected we will see commercial 5G networks deployed widely by 2020. This adds to the impetus for African telcos to invest in their networks and create new business models today in preparation for a 5G Era.

While it will take some time to develop 5G networks, operators in Africa can act now, incubating new services and building new capabilities based on 4G networks. Expanding and evolving LTE and its derivatives, 4G+4.5G will pave the way to 5G. Operators can now deploy 5G commercial networks with LTE continuous evolution.

LTE is now defined as the fundamental network for all connected businesses. It is often referred to as LTE4ALL, with the capability to enable all types of services, including voice, data, video, Fixed-Wireless Access (FWA) as well as new IoT applications. This paves the way for operators to explore new business opportunities beyond consumer mobility, for example fuelling digitisation in homes and enterprises.

Innovation maximises network value

At Huawei we developed and successfully deployed a series of business solutions to maximise our customers' network value. Huawei's CloudAIR 2.0 features new technology to dynamically increase spectrum sharing and support LTE and 5G New Radio (NR) on the same spectrum, enabling operators to monetise their spectrum assets and improve network ROI.

Huawei's Three-Star innovative site solutions (PoleStar, RuralStar, TubeStar) facilitates more efficient use of sites, enabling greater coverage and improving the return on investment. For radio equipment, cutting edge technologies like Massive Multi-Input Multi-Output (Massive MIMO) are now being deployed globally on LTE network providing extraordinary experience and capacity layer necessary to open new business streams. These innovations are the bridging steps for 5G Era.

We are committed to working together with government and telecom operators in this market to drive digital transformation and move towards a 5G future. We aim to create an open, collaborative, win-win industry ecosystem to have in-depth conversations, discuss the latest trends and share opinions together.

Dr. Mohamed Madkour, Vice President of Huawei Global Wireless Network Marketing.

His specialties include: E-2-E MBB Network Solutions, Broadband Business Strategy, Wireless Solutions Sales; 4G LTE and beyond. ✆

Revenue management is essential for monetising currrent and future services.

Photo: Adobestock

The role of revenue management

Communications service providers need new ways to grow profitability. However, as a recent report* points out, effectively monetising growth - notably in data transport and associated services - requires effective end-to-end revenue management.

COMMUNICATIONS SERVICE PROVIDERS' (CSPs') bottom lines are under increasing pressure as margins on core services like voice, messaging and data access get squeezed. They need new ways to grow profitability. In particular, they must better monetise exponential growth in the usage of data transport and associated services, and to do so, they must completely transform their businesses.

CSPs are undertaking huge technical, operational, business and cultural changes that are all competing for resources and priority. Despite a common goal, many of these transformation projects occur in silos. Only when these changes are holistic will they deliver the benefits CSPs want. A significant cog in that integration is ensuring that service and performance developments are matched by the ability to charge correctly for them, and that the money flows effectively through the entire value chain. In short, monetising traffic growth requires effective end-to-end revenue management.

The entire CSP business is under pressure, and this is manifesting inside organisations as demands for change that can be categorised under three major themes:

- The need for a step-change in efficiency – this means driving costs out of the business through automation and software-driven platforms that can support changes quickly and cheaply. The marginal cost of services must be reduced across all network, operational and support functions. For example, creating and changing settings in charging and policy functions to support new tariffs or services cannot bring with them additional costs, nor cause significant delay in rollout. Working in Internet-time is essential.
- The adoption of a new customer experience paradigm – the direction of service flow has always been from the CSP to the customer, but increasingly control needs to be put in the hands of customers through self-service provisioning, activation, and tariff flexibility. This meets with the expectations of millennials and provides a valuable tool for CSPs to differentiate beyond price, reduce churn and even gain market share from competitors.
- The creation of new services – point-to-point voice, messaging and Internet access will remain the core CSP services, but new services are essential for their future growth. However, many new services will not be delivered solely by the CSP, will operate on different business and pricing models, and will have definitive lifespans. This means CSPs need to create ecosystems and build new value chains. In turn, these will create requirements for new and advanced capabilities in CSP operations.

Organic revenue growth is no longer something CSPs can rely on. Data traffic on the other hand is continuing to grow at a rapid pace. CSPs are attempting to better monetise that data growth and build new value propositions following the three strategies mentioned above.

There is, however, a dependency between profit-growing strategies and developments in revenue management capabilities. Only when the correct revenue management elements are in place, will CSPs be able to benefit fully from many of the higher-profile elements of their growth strategy, such as network virtualisation, 5G and the IoT. The key steps to make this happen are:

- Create new levels of business process automation, real-time charging across pre- and post-pay systems, flexible policy management, and seamless integration with CRM systems to support the change in the customer experience paradigm. Only then can CSPs give customers what they want, when they want it and to demonstrate value. By doing this, CSPs can maintain a link between the increase in data traffic and revenue growth, albeit at a lower level.
- Develop effective systems to support the new partnership models that underpin the creation of new services with new revenue streams. New services are not likely to be solely provided by CSPs; they will come from partnerships with other companies that have assets CSPs don't. Creating effective partnerships that benefit all parties is essential. However, such partnerships require new settlement structures, real-time operation, and greater integration between previously separate BSS and OSS functions.
- Create a step-change in efficiency that makes the above possible at the speed and cost required through virtualisation and automation. This is a business-wide development and one which must include IT systems if investments in other areas of virtualisation, such as network function virtualisation, are to deliver the expected return on investment. ✆

**This is an extract from the TM Forum/Huawei white paper: Revenue management: Essential for monetising current and future services. The full paper can be downloaded at: inform.tmforum.org/research-reports/*

TM Forum is the global industry association that drives digital transformation of the communications industry through collaboration: www.tmforum.org

Cashless in Kaduna?

Or coin-free in Kumasi? One day it may not be a problem, as we find out in this interview with Eran Feinstein, Group CEO of payment service provider Direct Pay Online (directpay.online), a group now taking its services into West Africa.

How do you operate? Do you mainly support businesses that want to operate cashless systems, or do you also support end users? How do you set up a system for a client?
EF: At DPO we provide a payment platform for merchants (businesses) that would like to have a cashless business. Once the businesses have joined us, they are able to accept online and face-to-face payments. For end customers, we provide secure payment pages where they can pay safely and use any form of payment. Additionally, we give them an option to have a DPO e-wallet where they can save their card details or mobile money accounts for future payments to merchants.

How quickly has the sub-Saharan African market embraced online payment?
EF: Several African markets and businesses have already embraced online payments – notably the travel industry. Other markets are following the rest, but the process is slow. However, we are now seeing the growth of online payments in industries like e-commerce, schools, insurance companies and many more industries.

