Issue 1 2022

Communications Africa Afrique

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FROM HERE TO EVERYWHERE

How fibre-led connectivity is changing Africa

A robust business model?
The growing market for health apps

Satellite technology
Better backhaul for South Sudan

Country focus
How Ghana gets data from space

Power
Data centres – on oil platforms!

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FEATURES: ● Network evolution ● Network testing ● Network planning

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Cover photograph: Kinshasa, Democratic Republic of Congo. Photo: Adobe Stock.
See fixed broadband story on page 13.

A note from the Editor

THE MOBILE WORLD Congress has returned – and more attendees than ever are likely to be looking to Africa for business opportunities. That's no surprise. Mobile communications in much of Africa plays the same role as fixed voice, broadband and TV in many other parts of the world. And, as this issue of Communications Africa indicates, that role is growing. Streaming TV optimised for mobile devices is perfect for Africa; health apps can reach many parts of Kenya that doctors cannot; enhanced testing is improving service quality; and new approaches to network planning are bringing cost-effective coverage to remote areas.

But other forms of connectivity are also making an impact – as this issue also makes clear. Who would have believed ten years ago that Kinshasa could enjoy fibre links with San Francisco? Or that data centres could be localised within Africa? Or that satellite communications could be a cost-effective way to support rural rollout?

So, yes, mobile leads the way. But other approaches to telecommunications are making their presence felt – and making Africa more connected than ever before.

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Parallel Wireless to display Open RAN technology at MWC Barcelona

PARALLEL WIRELESS, INC, one of the leading US-based O-RAN Alliance-compliant, cloud-native Open RAN companies, enabling all generations – 2G, 3G, 4G and 5G – is planning to demonstrate the latest innovations in Open RAN technology at Mobile World Congress (MWC) 2022 in Barcelona, Spain.

Open Radio Access Networks (O-RANs) have gained tremendous momentum over the past few years and will continue to do so in 2022 and beyond. According to Dell'Oro Group, cumulative Open RAN revenue from 2020 to 2025 could be as high as US$15bn, with Open RAN revenues accounting for more than 10% of the overall RAN market by 2025.

5G technology adoption and enabling network deployments and upgrades at lower costs are driving more operators to choose an Open RAN approach for their network architecture.

As Open RAN deployments take off, the ecosystem of partners in every aspect of the network – radio, server, RAN Intelligent Controllers (RIC), the core and more – is set to expand. Open RAN drives greater vendor diversity and supply chain security. With interoperable hardware and software mobile network operators (MNOs) are getting the most flexible, easily scalable, cost-efficient networks, enabling state-of-the-art broadband communications.

Photo: Adobe Stock

The telecom industry is demanding open and flexible networks.

Parallel Wireless aims to enable MNOs to deploy leading-edge networks, while reducing costs and complexity and growing revenues. Parallel Wireless has deployed Open RAN networks with operators from across the globe such as Axiata Group, IpT, Vodafone, Etisalat, Millicom, BT EE and many more.

Eugina Jordan, vice-president of marketing at Parallel Wireless, will be a keynote speaker on 2 March as part of the MWC 22 5G Connect Theme session titled, "Open RAN: The Next Step."

Zahid Ghadialy, senior director technology and innovation strategy at Parallel Wireless, will be participating in the panel session on 28 February to discuss, "Open RAN: A Vision of 5G and The Future of 6G."

StarLink posts double-digit growth in 2021

STARLINK, MENA REGION'S cyber and cloud advisor, has declared a remarkable 2021 closure with a YoY growth of 20%, and setting itself an ambitious target of US$550mn for 2022.

This was announced at StarLink's Sales Kick-Off, held virtually on 20 January.

Reflecting on the year gone by, Nidal Othman, CEO StarLink, said, "The evolving situation over the last two years created a landscape that encouraged innovation and no doubt digitally sophisticated enterprises were well placed to differentiate and stay ahead of the curve. StarLink stepped up on every occasion to connect with its partners and vendors to empower enterprises, shape and prioritise their digital strategy and enhance their customer experience."

"We are optimistic and look forward to maintain the same momentum and focus, to meet our 2022 goals," Othman added.

Looking ahead, Mahmoud Nimer, president of StarLink, commented, "Our theme for the year – 'StarLink Transforms' – is a strong reflection of our 2022 outlook, which centres around 'diving deep' and exploring untapped markets, empowering our vendors, partners and customers with strong initiatives, for a greater collaboration and growth. StarLink's spirit of H.O.P.E. upheld by our skilled and specialised StarLink teams is at the core of our company culture that inspires us to stay future-focused."

Ahmed Diab, chief operating officer, StarLink, concluded, "2022 comes with immense hope and opportunities. With our dynamic GTM strategy and structured roadmap, we have a great head start. All efforts are towards acting on the bold plans and delivering the highest value."

Photo: Adobe Stock

The company is optimistic to meet 2022 goals.

Inmarsat partners with Rawafed Libya for Telecommunications and Technology

INMARSAT, ONE OF the global leaders in mobile satellite communications, has announced a distribution partnership with Libyan telecoms operator Rawafed Libya for Telecommunications and Technology (RLTT).

RLTT's specialist "Digital Oilfields" business unit will use Inmarsat's IsatData Pro (IDP) and BGAN to provide secure, satellite-based data services to oil and gas companies operating in Libya. Digital Oilfields provides always-on remote telematic and CCTV monitoring of vital infrastructure including wellheads at oil and gas drilling sites as well as production sites across the country.

The services are delivered through Inmarsat's ELERA L-band connectivity network and benefit from ultra-reliable 99.9% availability, security and small-form, robust terminals.

"Inmarsat's experience in providing IoT-over-satellite connectivity for industry means that it understands the types of products and services we want to offer to the oil and gas sector in Libya," said Taha Ellafi, chairman at RLTT.

The RLTT Digital Oilfields unit plans to expand its satellite-based offering to Libya's oil and gas companies with the addition of pipeline monitoring, plus vehicle telemetry, tracking, and fleet management.

Ellafi added, "Operators across the country are digitalising their operations to increase efficiency and output and improve on-site safety and security for staff. Our new partnership with Inmarsat puts RLTT in an excellent position to take full advantage of this growth opportunity. Working with Inmarsat, we can provide remote security monitoring to drilling and production facilities across the country – including inaccessible locations beyond the reach of terrestrial fixed and mobile networks."

"More and more oil and gas companies are benefitting from the operational and safety improvements IoT provides," said Mike Carter, president of Inmarsat Enterprise. "As the industry automates its infrastructure and its processes to enable remote monitoring and asset management, it reduces the need to travel to remote, potentially hazardous places. This results in benefits in terms of efficiencies, sustainability and safety."

DPO Group partners with Mastercard in Ghana

DPO GROUP HAS partnered with Mastercard to enable thousands of businesses in Ghana to offer their customers greater choice and convenience by pivoting online and accepting digital payments.

Through the collaboration, DPO will leverage Mastercard's digital payments technology to enable businesses to accept a wide range of digital payment methods safely, seamlessly, and securely.

It will also help small and medium enterprises (SMEs) and international companies to process payments via a single integrated platform.

This platform is equipped with strong protection against online fraud and support for refunds, chargebacks, and more.

Users will be granted access to the DPO store, an e-commerce plug-and-play solution available in more than 20 countries in which DPO operates.

Through this partnership, DPO and Mastercard will also provide training for Ghanaian firms and entrepreneurs on how to maximise business growth.

AI in healthcare market to reach US$208.2bn by 2030

THE GLOBAL ARTIFICIAL intelligence in healthcare market size is expected to reach US$208.2bn by 2030, according to a new report by Grand View Research.

The market is expected to expand at a CAGR of 38.4% from 2022 to 2030. The growing demand for personalised medicine, rising demand for value-based care, growing datasets of patient health-related digital information, advancements in healthcare IT infrastructure, penetration of smartphones, improved internet connectivity and shortage of care providers is propelling the growth of the market over the forthcoming years.