You support a variety of payment modes. How popular is mobile payment in Africa? Is it more of a driver than PCs or cards?
EF: Mobile money is quite popular in some parts of Africa. However, from the online payments side cards are more popular than mobile money. A few years back the transactions were 80 per cent cards and 20 per cent mobile money, but this has rapidly changed and we can see it at 60/40. We believe in the next few years the trend will change completely.

You're now entering West Africa. Why now?
EF: At DPO we believe that this is the right time for us to get into West Africa. DPO started its operations in East Africa, established its presence there and set new standards. DPO then opened the South African market and acquired several players in order to dominate that market. Ghana has been selected as the first market and DPO has also decided to site its regional headquarters in Accra.

How different are the challenges of this market compared to the East African markets you launched in?
EF: Each market represents a different challenge. Some of the West African markets (for example Nigeria) are massive and DPO will have to prepare itself to address the unique requirements of such markets. There are also different regulations and different banks operating in these markets. DPO will be ready to adapt to these situations.

What are the opportunities of this market?
EF: The West African market represents a great opportunity when it comes to payments, growing e-commerce, the travel business, the airline industry, schools, big billers and more. In addition, DPO's unique solution for SME merchants will definitely disrupt the market, mobile points of sale, contactless card readers, QR code and more.

What sort of services will you introduce first In West Africa – and how? Will you be seeking merchant partnerships or do you already have some?
EF: DPO will provide multiple solutions for merchants in the region, customer-to-business solutions, free e-com websites for small merchants, business-to-business online payments platforms, mobile point of sales, QR payments, pre-paid cards and much more. DPO is always open to partnerships that can drive more payments while supporting the growth of the payments industry.

What next? Could online payment eventually oust cash in Africa as it is starting to do in parts of Europe?
EF: For DPO, online payments and advanced payment solutions are key elements in our strategy. We truly believe that cash will be moved to second place. ✆

Photo: jeremias münch/AdobeStock

DPO provides a payment platform for merchants that would like to have a cashless business.

Budgeting for backhaul: part two

In the second of two articles on backhaul options, Ryan Bruton, senior director international engineering at Aviat Networks, a leading name in microwave networking products and services, discusses controlling telecoms backhaul costs

Assuming that many of Africa's backhaul needs involve microwave, how do service providers go about ensuring a cost-effective approach?

RB: Africa's backhaul depends on microwave as well as fibre. There is no way around this. In Aviat Networks' experience, in challenging African and APAC environments opex reduction is a three-part approach. Firstly reduce the site costs. Reduce the power and size of infrastructure to support a site by moving as much of the microwave and radio access network (RAN) equipment outdoors, and reduce the amount of equipment required indoors. Here we provide split mount solutions that move the major heat-emitting elements outdoors. In addition Aviat Networks combines the functionality of several pieces of equipment into one small unit; we combine the microwave indoor unit (where required) as well as Ethernet switch and cell-site router into a single IP/MPLS-capable microwave router.

The second part to the approach is correct network design, where we support operators in correctly dimensioning the network and using the correct protocols and network architecture unique to their needs – including IP/MPLS to the edge, where useful, along with rings and mesh networks for redundancy and better capacity distribution.

The third part of the approach is the one that is most neglected: revisiting the network and optimising what is built. Capacity needs change, the network evolves and very often sites have too much or too little capacity; important network elements such as synchronisation, routing and quality of service need updating. We support operators with the skills to optimise these networks as well as the network management tools required to be able to monitor and spot the problem areas.

Our AviatCloud tool offers an integrate series of apps that support the end-to-end evolution of the network – from design, to deploy, to support and maintain – in one single tool.

Operators globally will soon be facing the challenge of rolling out 5G and backhauling densified networks. Do you see cost control as a major theme of a 5G future, given that MNOs will not necessarily have the guaranteed revenue streams of the past? How could backhaul models evolve?

RB: Balancing the needs of 5G around capacity and low latency with cost is going to be a huge challenge for operators. The traditional way of planning and deploying networks is simply not good enough, and operators have to evolve skills, network topologies and deployment strategies in order to meet the 5G challenge. From a microwave backhaul perspective this means higher capacities from access to new higher-capacity spectrum. More generally in the networks as a whole it means more automation in the network to be able to deploy services faster and react to network changes without the need for direct human intervention. Using automation technologies such as software-defined networks (SDN) together with more integrated tools supporting the full network life-cycle evolution is absolutely key. Today Aviat Networks is the only microwave vendor to offer native SDN microwave solutions with the WTM4000, and the vision of our AviatCloud tool is to offer an integrate series of apps that support the end-to-end evolution of the network – from design, to deploy, to support and maintain – in one single tool. Coupled with a long history of microwave innovations, Aviat provides a comprehensive suite of localised professional and support services enabling customers to drastically simplify both their networks and their lives. *For more information, visit www.aviatnetworks.com or connect with Aviat Networks on Twitter, Facebook and LinkedIn.* ©

Photo: Aviat Networks

Long Haul Trunking Microwave has formed the backbone of networks around the world.

Photo: Aviat Networks

Smaller antennas are needed to reduce tower costs.

IDT introduces IDT Express

MARGINS ARE EVERYTHING in wholesale voice termination. Maximise your profits by harnessing the global buying power, 600+ direct connects, 430+ CLI-certified routes and competitive rates from the world's leading independent carrier. Then take control with our real-time self-serve portal to adjust termination quality, change destinations, buy DIDs and more – anywhere, any time. Talk to our expert account team about how we can help you translate voice into increased profits – in any language.

With a simple click, you can register IPs, start passing traffic and make money within minutes. Whether you are a systems integrator, hosted PBX supplier, call center or a voice wholesaler, you've got real time reporting to manage your business the way that suits you and access to anti hacking features that immediately alert you to any suspicious traffic.

IDT Express is powered by IDT Telecom, the world-leading independent carrier of international voice traffic. Listed on the NYSE since 1996, IDT has more than 25 years' experience in telecoms. IDT terminates 28bn international VoIP minutes annually so we have all your destinations covered, through 600+ direct connects and 430+ CLI-Certified routes. We also offer a portfolio of termination quality to tailor to your needs, as well as a network that can dynamically allocate capacity, based on your call volumes.


IDT has launched IDT Express to enable customers to purchase DIDs, manage IPs, voice termination quality, among other things.

Photo: Adobe Stock

Due to the international minute volumes we generate, we can aggressively negotiate termination rates with Mobile and Land Network Operators. We pass these rates on to our IDT Express customers so you can leverage our global buying power for your business, helping you to increase profits.

Thanks to IDT's vast network and number of interconnects, as well as access to a dedicated account manager, IDT Express offers you multiple options for each destination ensuring that you will always have a working route to use, at the most globally competitive rates.

Talk to our expert account team about how we can help you translate voice into increased profits – in any language.

Visit idtexpress.com today and open up a free test account and we'll give you US$5 free.

Zambian government launches web-based investment guide

THE ZAMBIAN GOVERNMENT has launched a web-based Investment Guide (iGuide) that is tailored to present a versatile and informative platform to increase the number of investment opportunities available in the country.

The electronic investment platform, the iGuide, has been jointly developed by the MCTI and the Zambia Development Agency (ZDA) with support from the Economic Commission for Africa (ECA) in collaboration with the United Nations Conference on Trade and Development (UNCTAD).

The iGuide is a web-based portal that collects, builds and disseminates investment related information. It is designed to present quick access to information providing domestic and foreign investors alike with up-to-date and pertinent information on business opportunities as well as applicable laws and regulation.

It is a marketing tool where all information about investment is put under one umbrella for easy access, including chapters on, inter alia, registration, labour, land taxation, investor rights, growth sectors and investment opportunities.

The main objective of this web-based tool is to assist government in attracting more investment in line with their development needs.

Information that is found on the iGuide Platform encompasses:

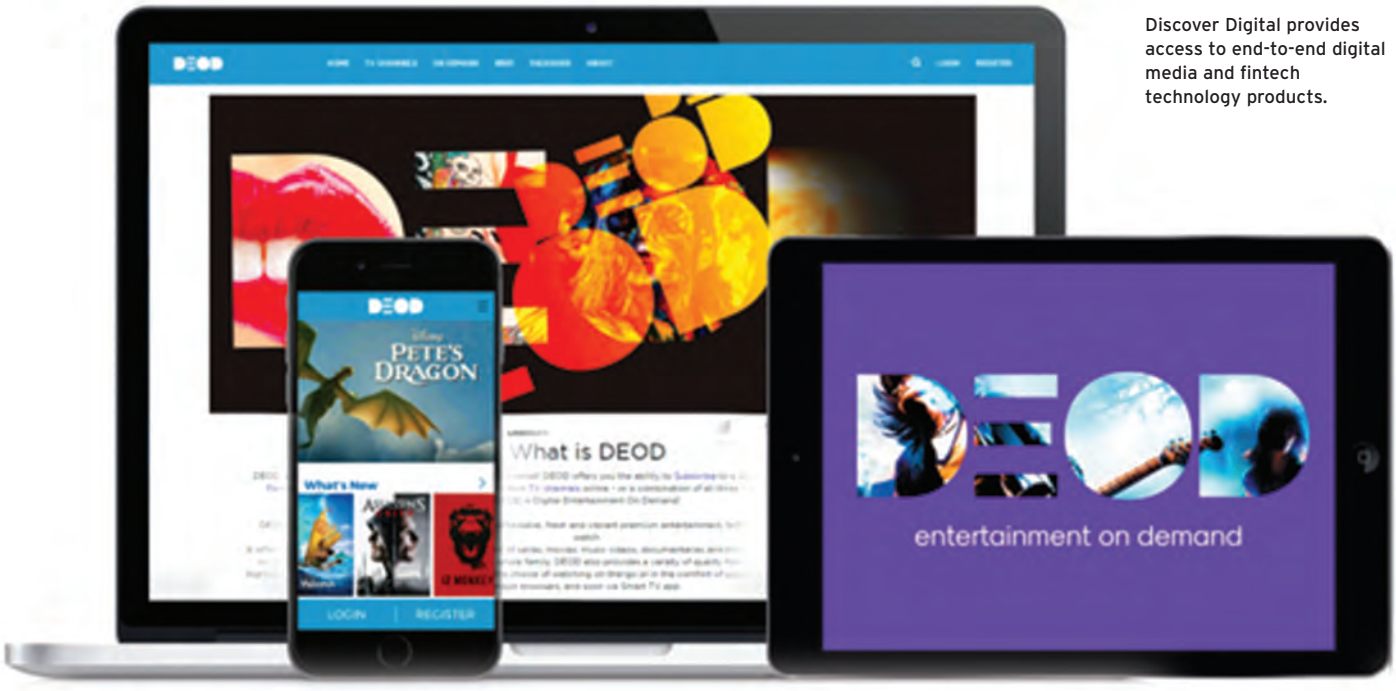
- Local data – iGuide contains updated data such as wages, non-wages, labour costs, taxes, rent values, utility prices and transport costs which is key for investors in making business decisions.
- Relevant acts, rules and license requirements – Contains relevant contacts of ministries and organisations dealing with investors; steps in getting licenses; timeframe; among others.
- Experiences of established investors – Summarises the experiences of established investors of their investment history.

The platform has the following sections: Labour; Production Factors; Land; Taxes; Investor Rights; Growth Sectors & Opportunities.

The iGuide is expected to increase investment activity in the country. "The development of the guide will assist in building capacity of local institutions directly dealing with investment issues such as ZDA," said ECA's southern Africa director, Said Adejunobi.


The new web-based investment guide will collect, build and disseminate investment related information.

Photo: wikimediacommons



Discover Digital provides access to end-to-end digital media and fintech technology products.

Photo: Discover Digital

New views of VAS

Value added services (VAS) in Africa are not just about mobile money. News and entertainment are also an important part of VAS growth in Africa, as two leading enablers of value added services in the region tell Vaughan O'Grady.

IT'S TRUE THAT mobile money is an important feature of Africa's value added services (VAS) scene. But the reach of news and entertainment-based VAS is growing – in both mobile and fixed applications. For example, technology company and video on demand (VOD) solutions provider Discover Digital has developed various products for telcos, ISPs and loyalty partners to enable them to offer their end-user customers quality digital entertainment as an acquisition or retention tool, as part of a reward programme, as a data-gathering incentive, or merely to drive traffic and high data usage through their networks.

A VOD reseller service (called Digital Entertainment on Demand) a billing switching system (Common Operator Billing Interface), and a locally developed Recommendation Engine (RE). are just three products, while the services offered by Discover Digital include a stand-alone studio-compliant Content Management System (CMS), Multi-Screen Applications, Digital Rights Management (DRM), Content Workflow Solution, Linear Channel Delivery services and even live streaming and broadcast production services via a subsidiary, EFX productions. Fully managed and integrated VOD/IPTV solutions can include all these.

As for how this all works in business terms, Taryn Uhlmann, executive head, content and marketing, says, "Our work in this space is underpinned by strategic B2B partnerships with the likes of mobile operators." In particular the DEOD VOD product is adaptable to fit partners' corporate identities, pricing strategies, fixed line and mobile data bundling objectives and market-specific content needs. "This enables mobile operators to offer digital entertainment without the need for hefty technical set-up costs and the high, often prohibitive, minimum guarantees required by the studios," says Uhlmann.