According to the report, the software solutions segment dominated the global market in 2021, due to the widespread adoption of AI-based software solutions amongst care providers, payers and patients.

The clinical trials segment dominated the market in 2021, owing to the growing demand for faster clinical trials with enhanced accuracy and reliability.

North America dominated in 2021, owing to advancements in healthcare IT infrastructure, readiness to adopt advanced technologies, presence of several key players, growing geriatric population, and rising prevalence of chronic diseases.

The ongoing Covid-19 pandemic positively impacted the adoption of AI-based technologies and unearthed the potential they withhold. Healthcare systems began adopting AI-based technologies in faster and early diagnosis and detection of diseases and quicker and more accurate clinical trials.

Photo: Adobe Stock

The clinical trials segment dominated the market in 2021.

Furthermore, AI-based technologies were implemented in virtual assistants, robot-assisted surgeries, claims management, cybersecurity, and patient management. AI algorithms were trained with patient health datasets to optimise the diagnosis and detection of diseases at an early stage, to begin with an optimum treatment regime.

The clinical trials segment dominated in 2021, owing to the adoption of these technologies in clinical trial designing, study adherence, patient recruitment and minimised patient dropout. North American region dominated in 2021, owing to the availability of optimum IT infrastructure, technological literacy, presence of key players and local developers, and lucrative funding options.

Eutelsat and Intersat to provide internet connectivity in Gambia, Guinea Bissau and Senegal

EUTELSAT COMMUNICATIONS HAS signed a multi-year deal with Intersat, one of Africa's leading providers of Internet solutions, to address the connectivity needs of enterprises, institutions and individuals in Gambia, Guinea Bissau and Senegal.

Under the terms of the agreement, which represents the totality of the available capacity over these countries, Intersat will leverage the unparalleled coverage and reach of EUTELSAT KONNECT to provide a robust and high-quality internet service to customers located beyond the limits of terrestrial infrastructure.

EUTELSAT KONNECT is a new-generation high-throughput satellite offering unprecedented operational flexibility, delivering significant resources for broadband services across Africa.

Commenting on the agreement, Aminata Sanyang, managing director of Intersat, said, "At Intersat we strive to stay at the cutting edge of technology by investing in state-of-the art services that make our customer offer better and faster."

Nicolas Baravalle, Eutelsat's regional vice-president, sub-Saharan Africa, added, "This contract also highlights the pertinence of Eutelsat's multi-channel distribution strategy."

Photo: Eutelsat Communications

The partnership focuses on delivering significant resources for broadband services across Africa.

GenCell launches off-grid ammonia-to-power solution for mobile operators

GENCELL ENERGY, ONE of the leading providers of hydrogen and ammonia to power solutions, has announced the formal launch of its GenCell FOX off-grid power solution for mobile operators, which generates power on-demand from ammonia, during Mobile World Congress (MWC) 2022, to be held from 28 February to 3 March.

The GenCell FOX delivers reliable, resilient and zero-emission primary power which can replace fossil fuel generators. The solution can also complement solar PV and wind power solutions at telecom sites around the globe. The FOX can be placed at a telecom base station in virtually any location where grid services are poor or non-existent to keep the tower running without any need for servicing or refueling for as long as half a year.

GenCell will be offering operators a limited number of pre-launch projects for deployment in 2022, and it will be available for full commercial deployment in 2023.

Rami Reshef, CEO at GenCell, said, "The GenCell FOX is the first fuel cell solution to overcome the limitations of the current hydrogen infrastructure by creating hydrogen-on-demand from ammonia, the world's second most-produced inorganic chemical. More than 200 million tons of ammonia is produced each year and distributed globally via pipelines, tankers and trucks, making it readily available and inexpensive. By creating hydrogen-on-demand from ammonia, the GenCell FOX provides zero-emission fuel cell power at a lower cost than diesel generators.

"As the need for green power for towers has become more insistent and obvious, while in parallel we have demonstrated that the product has completed successful field tests in various extreme weather conditions, we are seeing increasingly broad interest in the FOX from telecom, cable and other connectivity providers around the world," concluded Reshef.

"Kwik Delivery's mission is to enable Nigerian businesses to grow, to sell more and to foster trust between economic stakeholders through the use of technology. We have been growing very fast since we were founded two years and a half ago. We have close to 100,000 B2B customers in Lagos and Abuja and we are on target to reach 1,000,000 by the end of the coming year."

- Romain Poirot-Lellig
CEO
Kwik Delivery

"Passport to Earning will provide young individuals with an effective tool to strengthen and upscale their skillsets and empower their professional journeys towards greater goals. In addition, the RewirEd Summit proved to be a fitting gathering to launch this platform in line with the conversations we hosted around the summit's first day theme: Youth, Skills and the Future of Work."

- HE Dr Tariq Al Gurg
CEO and vice-chairman
Dubai Cares

"Mobile internet services are becoming quite popular in Zanzibar, like everywhere else around the globe. These services bring online access to information and communication to the masses through their mobile phones, helping bridge the existing rural and urban digital gap. More crucially, however, these services are singularly responsible for promoting financial inclusion by allowing the banked and underbanked in Zanzibar to participate fully in the emerging digital economy."

- Said Seif Said
director general
Zanzibar's e-government agency

"This new five-year deal will accelerate the benefits of Nokia's technology – including 5G – for consumers in Middle East, North Africa and Southeast Asia and will enable businesses to digitalise and innovate with new services. The move to 5G will drive radical transformation across industries, communities and public services and we are proud to continue supporting Ooredoo Group on this journey."

- Pekka Lundmark
president and CEO
Nokia

"Reducing our carbon footprint is a challenge we take incredibly seriously. Over the past five years, we have built a strong team focused on delivering reliable mobile infrastructure across our markets while reducing our dependency on generators. This has been achieved by becoming more efficient, connecting sites to the grid, and using renewable solutions, for example hybrid battery and solar installations. Now, we are taking this work further by setting specific carbon intensity targets, developing a roadmap towards net zero emissions, and investing in our markets for a more sustainable future."

- Kash Pandya
CEO
Helios

"Thuraya's next generation programme is a comprehensive programme that covers land, sea and air connectivity and targets key enterprises in the transportation, logistics, energy, utilities and maritime sectors across Europe, Africa and the Middle East as well as the fast growing Asia Pacific region."

- Antti Syrjanen
vice-president portfolio management
Thuraya

"A first step in a broader strategic collaboration between Angola Cables and CVTelecom. The agreement will pave the way for improving telecommunications infrastructure and services in the region and will ultimately make a positive contribution towards improving digital transformation on the African continent."

- Angelo Gama
CEO
Angola Cables

"Alongside Inmarsat's BGAN M2M service, we provide data communication tools for real-world situations where visual data is needed, ensuring full-precision photo and video content is communicated using considerably less bandwidth than traditional methods. By facilitating remote inspections in hazardous environments, we can not only help keep people safe, but also deliver substantial sustainability value too."

- Paul Gudonis
chief strategy officer
AnsuR

"Digital platforms are critical to the success of our business and we have invested heavily in building a digital transformation strategy that supports our business goals. We are pleased to enter this partnership with a homegrown leader in satellite communications and explore how this collaboration can deliver enhanced services that support our operational excellence."

- Mansoor Mohamed Al Hamed
CEO
Mubadala Petroleum

"Equinix will accelerate our long-term vision to grow digital infrastructure investments across Africa. I thank our founding shareholders led by Mr. Fola Adeola, MainStreet Technologies, AFC, PAIDF, FBN, Polaris and AfDB for investing in the MainOne vision to bridge the Digital Divide in Africa."

- Funke Opeke
founder and CEO
MainOne
Helios

"The telecom industry is demanding networks that are open and flexible so that they can reduce deployment and maintenance costs yet maintain quality of service. We are pleased to be working with a broad, open ecosystem of disaggregated RAN solutions using vendor-neutral hardware and software-defined technology based on open interfaces and community-developed standards. The Future of RAN is Open, and we are excited to lead the transformation in the wireless industry."