Africa of course can offer a few technical and pricing challenges. Accessing video content via a mobile phone can be enormously expensive, Uhlmann points out. "We employ Adaptive Bit Rate technology which always serves an appropriately scaled video to suit your overall environment – considering device, speed of Internet and available bandwidth." DEOD also supports download – and scheduled downloads, which means viewers can take advantage of off-peak data periods and free Wi-Fi to download content for later viewing. Short form content is also part of the service.

The business model is fairly adaptable too. Mobile operators and other key stakeholders throughout Africa could, for example, offer DEOD to their customers at subsidised rates, or even free, building on increasing consumer appetite for on-demand video services to complement their core portfolio of services and add new revenue streams through advertising on mobile.

"Africa's markets and cultures are varied and unique; each territory and each partner is focused on different target markets, utilising different strategies," says Uhlmann. A bespoke and relevant VAS offering is the response. "It furthermore enables targeting by device and by operating system and provides automating direct-to-consumer billing." Advertisers, she adds, benefit from attaining individual relationships and granular knowledge about their specific customers and this in turn subsidises the costs of streaming for consumers.

Africa is obviously a promising market for mobile VAS precisely because of limited fixed access, but does the company still have to develop, adapt and promote a news and entertainment offering for a specific African market?

Uhlmann explains that DEOD, to a partnering mobile operator, is a 'base' product. This means that it offers an extensive range of content: films, kids's shows, news and more. "With each mobile partner we then assess their individual market needs and each operator can build on tailored, local content [including local language content] or additional international content as is required

to speak to their unique customer base. In this way DEOD as a valued added service remains relevant and adapts to market needs both in its market positioning and its product offering."

Another company with an eye on Africa is Opera Software, whose portfolio includes innovative web browsers. Jørgen Arnesen, the company's global head of marketing & distribution, explains that Opera technology allows millions of people to get online content quickly on any device. The Opera News app, for example, collects the top stories and trending videos from around the internet and puts them in one data-compressing app. Operator partnerships are also important. "Operators appreciate that our Opera Mini browser is available for a wide variety of handsets and how it helps them grow their internet user base without causing major new investments in their networks," Arnesen says.

Opera tailors products carefully to the conditions and needs in the markets via research and feedback. "A good example of this," says Arnesen, is the development of our data-saving mode, which can be enabled in all Opera products and is a key feature of Opera Mini. Enabling data-savings in Opera Mini allows users to compress data and access the internet in areas where network conditions may not be optimal."

In addition, says Arnesen, "we recognized the need for one app to provide the trending stories from a wide variety of news sources. You no longer need multiple apps for staying up to date with what's happening locally and globally, Opera News keeps users on top of the latest stories, all while compressing data and offering a download feature to enjoy the content offline later."

Thus, he adds, thanks to the artificial intelligence integrated in the company's products, it can continuously provide users with a unique experience that is based on their usage habits. "We have on-the-ground teams in each country that gather stories from the most important sources as well as continuously work to improve the quality of our news offerings."

Local 'ambassadors' are another important part of the Opera offering. "At the moment, we are working with two brand ambassadors in Nigeria: Chelsea FC player Victor Moses and the Nigerian award-winning singer and songwriter Simi.

"We cooperate actively with our ambassadors and keep our followers up to date on our social media channels." Chances to win prizes, including devices, or meet the ambassaodrs, are all part of this engagement.

While entertainment matters to Opera Arnesen says, "As for mobile money, we don't expect this trend to slow in the future and have introduced products to the market that provide the reliability and security required in this field." Strategic investments to encourage the development of online products and services that will answer the demands of millions of users are a part of this approach. "Modern mobile buyers are demanding easier, faster and less expensive methods to transfer money, request loans, or make peer to peer transactions," he says.

Opera has made a strategic investment into OPay, an Opera Group company with a focus on providing financial services in Africa. Recently, Opay announced the launch of OKash, the first standalone app of OPay which facilitates almost instant micro loans with flexible pay back terms directly from your mobile phone.

So had non-financial VAS been overlooked in Africa until recently? Uhlmann of Discover Digital says, "I don't think sport or entertainment-based value-added services have been overlooked; rather I think sport and entertainment is not traditionally the core business of telcos and, as such taking sport and entertainment to market has various complexities. Aside from cost most telcos and mobile operators require a partner in the content/broadcast and or technology space whose primary business is sport and/or entertainment. Additionally, rights to sport content in particular are often tied up in long-term pay TV deals, making a mainstream sports offering difficult to procure."

However, she adds, the future is still bright for this VAS market. "Over time, both sports and entertainment providers are seeing the value of ending their exclusivity in traditional pay-TV deals and including OTT mobile offerings where they can immediately attract a much greater audience and generate revenues over a wider base. They also develop a direct and richer relationship with their customer and fan base, so in time this market will most certainly outperform other VAS services and products." ✆

Africa is obviously a promising market for mobile VAS precisely because of limited fixed access, but does the company still have to develop, adapt and promote a news and entertainment offering for a specific African market?