- Keith Johnson
president
Parallel Wireless

"More and more oil and gas companies are benefitting from the operational and safety improvements IoT provides. As the industry automates its infrastructure and its processes to enable remote monitoring and asset management, it reduces the need to travel to remote, potentially hazardous places. This results in benefits in terms of efficiencies, sustainability and safety."

- Mike Carter
president
Inmarsat Enterprise

Events 2022

MARCH			
1-3	NITT 2022 Transport Technology Conference	Abuja, Nigeria	https://www.nitt-conference.com/
8-9	IDC IDG CIO Summit	Virtual	https://www.idc.com/ap/event/idc-idg-cio-summit-2022/
17	IDC Cloud and Datacenter Roadshow	Sub-Saharan Africa	https://www.idc.com/mea/events/69605-idc-cloud-and-datacenter-roadshow
17-18	Blockchain Africa	Virtual	https://blockchainafrica.co/
29-30	IoT Forum Africa	Virtual	https://itnewsafrica.com/events/event/iot-forum-africa-2022/
MAY			
10-11	East AfricaCom	Virtual	https://tmt.knect365.com/eastafricacom/
JULY			
27	Digital Manufacturing Africa	Virtual	https://itnewsafrica.com/events/event/digital-manufacturing-africa-2020/
SEPTEMBER			
1-2	Cybertech Africa	Kigali, Rwanda	https://africa.cybertechconference.com/
2-3	Techspo	Johannesburg, South Africa	https://techspojoburg.co.za/

The telecoms world returns to Barcelona

The 2022 Mobile World Congress in Barcelona is all set to go ahead. And, as Deblina Roy explains, it's back to normal - well, almost.

MWC BARCELONA – THE flagship mobile industry and technology event – is returning from 28 February to 3 March 2022 in Barcelona, Spain – and with it a timely focus on how the entire mobile ecosystem can transform our lives.

In fact Connected Impact is the overall key theme for this year's event, showcased in presentations from an impressive line-up of speakers and exhibitors.

Besides a special conference focus on the Ministerial Programme, which will address long-term goals to close connectivity and usage gaps, meet global climate targets and build policies for our new digital world, the technical sessions will highlight global mobile operators, device manufacturers, technology providers, vendors and content owners who will exhibit ground-breaking products and technologies, providing remarkable opportunities to connect with the senior decision-makers, creators and innovators in the industry.

This event will deliver cutting-edge updates on many areas through themes that include: 5G Deployment and 6G Planning; Open RAN; Enterprise and Private Networks; Building to the Edge; Connectivity for Good; and Telco Cloud.

Photo: Adobe Stock

The event, being held in Barcelona, will deliver cutting-edge updates on many areas.

And there's much more, according to organizer the GSMA: over 1,500 exhibitors, with attendees registered from 150 countries. It adds, "You will meet decision-makers, hear from thought leaders and close deals. Policymakers will meet through our prestigious Ministerial Programme, and all are encouraged to experience the 4YFN (4 Years From Now) start-up conference and, brand-new for 2022, Industry City."

Industry City is a demo, networking and content zone at the event which will showcase how the fintech, manufacturing, and smart mobility industries are leading in connected technology.

There's also a networking app – My MWC App – and Covid-specific measures to protect exhibitors and attendees.

If everything goes according to plan, attendance at the 2022 edition of MWC is expected to be close to the pre-pandemic level. This could be good news for the African communications market where more opportunities than ever are being targeted by a growing number of companies and industry associations – many of which will be at MWC.

www.mwcbarcelona.com

CDC Group provides US$30mn anchor commitment to AXIAN Telecom's public listed bond

THE UK-BASED DEVELOPMENT finance institution CDC Group has announced its anchor commitment of US$30mn to African telecom service provider AXIAN Telecom's inaugural five-year US$420mn public bond offering.

AXIAN Telecom is a fast-growing provider of telecoms services and infrastructure in Madagascar, Togo, Tanzania, Senegal, Comoros, Mayotte, Reunion and Uganda.

The provision of new financing is set to allow AXIAN Telecom to expand its footprint through increasing access to affordable mobile and data services by improving digital access and thus pursuing its strategy of inclusion in the telecom value chain for customers, extending access in rural regions and lower-income demographics.

The expansion of AXIAN Telecom into under-serviced markets should disrupt monopolistic pricing policies and dated product offerings and improve vital digital infrastructure such as fibre optic cables, towers and subsea cables.

Richard Palmer, head of corporate debt at CDC, which will be renamed British International Investment in April, said, "Affordable mobile and data services is a vital component of any economy and investment in underdeveloped telecom markets is therefore at the core of CDC's strategy in Africa. Our commitment to this bond financing supports the mobilisation of private capital from institutions that are less familiar with AXIAN Telecom's markets."

Photo: CDC Group

This financing will support AXIAN Telecom in reaching millions of people.

Hassanein Hiridjee, chairman and founder of AXIAN Telecom, added, "This bond financing will greatly support AXIAN Telecom in reaching millions of people whose prospects can be transformed by access to the services that a mobile phone can provide. This will take us through our next growth phase, and we are grateful for the support that CDC and other DFIs have provided in anchoring this transaction."

CDC will formally become British International Investment plc (BII) on 4 April 2022.

Phase3 Telecom wins prestigious technology awards

PHASE3 TELECOM, ONE of the leading independent aerial fibre optic network infrastructure and telecommunications services providers in Africa, has received two technology awards: the Best Fibre Optic Infrastructure Service Provider award at the Cyber Africa Awards and the Broadband Service Provider of The Year at the Nigeria Technology Awards (NiTA).

This first award marks the company's third award category win and fourth recognition by Cyber Africa across its platforms since 2011 for its continuing industry contributions within the telecommunications and technology spaces.

Photo: Phase3 Telecom

Olalekan Babalola, head of southern region at the Nigeria Technology Awards (NiTA).

The Nigeria Technology Awards (NiTA) is an award ceremony organised to recognise, celebrate and reward technology entrepreneurs, innovators, academicians, inventors and policymakers (Government) in Nigeria through online voting. The awards aims to build a large scale and internationally recognised Technology Awards in Nigeria. The award ceremony is organised by Technology AVENUE.

Commenting on the high honours, Phase3 executive chairman, Stanley Jegede, said, "These awards reaffirm our team's commitment to investing and innovating to foster digital transformation; engender top value for clients and strengthen our vision to firmly establish West Africa as a powerhouse in global technology and telecommunications play."

The awards reinforce the company's mission to provide excellent services to connect people and businesses for the socio-economic development of Africa.

Liquid Intelligent Technologies partners with Teridion

LIQUID INTELLIGENT TECHNOLOGIES, a business of Cassava Technologies, a pan-African technology group, has announced a strategic partnership with Teridion, a superior cloud-based global connectivity platform.

Teridion's multi-cloud-based solution has been added to Liquid's backbone services as part of their efforts to offer internet service that matches changing enterprise needs. This will allow Liquid to provide reliable and fast internet connectivity to its global customers.

Commenting on the partnership, chief business development officer for Liquid Cloud & Cyber Security, Winston Ritson said, "The multi-cloud-based solution coupled with Liquid's current technology will serve this market well. As a business, we understand the changing needs of our enterprise customers. Using a multi-cloud-based platform allows Liquid to provide ten times faster internet performance that is more reliable and scalable, allowing global enterprise customers to receive optimal performance from WAN. This partnership with Teridion is a game-changer for our business and is part of our commitment to offer services that our global Enterprise customers can use to continue on their growth trajectory."

The partnership between Liquid and Teridion will allow the enterprise customers to benefit from improved internet performance with dynamic route optimisation. Additionally, the patented technology will allow for dynamic, unlimited scalability, a high-performance global multi-cloud network, machine learning, and over 500 POPs in a solution that requires no hardware or software and can work with any device.

"Businesses operate in a global setting with remote employees. They are looking for a single service provider capable of delivering high-speed, reliable connectivity across their company. Teridion's guaranteed SLA, global reach, and interoperability through a clientless solution that requires zero employee setup makes it an ideal solution."

SIDA-funded project to boost technology and innovation in Tanzania

THE SWEDISH INTERNATIONAL DEVELOPMENT Agency (SIDA) has funded a project to boost science, technology and innovations in Tanzania.

On 5 July 2021, the project Strengthening STI Systems for Sustainable Development in Africa got underway in Dar es Salaam, Tanzania.

The project was launched at a multi-stakeholder consultation meeting, attended by about 50 participants representing government ministries and policy-making bodies, research and ethics regulatory bodies, the private sector and local communities.

Photo: Adobe Stock

The project is supporting Tanzania in its efforts to strengthen its national innovation systems.

The project is supporting Tanzania in its efforts to strengthen its national innovation systems in line with the recommendation on science and scientific researchers, a landmark international accord adopted by UNESCO's 195 member states in November 2017.

At the meeting, participants were invited to exchange ideas on the recommendation on science and scientific researchers and the implementation of its 10 key areas. The recommendation sets common standards and norms for the research systems, with provisions that address human rights, scientific freedom, ethics and integrity and knowledge circulation, among other things.

Two TV networks, ITV and TBC, included coverage of the launch ceremony in their news broadcasts. Tanzania is one of six pilot countries taking part in the project, alongside Congo, Ghana, Namibia, Sierra Leone and Zimbabwe.

Safaricom deploying data centre in Ethiopia

Kenyan mobile network operator Safaricom has announced the deployment of a prefabricated data centre in Addis Ababa, a move that is in line with the company's target to expand operations in the country.

In a social media post, the company stated, "At such a monumental time where we are building our network, we are committed to bringing the best telecom technology to Ethiopia. We have invested US$100mn in our first data centre in Addis."

According to Pedro Rabacal, chief technology officer at Safaricom Ethiopia, the company is investing around US$300mn in Ethiopia in 2022 and more data centres will be rolled out.

Ethiopia is positioning itself to transform its telco sector, with a surge in data centre development.

Engie to equip Orange's data centre with a solar PV plant in West Africa

ORANGE HAS JOINED forces with Engie to convert the GOS, Orange's main data centre in Africa, to solar power, with an aim to reduce the carbon footprint in Côte d'Ivoire.

The data centre was built in 2016 in Grand Bassam, Côte d'Ivoire, on a site covering 16,600 sq m. It hosts IT and telecommunication equipment, which supports the services provided by the GOS to all OMEA subsidiaries.

The GOS is one of the components of the Orange data centre network in Africa, which has Uptime Institute Tier 3 certification design, consolidating Orange's position as a key player in the sub-region's economic ecosystem. It helps to advance digital equality by supporting states to develop agricultural, educational and healthcare services and fosters entrepreneurship and local innovation.

In December 2021, Orange signed an energy-as-a-service (EaaS) contract with Engie to convert the GOS to solar power by installing a solar plant on rooftops and solar carports, for a total installed capacity of 355 kWp, to reduce its environmental footprint, minimise the share of commercial electricity from non-renewable sources and avoid using fuel generators. The commissioning is scheduled for H2 2022.

Alioune Ndiaye, chairman and CEO of Orange Middle East and Africa, said, "This project is a first in West Africa for Orange in terms of its size and scope and it perfectly illustrates our ambition to speed up our solar projects in order to achieve net zero carbon by 2040. In the rest of Africa and the Middle East we have already implemented several initiatives, as equipping 5,400 telecoms sites by solar panels and building solar farms in Jordan and Mali. We intend to go further."

Orange is a worldwide telecom player offering extensive submarine, terrestrial and satellite connectivity with 450,000km of submarine cables, 45,000 km of fibre across Europe, the US, Africa and Asia, and more than 450 points of presence. In West Africa, Orange has a substantial presence across many countries including Cote d'Ivoire, Senegal, Mali, Burkina Faso, Ghana, Guinea and Liberia.

Airtel Africa announces its financial performance in Africa

AIRTEL AFRICA HAS reported strong growth across all key metrics, with Nigeria PSB approval in principle to unlock further mobile money opportunities.

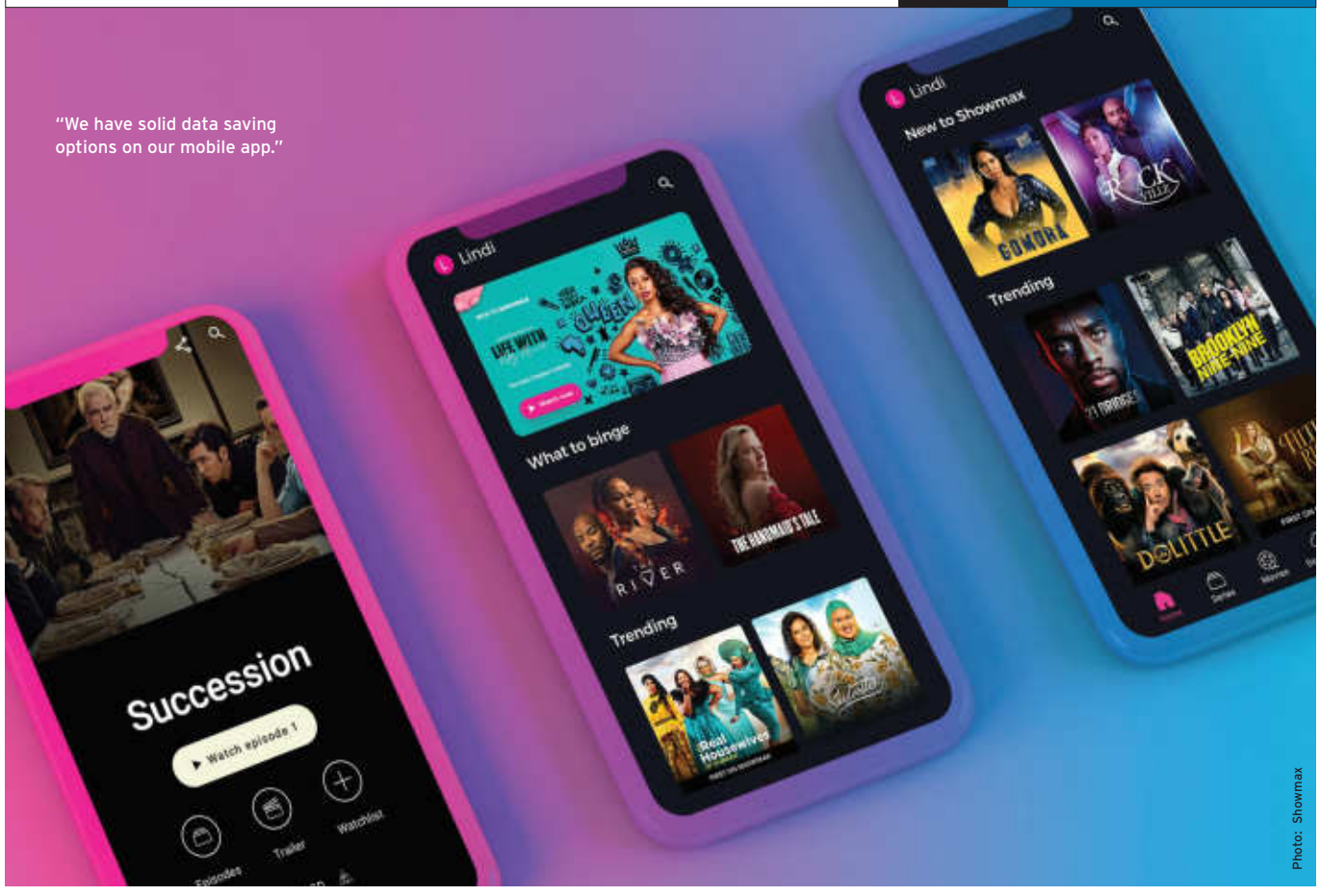
The company reported revenue grew by 21.7% to US$3,492mn. Constant currency underlying revenue grew by 24.8% and was recorded across all regions: Nigeria up 29.0%, East Africa up 24.4% and Francophone Africa up 19.0%; and across all key services, with revenue in voice up 16.1%, and in data and mobile money both up 37.2%. Underlying earnings before interest taxes depreciation and amortisation (EBITDA) were US$1,703mn, growing by 31.3% in reported currency with an EBITDA margin of 48.8%.