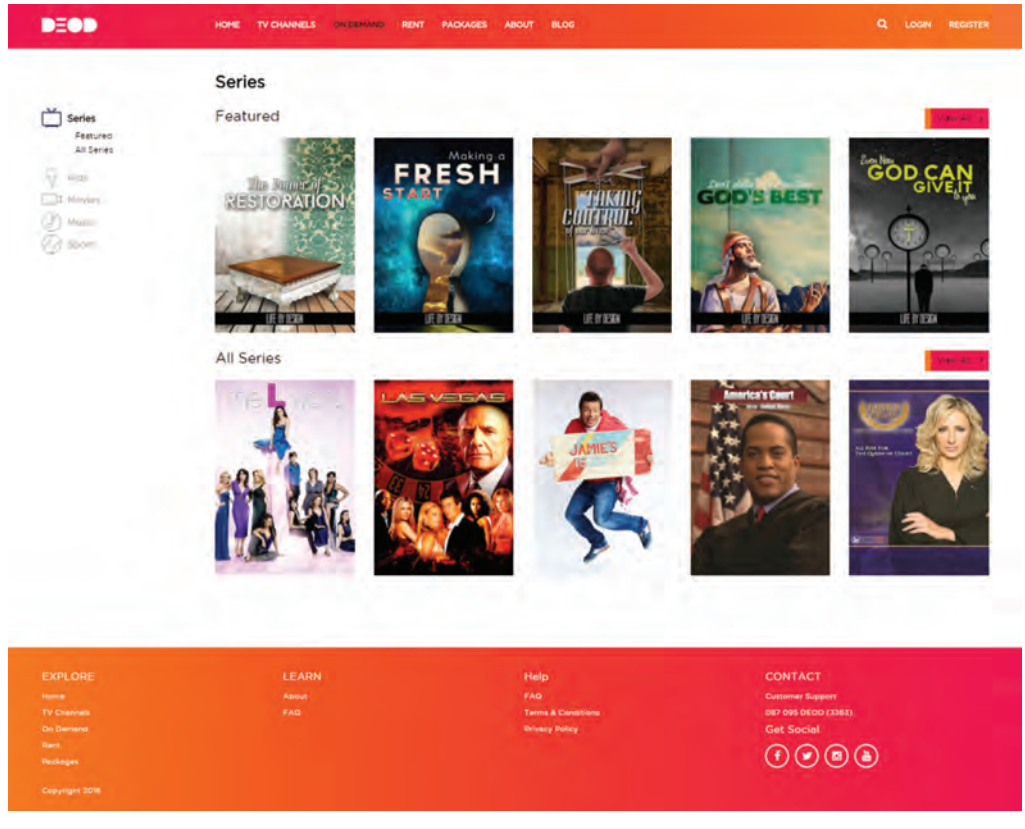


Photo: Discover Digital

DEOD is the first converged online OTT television service to launch in Africa.

The Implementation of GDPR and it's potential impact on local businesses

As of 25 May, anyone trading with EU businesses, marketing to EU citizens, or holding the personal data of even a single European national, needs to be fully compliant. This means making major changes to how one captures, processes and stores consumer data.

The relationship and transfer of data between data controllers and data processors is an important part of GDPR

Photo: Adobe Stock – Scanrail

THE NEW ROLL out will have a strong focus on data protection and archiving practices. Ignore GDPR, and you run the risk of hefty fines (up to $23.7mn or four per cent of annual global turnover, whichever is greater), a loss of consumer trust, and untold damage to your reputation. Are you ready to face GDPR head-on? If you have been readying yourself for compliance to our own POPI (Protection of Personal Information) act, then you should not be far off complying with GDPR which is based on similar principles.

The requirements of GDPR

Globally, recent years have seen some of the worst data leaks and malicious hacks in history. As a result, people are far more concerned about their fundamental right to privacy and have also become more vigilant and aware of their liberties when it comes to their digitally-gathered personal data, and what businesses are doing with it. GDPR outlines a new set of regulations that are designed to prioritise the rights of EU citizens and give them more control over their private data, including valuable and sensitive information such as financial details, phone numbers, addresses, religious and political views, and much more. Regardless of where a business is located, if it collects or processes the personal information of any EU resident, GDPR applies. In this regard, it's imperative to understand what data you collect, where it is stored and how it's being used. The legislation highlights two main data rights for customers: the right to be forgotten, where a customer can request their data be deleted; and the right for data portability, where a customer can request that their data is moved from one company to another. Customers are further protected in the form of necessary updated privacy notices, which need to be worded in clear, concise and plain language that anyone can understand. By outlining exactly what you'll be doing with the data, a strong focus on transparency is emphasised, and customers feel more at ease.

Photo: Connection Telecom

Rob Lith, director of business development at Connection Telecom

Another important aspect of the regulation involves data breaches. Businesses are required to notify authorities of any kind of cybercrime within 72 hours. In an effort to minimise exposure to these kinds of attacks, a company is encouraged to only collect, share and keep the data that they really need, and to ensure that it is effectively searchable in case they are called upon to provide it.

The importance of change and compliance

Any South African company needing to align itself with the GDPR requires the appropriate internal processes and technical capabilities to be able to execute these changes correctly. For example, a data processing company, such as Connection Telecom, would need to sharpen its security controls and data breach continuity plans, and seek advice from a specialist attorney that can assist with updating its policies and documentation to ensure informed consent and water-tight compliance.

The relationship and transfer of data between data controllers and data processors is an important part of GDPR, and businesses need to work together to ensure consumer information is secure. Companies should also consider assigning dedicated individuals or teams to focus on GDPR, to ensure that data is accurately documented, safely stored, and permanently deleted – not to mention that practices are regularly tested to ensure optimal protection.

Beyond the negative financial implications of non-compliance, there's another important reason for businesses to implement these data security and integrity practices: a digitally-savvy generation of customers is better informed than ever before, and the reputational risks associated with irresponsible handling of data are known all too well. Consumers expect ethical behaviour and utter transparency, even from the largest corporation.

Finally, it is worth noting the positives of GDPR compliance. By gaining a true understanding of a business's data practices, more effective business decisions can be made in the long run. It's not just a legal responsibility, it's an opportunity to do better business – and organisations across the globe would do well to embrace it with open arms. ✆

Embrace the shadow

Shadow IT is a term used to describe technology systems and solutions built and used by business units in enterprises without explicit organisational approval from the IT function.

Photo: fotohansel

Businesses must recognise that shadow IT emerges as employees seek to be more efficient and take control of their working lives.

SHADOW IT IS becoming both pervasive and unavoidable across a wide range of departments within most organisations. Technology now allows business users to download their own digital solutions without the permission, participation, or even knowledge of the official IT department. There have been many negative stories around the consequences of this trend. However, if managed correctly, shadow IT can actually serve as a key enabler, driving innovation and rapid time to market, rather than becoming a sinkhole for effort and budget. Given that it will happen regardless of attempted central control, IT departments should therefore learn to embrace shadow IT as an essential element of modern business life – and be prepared to manage it effectively. In doing so, they will genuinely empower employees and start to demolish the traditional divide between the business and IT.

In this article we will look at some of the drawbacks and potential benefits of shadow IT, and how companies can go about reaping these benefits. We will focus on the software-as-a-service (SaaS) aspects of shadow IT, not because all SaaS solutions are deployed as shadow IT, but rather because SaaS is currently the approach most used by employees to install shadow IT solutions.

Why shadow IT is unavoidable

Enterprise software is set up and configured to satisfy the requirements and needs of the business, rather than those of individual users. The aim is therefore to deliver a consistent, standardised approach. However, in today's highly personalised world, where the commodity off-the-shelf applications we use every day can be heavily customised, users now expect far more of the systems they use in their business lives. In many cases standardisation has led to businesses deploying inflexible, bureaucratic, non-intuitive software applications, for which it feels as if the solution is the master and the employee the servant.

IT organisations, processes, tools and technology have evolved over time to address major project and business needs – such as delivering back-office efficiency through ERP software. However, the process of re-platforming from legacy technologies and ways of working to current-day needs has simply not provided the same level of personalisation and user-friendliness that employees expect in today's consumer-driven digital world.