Airtel's profit after tax almost doubled to US$514mn as higher profit before tax more than offset associated tax charges. Basic earnings per share (EPS) were recorded at US$11.7 cents, an increase of 113.8%, largely as a result of higher profit. EPS before exceptional items increased to US$11.5 cents, up from US$5.0 cents in the previous period.

The telecom operator's operating free cash flow grew by 42.2% to US$1,271mn and net cash generated from operating activities was up 23.1% to US$1,499mn.

More significantly, Airtel Africa's user base expanded to 125.8 million, growing by 5.8%, with increased penetration across mobile data (customer base up 11.1%) and mobile money services (customer base up 19.6%). Customer base growth was affected by the NIN/SIM regulations in Nigeria but returned to growth in this region in the third quarter; excluding Nigeria, the customer base grew by 12.0%.

Segun Ogunsanya, CEO, Airtel Africa plc, said, "Operationally we have continued to execute on our network and distribution expansion plans, driving continued strong growth in ARPUs across voice, data and mobile money."



See all the hit shows – on your phone!

Streaming TV is today popular around the world - offering access to diverse content almost anywhere on almost any internet-enabled device. That, of course, is a very appealing proposition for the growing number of Africans who access the internet mainly - or solely - via smartphones. And companies like Showmax are delivering the content Africans want the way they want it -as Vaughan O'Grady finds out.

SHOWMAX IS AN internet TV service. It was launched in 2015. The service is available throughout sub-Saharan Africa and to selected diaspora markets worldwide.

What sets Showmax apart, it says, is a unique combination of hit African content, first and exclusive international series, the best kids' shows, and live sport from SuperSport.

For a single monthly fee a user can get unlimited access. "Start and stop when you want. No ads. Cancel anytime," as the publicity material says.

Streaming Showmax means using apps – not just for smart TVs, tablets, computers, media players and gaming consoles but also, and importantly, for smartphones.

And, as data isn't always cheap, customers can manage data consumption using a bandwidth capping feature. In addition, if there is no internet, they can download shows to smartphones and tablets to watch later offline.

Of course mobile is often the viewing medium of choice in Africa, where it is not just a useful alternative to TV but the main form of internet access for millions of people. So how pervasive is viewing on mobiles or tablets?

Candice Fangueiro, head of content for Showmax, explained, "Mobile is very important in Africa, which is why we offer Showmax and Showmax Pro as mobile-only subscriptions to suit those subscribers who use their mobile phone as their primary device for consuming video content."

She continued, "This is also why we've made mobile a priority for Showmax. We were the first streaming service to allow subscribers to download and watch content offline."

We offer Showmax and Showmax Pro as mobile-only subscriptions to suit those subscribers who use their mobile phone as their primary device for consuming video content.

There is even an offering that helps you to limit your data use. "We have solid data-saving options on our mobile app that limit streaming to 100Mb an hour – you can stream for 10 hours on Showmax on your phone with 1GB."

OTT and streamed offerings have spurred a growth in content in most markets – and Africa is no exception. As Fangueiro pointed out, "The African entertainment industry is a very exciting place to be right now: there's experienced talent, fresh locations and a wealth of incredible, under-exposed stories. Demand for African stories both locally and internationally is on the rise."

In fact in 2021 the service's original programming, called Showmax Originals, consistently broke records as the most watched content ever on the streaming platform, from reality TV series The Real Housewives of Durban in January and June to true crime docu-series Devilsdorp in July to telenovela The Wife in November 2021, not to mention I Am Laycon, a series about a Big Brother star,

which set a Nigerian record in February 2021.

In Nigeria, Big Brother Naija delivered record viewership and advertising revenues for MultiChoice, and has become one of Nigeria's most-loved reality brands. Detective series Reyka, a global coproduction with Fremantle, has sold to 80 territories, with broadcasters and streamers including CBC (Canada), SBS (Australia), TVNZ (New Zealand), Sky Italia, Britbox (North America), Channel 4 (UK), HBO (Latin America) and Canal+ (Poland and France)."

Of course MultiChoice, Showmax's parent company, is 26 years old, so is well positioned to meet this increased demand – and there have been international accolades too, with shows like teen drama Is'thunzi and telenovela The River nominated for International Emmys in recent years and the ecological horror Gaia winning earlier this year at South by Southwest, a US event that celebrates the convergence of tech, film and music industries.

Nor is this a solo effort. Co-production is seen as a major opportunity these days and Showmax is no exception. Fangueiro explained, "We're increasingly co-producing with international partners. In addition to Reyka, we've made the epic precolonial fantasy Blood Psalms and the police procedural Crime and Justice with Canal+; adapted Deon Meyer's bestselling crime novel Trackers with CineMax and ZDF; and have further co-productions (Recipes for Love and Murder, Crime and Justice S2, and Pulse) in production."

Interest in the group's content is at an all-time high, with 121 series sold to international buyers.

Interest in the group's content is at an all-time high, with 121 series sold to international buyers, seven times more than last year. And it's diverse. "We're currently producing Showmax Originals in Kenya, Ghana, Nigeria and South Africa; as MultiChoice we're producing across the continent."

Of course, says Fangueiro, localization is important. As she puts it, "Time and time again we see that it's the latest and freshest content from both a local and international standpoint that fulfil that demand."

Local content on Showmax is going from strength to strength but a number of genres are doing especially well. "We've broken records this year with reality (The Real Housewives of Durban, Uthando Lodumo), true crime (Devilsdorp) and telenovelas (The Wife), so those are all key genres for us. Movies are also a key driver for us across all territories in Africa – between great local content and a selection of international and local current blockbuster films, the largest content demands are met."

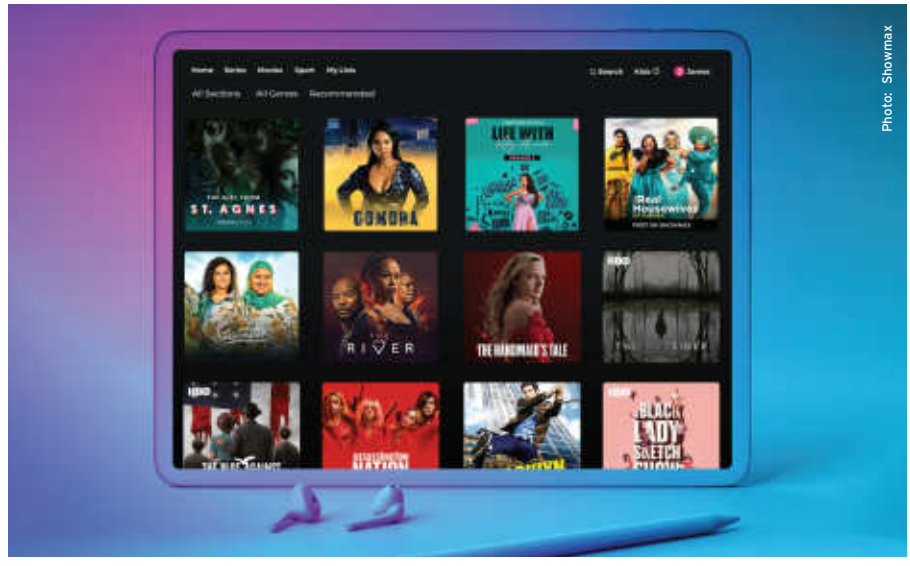


Photo: Showmax

"The ultimate binge experience is still one of the key reasons viewers watch streaming services."

And of course, OTT offers something scheduled TV cannot. "The ultimate binge experience is still one of the key reasons viewers watch streaming services, and we see this as our subscribers engage with their favourite TV series."