By contrast, shadow IT is seen as fresh and new, using what is perceived by employees as leading-edge technology. It aligns perfectly with their demands and requirements, as it was set up by business users. In addition, shadow IT embraces the latest technologies via SaaS, platform-as-a-service (PaaS), infrastructure-as-a-service (IaaS), and other consumption-based models, and is agile by design – not as a costly retrofit.

IT departments must learn to embrace shadow IT as an element of modern life and practices that will happen regardless.

Focusing on shadow IT using the SaaS model, it is obvious why users are embracing it:

Ease of access. A SaaS application is accessible over the Internet, usually solely through a browser. Little or no client software is needed, so the employee can access the service from anywhere.

Ease of maintenance. SaaS applications are maintained by the provider. There is no necessity for the end user to install patches or updates, and no need for expensive and/or scarce internal technical resources. Free/low cost. SaaS applications are generally available through a pay-as-you-go licensing model – all that is needed is a credit card, with no requirement for an enterprise-level agreement (and all the complexity attached). Many are free for small-scale or personal use. Subscriptions can be terminated at any time, meaning there is no residual cost or need to write down capital expenditure.

Fast deployment. Solutions are available on demand – end users do not have to wait to have their applications deployed or for an enterprise agreement to be signed. They can just get on with their work.

The drawbacks of shadow IT

Press coverage of shadow IT has normally concentrated on its negative points, focusing on a long list of detrimental implications. In fact, the term "shadow IT" itself is most likely to be used by IT functions in a pejorative way. This is understandable, as traditional enterprise IT departments place a premium on control and centralisation, and don't like end users going behind their backs, especially when the implied message is that what IT provides is not good enough. Shadow IT is therefore normally seen as an unacceptable risk to the organisation that needs to be actively eliminated, with the most common drawbacks being that it:

Creates inconsistency in business logic and approach, as different parts of the organisation may end up using different IT services and processes, which do not necessarily integrate. For example, if some parts of an organisation use Google, while others use Microsoft Office 365, this potentially creates discrepancies in working practices, such as around document sharing, meetings and communication.

Adds extra cost to the business, as the business has to pay for its traditional services as well as shadow IT, which do not generally sit under the same budget and are not subject to

the same scrutiny in terms of cost/benefits. This makes it difficult for the organization to estimate the true cost of IT. For instance, a team within the business may be using a different chat system, such as Slack, and charging it back to the business, meaning the organisation ends up paying for multiple systems.

Creates inefficiencies, as the business needs to support more than one service, which can lead to duplicate support costs, as well as introducing potential extra expenses to integrate different systems.

Increases security risks, as data held in shadow IT services may not be managed, maintained and secured in the same way as corporate data. For example, using personal Dropbox accounts to store sensitive information might result in employees still having access to the same data after they leave the business.

Constitutes a barrier to enhancing IT services, as end users, satisfied by shadow IT, may not feel the need to push for better services from the IT department. For instance, if discrete parts of the business are using WhatsApp or Slack for communication, they may not push for the whole organization to move away from traditional collaboration systems. This means that small pockets of employees have leading-edge tools, while the majority of the business struggles with outdated or inadequate legacy technology.

The benefits of shadow IT

Despite the long list of possible problems and opposition from IT, end users continue to see benefits from shadow IT, often crediting it as central to driving innovation, business transformation, and increased productivity. By embracing shadow IT, enterprises can realize benefits, including: Increased productivity. Due to their informality and the fact that they may be hidden, it is difficult to uncover metrics for improved productivity driven by shadow IT systems. However, with the main reason given by end users for using shadow IT solutions being, "I want to do my job," the implication is that existing, official systems are, at best, cumbersome or not fully fit for purpose. The shadow IT solution provides a better user experience that allows employees to perform more effectively, driving user adoption. A good example of this is a DevOps team that ADL recently worked with, which needed to manage product fixes with suppliers in real time. The team started using the free version of Slack to reach all parties and reduce the time to detect problems. This localised success has led to a more formalised solution being rolled out for the rest of DevOps.

Innovation. Shadow IT solutions fill a gap between what IT currently supports and what an end user needs. These gaps highlight inefficiencies with existing IT solutions, while new tools introduce innovative new ways of working that challenge existing ideas, bringing new benefits. One example of this is Trello, a lightweight tool that helps support project management, commonly used by employees who want to create a simple scrum/agile board. Using such simple and user-friendly tools would enable end users to adopt innovative ways of working faster than a more complicated one would. Innovation can come from any direction – simply limiting technology selection to the IT department reduces the potential for the rest of the company to drive new ideas and ways of working.

Traditionally, IT supports applications that aim to provide employees with the required tools for their jobs.

Ability to attract talent. End users are generally more engaged and productive when they can choose their own systems. Therefore, allowing shadow IT helps attract and retain high-performing talent. For instance, allowing users to choose their own project management tools, such as Pivotal Tracker or Teamwork, empowers teams within the business and enables them to be more efficient. Flexibility. In organisations in which shadow IT is accepted, end users are more likely to follow the latest technology trends by choosing either systems they know and love (such as WhatsApp), or that are generally the best on the market. Embracing these intuitive, consumer-style technologies enables companies to move to new systems faster than through traditional channels, with less need for formal training and rollout activities.

How businesses can manage shadow IT and reap its benefits

It is a natural response for IT to feel overwhelmed by shadow IT, and to therefore attempt to block everything and anything not directly sanctioned by the IT function. However, that will stifle innovation and productivity – businesses must recognise that shadow IT emerges as employees seek to be more efficient and take control of their working lives. It is not a conscious attempt to endanger or undermine the business. As such, IT must start looking at ways to manage and monitor shadow IT usage. The enterprise must be able to keep pace with today's rapidly evolving business landscape, and that requires taking advantage of the cloud/SaaS revolution. It also requires a more collaborative approach across the organisation, recognising that technology innovation can no longer be the preserve of a single business department.

There are multiple methods that can be used by IT to pragmatically manage or channel shadow IT: Training around BYOD and application/cloud services – Cloud solutions and highly connected applications, from Facebook to WhatsApp and Skype, are now part of our daily lives. However, this ubiquity tends to create a false sense of confidence in the security of all SaaS applications. Consequently, training is a vital first step to provide end users with the necessary mindset of ensuring security in the cloud.

Training and talking to users is therefore the most important step in managing shadow IT effectively. Typical IT policies, which restrict individual users from choosing the applications they are able to install, will generally not work in today's world, as there is a whole generation of employees who solely use browser-based, cloud services in their daily lives. It is therefore much more effective to help users understand the risks, work with them to mitigate them, and inculcate a culture of trust and personal responsibility.