We discussed bringing African programming to the world in issue 2 of 2020 with television network Demand Africa which underlined the importance of the African diaspora. How does Showmax reach Africans outside Africa – both in marketing and technological terms?

Fangueiro said, "All of our African markets want local content, and as we roll out our hyper-local strategy, we see this appetite increase: so far, South Africa, Nigeria and Kenya are great examples of this. This extends to Africans living abroad, and Showmax is available in key diaspora territories like the UK, France, Australia, New Zealand and 29 additional markets, making it possible for our subscribers to catch up on all the local content they love and miss."

She added, "Showmax live-streamed Big Brother Nigeria in the UK for the first time this year, and fans there loved being able to keep up with this highly popular show."

Of course there are a few issues for ease of content access on mobiles – not least the cost of data. Would cheaper data be a useful spur to growth, at least in some markets?

Fangueiro agrees but is optimistic. She said, "As the cost of data has decreased and fibre, LTE and fixed line internet have become more affordable, this has made it possible for more people to access not just streaming, but everything online, whether it's Facebook, TikTok or online banking. As the costs continue to drop, we see enormous potential ahead of us. Not just in South Africa, but across the continent."

The million-dollar question (quite literally for some streaming services) has lately been this one: Has your service been boosted by demand during lockdown? That's certainly been the case for Showmax. Fangueiro said: "Paying Showmax subscribers increased by 42% year on year." However, she added, "Rather than changing what people were watching, lockdowns changed how people watched. For those individuals who may have been streaming-curious before, lockdown saw them take the plunge and sign up to see what streaming on-demand was all about."

So Showmax, like a lot of OTT and streaming services, has done well. But now is the time to build on this momentum. What are Showmax's plans for the coming year?

Fangueiro said, "As an Africa-first streaming service Showmax is going big on local content for 2022 – and beyond – with a host of firsts from the four corners and many languages of the continent.

"Our audiences are most engaged when watching shows that reflect their reality, their hopes and their dreams. This is why the three most popular shows on Showmax in the first half of 2021 were all local. So, we're delighted to introduce our next wave of Showmax Originals, a mix of returning favourites and ground-breaking firsts, from some of Africa's most talented filmmakers."

These include first seasons of the epic fantasy Blood Psalms, the reality series The Real Housewives of Lagos, docu-series Sex in Afrikaans, and the survival horror Pulse, as well as second seasons of The Real Housewives of Durban, the Kenyan police procedural and legal drama Crime and Justice, the romantic comedy Troukoors, and the debut Showmax Original telenovela, The Wife, not to mention a three-film post-apocalyptic film slate, led by the critically acclaimed Glasshouse. "

It's a wide-ranging selection and, importantly, a multi-country one. And with African viewers often watching on any device that can access the internet, streaming on phones will no doubt play an important part in its success. ✆

A growing appetite for digital inclusion

Not long ago, many observers would have assumed fixed connectivity in Africa would be only relevant as part of mobile networks. David Eurin, CEO Dataport – Liquid Intelligent Technologies, tells Ron Murphy what has made fixed broadband viable – in some areas at least.

FIXED CONNECTIVITY IS more common than ever in Africa. While this is not happening on the scale of Europe or North America, there was a time when it was seen as unlikely to happen at all. So what has changed?

Well firstly there has been significant investment made by a number of organisations such as to ensure improved access on the continent. Liquid Intelligent Technologies, for example, a leading pan-African digital infrastructure provider, currently has over 100,000 km of terrestrial fibre – and development plans include extending the organisation's reach into West African and North African countries.

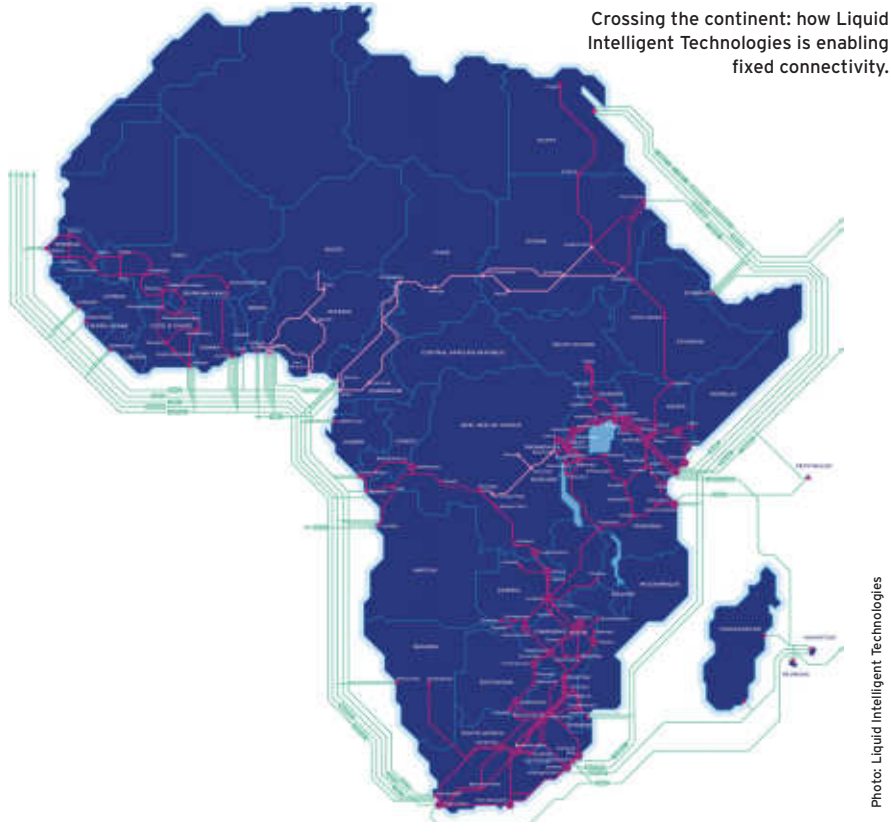
As for drivers for change, David Eurin, CEO Dataport – Liquid Intelligent Technologies, said, "One of the biggest catalysts for this increased investment has been the onset of remote working and remote education, which was a direct result of the pandemic. In the last 18 to 20 months governments across the continent have partnered extensively with the private sector to ensure the increased proliferation of connectivity."

He added, "Fixed connectivity is also a key enabler for the rollout of high-growth services across Africa, such as mobile 4G and 5G, cloud-based services and fixed broadband internet access."

There are still challenges, of course. Rollout costs, taxes, terrain and theft or damage are often mentioned. How can all of these be managed?

Eurin believes that promoting greater digital inclusion in Africa will require more effective and innovative collaboration. He said, "Governments can help with policies enabling a stable regulatory environment, new technologies and new business models, and promoting investments. Protecting existing assets (for example underground fibre is at risk during roadworks) is also a critical factor."

The right policies will, in turn, provide the private sector with the incentives to build out infrastructure and explore new technologies and applications that will drive demand. However, as Eurin pointed out, "Connecting the 100 million people in rural and remote areas that live out of reach of traditional cellular mobile networks on the continent will require strong private sector involvement, innovative business models, and complementary technologies, such as satellite and Wi-Fi-based technical solutions."



Crossing the continent: how Liquid Intelligent Technologies is enabling fixed connectivity.

Photo: Liquid Intelligent Technologies

One would expect the customer base for fixed broadband in Africa to be mainly business. Not quite. It's certainly true that broadband penetration is an important factor for economic growth through its role in improving productivity, accelerating innovation and providing new product and service opportunities. So, yes, in Africa fixed broadband is still mainly business-driven.

However, Liquid (and a number of other broadband operators) has deployed GPON FTTH [gigabit passive optical networks fibre to the home] networks in Kenya, DRC, Zimbabwe, Uganda, Tanzania and Rwanda with affordable price plans for the home (and SMEs). Fixed broadband is also delivered to the consumer with 4G LTE technology. Eurin said, "As part of our mission to build Africa's digital future without leaving anyone behind, Liquid has engaged in various initiatives to provide connectivity to the most remote parts of Africa. For example, Liquid offers free connectivity to various institutions of learning across the continent, allowing students to expand their learning options."