IT as a platform – Traditionally, IT supports applications that aim to provide employees with the required tools for their jobs. However, as users have increasingly different and more specialized needs, they are turning to shadow IT. In this new world, IT should aim to support platforms and allow users to choose their own preferred solutions. IT's focus should shift to supporting integration between different applications, removing barriers to choice. For example, Okta and Box's platforms enable organisations to build identity and content collaboration into their applications, supporting multiple users based on their preferred choices and allowing simple working between both Microsoft and Google documents. One benefit of this approach is to ensure that all documents are still on the company's platform, which negates the risk of an employee leaving with sensitive information. Effectively, by moving from maintaining a standard application to supporting a broader-collaboration platform, the real risk of data leakage is managed, rather than relying on the rigorous but ineffectual policing of an application that is increasingly bypassed.

3. Network monitoring – IT should most definitely not be in the dark about which apps are being used and, most importantly, what data is being sent into the cloud. Vendors such as Microsoft and Cisco have identified this requirement, and are now offering solutions such as Cloud Access Security Broker (CASB) and Cisco's Elastica Audit. These solutions collect data from all network devices, such as firewalls, in order to analyze traffic and provide a detailed picture of the cloud apps employees are actually using. This allows the business to effectively manage and monitor app usage and data flows. Each app can then be rated in terms of whether it meets industry standards, its security risks, and its business value, and an

informed decision can be made on whether to encourage or discourage its use. Greater visibility and monitoring of shadow IT can therefore effectively allow an enterprise to foster innovation while minimizing risk.

4. Shadow IT amnesty – Instead of going down the usual, binary path of blocking access to applications that employees are using, IT should attempt to talk to end users by offering an internal amnesty, bringing shadow IT into the light. This will allow IT to gain knowledge of applications being used and start a dialog, inviting end users to describe why they require a particular shadow IT solution and existing enterprise systems are not up to the task. Fostering dialog between end users and IT is often surprisingly difficult – especially for something as divisive as shadow IT. Both sides of the discussion therefore need to be prepared to leave their prejudices at the door and genuinely listen if progress is to be made.

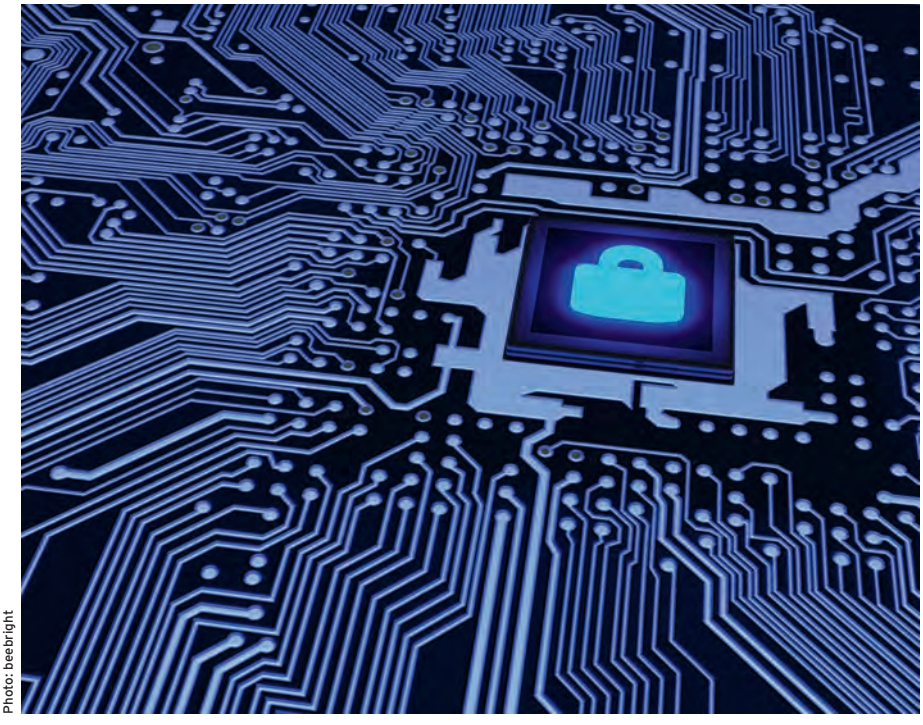


Photo: beebright

It is important for organisations to adopt a strategy to boost cybersecurity.

How embracing shadow IT led to 43 per cent OPEX savings

A global education company, operating across the world, was facing rapidly escalating costs for its video-conferencing (VC) solutions, which were a critical part of its business environment. Arthur D. Little was brought in to identify cost inefficiencies with the current solution, assess alternative VC tools, and select the best tools to fit the organization's global needs and digital strategy.

The client had been using the same VC tool for the past 20 years, and while it had been fit for purpose in the 1990s and undergone a series of upgrades and retrofits, it no longer met today's business needs. This resulted in two types of behavior:

Employees who used the official tool, but asked the provider for increasing amounts of optional functionality. This led to a very complex, fragmented and costly global contract – with more than 300 additional services included in it.

Users saw the tool as unsuitable for their needs and took it upon themselves to find a new video-conferencing solution through shadow IT.

Enterprise software is set up and configured to satisfy the requirements and needs of the business, rather than those of individual users.

While assessing the tools available in the market, ADL also engaged with end users to identify their VC needs and real-world use cases, while offering an amnesty for shadow IT. Employees were encouraged to be honest about their VC experiences through interviews, polls and forums. Research and employee feedback pinpointed a specific tool that not only met business needs, but that a large number of teams were already using – and even paying for separately, unknown to IT.

The client therefore added the new VC solution to its existing platform, seamlessly integrating it with the company portal, help desk and email. Additionally, training was provided on the solution, through instructor-led sessions, quick-help articles and regular open engagement on the client's internal forum.

Embracing shadow IT and adding the VC solution to the corporate platform brought annual OPEX savings of 43%, by eliminating duplicate payments and unnecessary additional services. It also greatly simplified internal processes, as the employees' favorite solution was directly integrated into the corporate platforms, allowing for much richer functionality. This illustrates some key lessons that can be applied more broadly:

- Embracing shadow IT and listening to employees' needs can unlock large-scale savings
- The earlier IT engages with users, the sooner costs can be reduced
- While not all shadow IT tools work for all users, it is still likely that some tools emerging from shadow IT will become the solution of choice for the whole business.

Insight for the Executive

Shadow IT is an accepted trend, with the majority of users already deploying SaaS solutions in their workplaces without the knowledge or sanction of the IT department. There is no way to reverse this – the reality of our cloud-pervasive, highly connected world is that shadow IT is the new normal within today's enterprise.

IT departments must learn to embrace shadow IT as an element of modern life and practices that will happen regardless. Instead, they should spend their time, energy and budgets on tools, practices and training to properly manage shadow IT and effectively empower employees.