Governments can help with policies enabling a stable regulatory environment, new technologies and new business models.

So is a consumer mass market for fixed broadband in Africa a possibility as demand rises, costs decline, and business models enable a more cost-effective use of fixed broadband? Eurin thinks so.

"This is very feasible," he said, "and, by all indications, will be a reality soon. The number of broadband connections in Africa crossed the 400 million mark in 2018 – nearly twenty times 2010 levels – demonstrating a growing appetite for digital inclusion on the continent.

And what about Liquid itself? Which of the company's fibre projects does he feel has been

Continued on page 17

Where revenue potential is minimal a new approach to network planning is required. Photo of Ryamanyoni site in Rwanda.

Photo: Vanu Inc

Rural solutions that minimise operating and capital cost

Vanu is a company that grew out of groundbreaking technical research in software radio. Now it's adapting its approach to simultaneously increasing the flexibility of wireless communications systems and decreasing their costs to developing markets, as Vanu's CEO, Andrew Beard, explained.

VANU, INC CREATES solutions for places that do not have good coverage today and aims to reduce the total cost of ownership of wireless networks. That includes the Anywave base station, the first commercial Radio Access Network (RAN) product to simultaneously support multiple cellular radio standards on the same platform. Vanu CEO Andrew Beard told us more about this approach.

Communications Africa (CAF): How do you minimise costs – particularly for backhaul which can be a major part of network rollout?
Andrew Beard (AB): Vanu's innovation solutions utilise a latency and jitter-tolerant packet-based IP backhaul, enabling the infrastructure to use a wide variety of media for backhaul including microwave, wireless broadband, cable modem, digital subscriber line (DSL), and satellite connections. Other Vanu radio innovations include very low power consumption, which translates directly into lower cost for power generation and storage by enabling solar-powered sites. Of course, solar also contributes to sustainability objectives as the use of diesel to run cell sites is environmentally unfriendly and, we hope, will quickly become a thing of the past.

CAF: Is minimising maintenance a matter of fewer parts or earlier intervention?
AB: Using Vanu's technology, maintenance is simplified through remote monitoring and software upgrades. Hardware fixes are simple swap-outs that do not require specific technical training. Because the Vanu radio is implemented entirely in software, the ability to not only monitor all aspects of operation but also to perform fundamental changes to the system remotely means that fewer site visits are required and lower-cost technical resources on a site visit can be remotely supported.

Vanu works closely with MNOs to supplement their existing and planned future coverage to act as a complement to their existing network footprint.

CAF: You use solar power for your base stations. How effective is this compared to, say, gensets?
AB: Solar can achieve whatever availability is required through proper dimensioning, and it has lower risk of disruption due to, for example, interruptions in fuel supplies or changes in site economics due to variable costs.

CAF: You say that the Vanu Anywave platform is a multi-band multi-standard radio access node. Does that make it a good long-term bet, given that some rural areas are still using 2G and 3G?
AB: The ability to simultaneously support multiple standards is the best way to ensure that everyone can obtain access to communications services, whether they are connecting via anything from 2G (which we expect to last longer than 3G in most of our markets) to 5G (which is mostly a future technology for our markets). By serving multiple technologies using a common hardware platform you can decrease both capital and operating expenses associated with deployment and operation of cell sites.

CAF: Tell us about your high-resolution network planning approach. Does it mean you can use fewer base stations more effectively? Or is it a matter of better targeting likely areas for coverage?
AB: Both. In general, Vanu's strategy actually uses a larger number of sites than a traditional rural coverage strategy, but because the total cost of ownership is lower, we can cover a large percentage of the population with lower overall costs. This requires precision in identifying where the need resides and thus explains the creation of VanuMaps.

VanuMaps is our proprietary mapping resource that is unprecedentedly accurate in its detail of where connectivity is lacking and can be provided profitably.

To make it work, Vanu developed a series of proprietary software algorithms that are able to produce maps incorporating coverage, population, terrain, propagation and other factors with a level of precision not previously available in Africa. Using terrain data and propagation models, we generate high-

Continued on page 17

How testing inspires improvement

Data collected during a recent benchmarking project carried out by testing equipment and services company Rohde & Schwarz offered a number of mobile network operators better insight into the quality of their and their competitors' networks. Shakil Ahmed, senior sales director MEA at Rohde & Schwarz, told Ron Murphy why this and other sorts of mobile network testing are so important to Africa's changing communications needs.

ROHDE & SCHWARZ MOBILE network testing equipment and services are being used to improve network performance and quality in 21 African countries including South Africa where multinational mobile network operator MTN Group relies on technology and expertise from Rohde & Schwarz to optimise its networks.

This includes a benchmarking project, for which, as Shakil Ahmed, senior sales director MEA at Rohde & Schwarz, said, his company is playing an instrumental role in testing one of the largest mobile network operators in the MEA region across Africa.

It's doing so with what he calls a harmonised and transparent ETSI standards-based approach. ETSI is a European Standards Organization (ESO). It is a recognisead regional standards body dealing with telecommunications, broadcasting and other electronic communications networks and services. Its standards are now used the world over.

Through this testing campaign Rohde & Schwarz grades each MTN network against the network quality of its competitors. This has a number of benefits. In particular the benchmarking project provides MTN with a technical view of how its networks rank relative to their competitors – in turn providing a platform for network improvement and for a commercial investment plan.

In addition, through the improvement of the network, the end users benefit from a strong and resilient network, making daily communications tasks easier and better. "Ultimately, this impacts each person's daily life, bringing the African region together through mobile broadband connectivity," as Ahmed put it.

The testing campaign also provides MTN with the ability to understand its strong network coverage areas and allows it to make the investments needed to increase each network's quality in order to cover more people from remote locations across each country. "This continuous improvement," Ahmed said, "allows operators such as MTN to bring in new technologies early which enable better voice and video quality and data throughput."

Africa has wide-ranging variations in technologies and commercial needs in each of the countries we focus on.