This means the IT function needs to take a more collaborative approach across the organization, and adopt new practices for managing shadow IT by effectively making it an integral part of the overall enterprise IT strategy. This can be accomplished by:

- Training employees in using SaaS in a safe and secure manner
- Shifting the focus of IT towards platforms rather than specific applications
- Monitoring and analysis of shadow IT used
- Engaging in dialog to understand why and where shadow IT is being used, including offering an internal amnesty to ensure accurate reporting.

Shadow IT is effectively a paradigm shift in the modern world of enterprise IT that has created profound changes in the fundamental model of how IT departments must serve the needs of the business. As with all change, there are challenges to be addressed, but also ample opportunity for significant benefits to be gained. ✆

Kigali hosts African Innovation Summit

THE RECENT AFRICAN Innovation Summit (AIS II) took place in Kigali, Rwanda. AIS II focused on innovative and disruptive solutions to the major challenges facing African countries, which include energy access, water, food insecurity, health systems, and governance. As a platform for multi-stakeholder dialogue and actions, AIS II is Africa's only summit on innovation that seeks to foster action-driven dialogue between African innovators and stakeholders in government, private sector, civil society and academia to ensure African solutions are concretely given the opportunity to scale in a measurable way.

At the launch of the event, Prime minister Edouard Ngirente said: "The challenge facing Africa is building robust ecosystems of innovation. I am happy that AIS is helping our countries build a culture of innovation as a way of life. It is a critical element of development and economic growth. In Rwanda, we will be launching a research and innovation fund to address the key needs of our country. Resolutions and recommendations from AIS will play a key role," said Prime Minister Edouard Ngirente.

Simba Mhuriro, an innovator and speaker from Zimbabwe, challenged African governments to support innovators who are tackling Africa's major challenges. "To our leaders, 20 years from now, how will you explain it to us if most of us innovators are employees instead of entrepreneurs driving Africa's development forward?" He said. "Local innovations can only be local if the benefits are realised in Africa. Governments have to create regulations that allow financial institutions to fund African innovators at a large scale."

The event gave 50 innovators the opportunity to engage stakeholders in discussing potential solutions to some of the blockages that are preventing solutions from going to scale.

App assists in enhancing service delivery

IT HAS BEEN four decades since South Africa hosted its first supply chain conference, SAPICS. Since then, there has been significant innovation, leading to evolutionary trends and a change in approach. But, what matters more today, and has for many decades, is the service delivered versus the product produced. Cassie Lessing, MD, Strato IT Group, a mobile business solutions provider, said that the majority of today's industries are driven not just by technology innovation, but by the service provided.

Lessing said that as the industry enters the 4th Industrial Revolution, there are several emerging technologies that will influence and shape the future of supply chain: "We are faced with technologies such as the Internet of Things (IoT), Robotics; Augmented and Virtual Reality; Artificial Intelligence, and 3D Printing. These will all influence and impact supply chain immensely, with the majority touching on the concept of service and the importance of the role it plays."

Lessing noted that perfect order metrics often defines success for clients. He says that this mostly means delivering the right product to the right person, at the right time, with the correct information: "It's the latter where things often go wrong, documentation is often lost, incorrect or unsigned upon delivery. This can cause significant issues for both companies and even lead to non-payment.

StratoPOD, the Strato IT Group's app, has helped clients work towards the industry standard of 'right first time' and has assisted in building stronger and more information-rich supply chain departments: "The app greatly assists in improving service delivery and also provides information-rich data to the client."

FibreCo increases dark fibre reselience

FIBRECO HAS ANNOUNCED it has gone live on its open access dark fibre link along the N3 from Johannesburg to Durban including the subsea cable landing stations of SEACOM and EASSy. The N3, Johannesburg to Durban, is a strategic link for FibreCo offering the shortest dark fibre route inter-connecting the regional data centres of Internet Solutions and Teraco as well as the SEACOM and EASSy subsea cable systems. The route offers connectivity to sites including Germiston, Heidelberg, Warden, Harrismith, Ladysmith, Estcourt and Pietermaritzburg and the cable landing station in Mtunzini.

"This investment provides a long awaited open access redundant dark fibre infrastructure to the existing connectivity making the multiple Tbps of Internet connectivity from the subsea cables more resilient," said Simon Harvey, CEO FibreCo.

Venita Engelbrecht, head of technology at FibreCo added: "Our clients are able to lease dark fibre and connect using their own optical equipment, hosted at our built for purpose repeater sites, allowing complete flexibility of managing their own network. The company's open access network consists of underground fibre routes, high speed optical equipment, carrier-grade Ethernet equipment and hosting and tower facilities interconnecting over 59 points of presence across the country.

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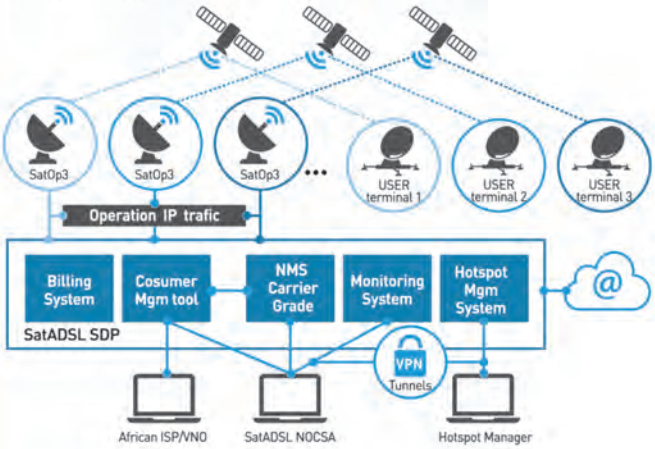
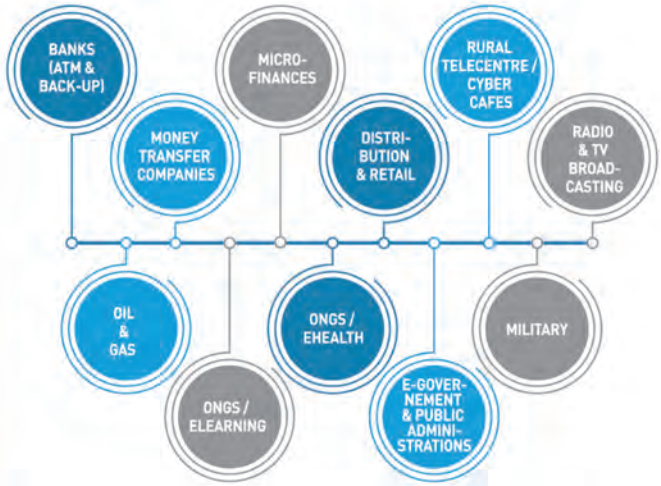
Currently, SatADSL counts more than 75 partners worldwide.





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