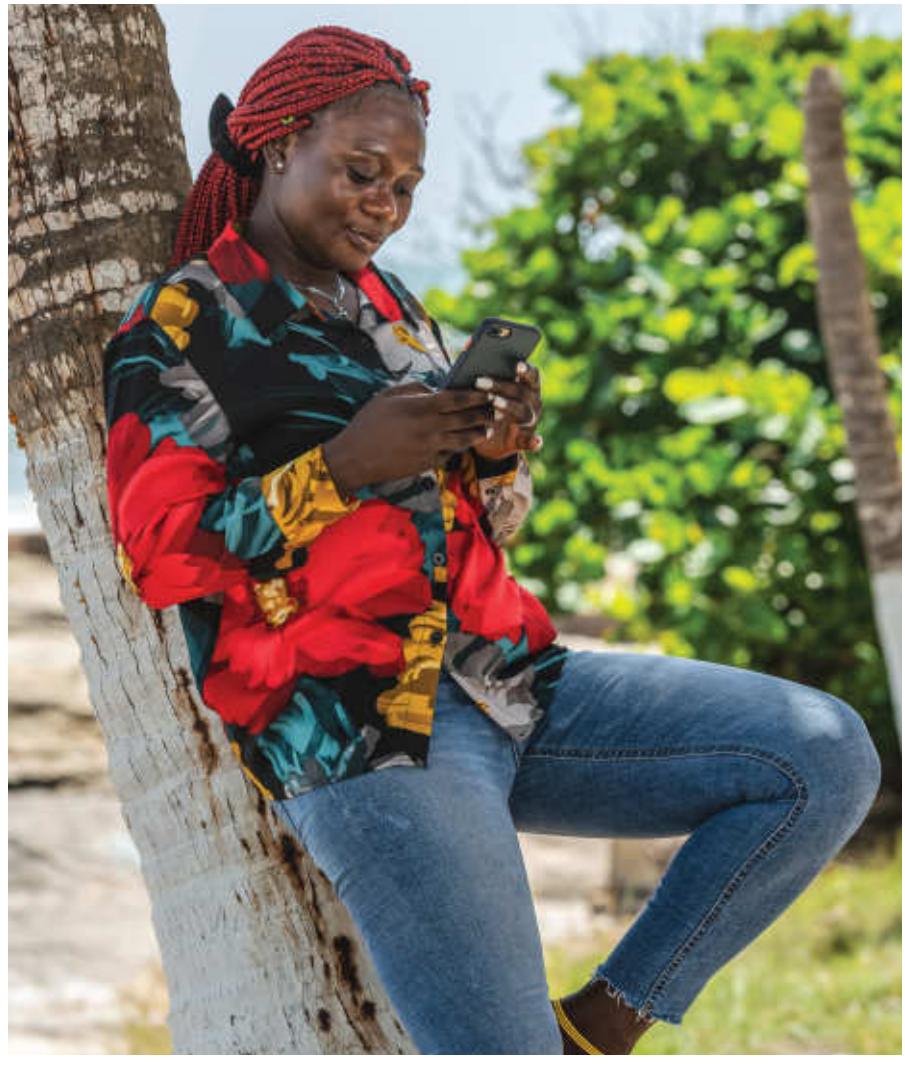


Photo: Adobe Stock

African testing requirements can take in everything from 2G to 5G, depending on the market.

Thanks to the data and recommendations from Rohde & Schwarz, the MTN Group has already been able to optimise network quality by 40 percent in 14 African countries.

This is an extraordinary improvement, Ahmed agreed. He explained, "The measurements were made using the R&S Smart Benchmarker solution for data collection and R&S Smart Analytics for the analysis and reporting. Our observations and recommendations are all based on the ETSI TR standards. We are an active member of ETSI and have been lobbying for an open standards-based testing and network performance scoring. This is all well documented in our publicly available white paper focused on network performance scoring from our applied sciences team.*"

Of course, Rohde & Schwarz, with over 80 years of history, has plenty of experience in testing in the mobile and wireless communications sector, including different elements of network infrastructure. For example,

much talk today is about both quality of experience (QoE) and quality of service (QoS). How are these measured?

"Through mobile network testing we can focus on the complete network life cycle," said Ahmed, adding, "Both QoE and QoS are important factors and critical to providing a holistic end-to-end view of the network. Hence, we not only focus on having end-to-end benchmarking equipment but the resilience of test environments that extend across both hardware and software."

The QoS aspect is focused on the mobile network and network performance. Hence it's critical that this part of the test environment is consistent and repetitive along the benchmark campaigns as this is the critical infrastructure and the backbone of all mobile communications, whether it be simply for voice or for mobile broadband.

By contrast, the QoE is focused on the end user experience, which Ahmed described as a full scenario of the smart mobile device, the usage of applications on that device and also the communication between user, device, apps and the network.

Thus, Ahmed explained, "As MTN is rolling out 5G, we have been focused on providing the latest standards on both QoS and QoE aspects. Through this we are well engaged in providing the new environment of interactivity testing for such use cases as mobile gaming and provisioning a solid network to allow mobile money platforms to operate well." He added, "Such use cases bring both QoS and QoE together."

Even as the three-year benchmarking project draws to a close, the company's involvement in Africa will continue. As Ahmed said, "Africa plays a key role in the Rohde & Schwarz strategic growth plan. The experience and delivery capability we have gained across African countries over the past three years now places us in a splendid position as we are the only company that has carried out parallel campaigns across 16 countries in Africa, managing live project teams." This, incidentally, includes the company's ability to manage not only the difficult terrain but also the logistics pre and post-Covid.

A great deal has been happening recently that requires testing. As Ahmed pointed out, over the three years of the project a lot of investment has been going into mobile networks and there has been a flow of operators rapidly deploying 4G as a standard technology, followed by early activity in 5G roll-out. Governments and regulatory authorities are releasing new spectrum for 5G across Africa and will continue to do so for some time.

In addition there has been a tremendous increase in subscriber usage, with a multitude of new smart devices and applications focused on the African market. Uptake of mobile money

Shakil Ahmed: "We test about 70% of the smart devices released into the global marketplace."

platforms and mobile TV (broadcast/multicast) environments is also taking off.

He continued, "We have seen early adoptions of private mobile networks in Africa, Industry 4.0 trials and the start of the O-RAN environment. The mobile network has become an incumbent critical network rather than a luxury for the purposes of mobility as it used to be. Especially through the Covid period the mobile network has become a living and evolving everyday necessity. Ultimately, this brings a huge amount of opportunity, but at the same time the complexity of multiple technologies."

Which brings us to test and measurement and the Rohde and Schwarz offering, a comprehensive portfolio of T&M instruments and systems for development, production and acceptance testing. "We test about 70% of the smart devices released into the global marketplace. We have a complete set of end-to-end test cases and solutions relative to this particular market segment."

That means regulatory authorities focused on selling 5G frequency and spectrum can benefit from the company's fixed and mobile frequency monitoring and interference hunting solutions. "Plus, we offer 5G QoS and QoE solutions from our mobile network testing business units and the 5G type approval test environments for the end devices."

Both QoE and QoS are critical to providing a holistic end-to-end view of the network.

In addition, now that broadcast multimedia is part of the mobile network offering, the company has solutions from its broadcast communications segment focused on how best to manage this capacity and efficiently deliver multimedia across the mobile network "along with our mobile network testing solutions for measuring video quality to the latest J.343 KPIs".

Ahmed added, "We see that some clients no longer have capex budgets available for testing equipment, so now we have the ability to be flexible in our business models and still assist the CXO to have fantastic-quality networks."

The point is, as he put it, "The world of the mobile operators and its ecosystem is starting to change. Even in Africa, we are addressing key strategic initiatives such as private mobile network testing, Industry 4.0 revolution and ORAN test environments."

Where then is the mobile test and measurement market going in Africa? Will 4G in particular be an important market as it begins to overtake 3G – or will testing and managing legacy networks still be important?

Ahmed said, "Africa has wide-ranging variations in technologies and commercial needs in each of the countries we focus on. You mention 3G to 4G – yet some countries are still wholly powered by voice; for these countries even 2G may well continue for some years to come, as they have not yet benefitted from data growth or the smart device explosion."

He added, "In some countries discussions on switching off 2G and 3G have started; however this will be based on value – and on potential cost savings, allowing the operator to focus investments on 5G in the coming years."

Thus the company feels that legacy test environments will stretch across from 2G to 5G in some countries and others will focus on 4G and 5G rollout depending on the network value, and the return on investment for the operator.

These factors should also be balanced with the need for a well maintained network that is ready for the next stage of expansion as it happens. And there's a lot happening. Ahmed said, "Fintech (mobile money), leisure in terms of gaming, remote working, virtual reality and augmented reality will drive mobile network environments and will be key influences as we move to make our lives simpler."

Life may be getting simple, in other words, but the mobile technology that aids that process is getting much more complicated. ✆

*See: https://www.rohde-schwarz.com/solutions/test-and-measurement/mobile-network-testing/network-performance-score/network-performance-score_250678.html

Continued from page 13

most beneficial and/or transformative to the way fixed broadband is seen in Africa?

Eurin said, "The company has connected the entire continent across some of the most challenging terrains. Recently, Liquid launched its DRC operations, expanding our investment in terrestrial fibre networks providing high-speed internet in DRC, connecting the country and most major cities directly to the world. Kinshasa, Lubumbashi, Goma and other large cities in DRC are now connected to London, San Francisco, Singapore, and many other global economic hubs. But it is not only connectivity that Liquid has brought to the DRC. The infrastructure is now the platform for our intelligent technology offering, backed by our global strategic partnerships – such as Microsoft."

Indeed Liquid's business model is fairly diverse, taking in satellite communications, infrastructure, IoT, data centres and more, underlining what it sees as its mission: to build Africa's digital future without leaving anyone behind.

"To achieve this," said Eurin, "the company has strategically repositioned itself into an intelligent technology solutions company to reflect the evolution of our organisation's product offerings and structure to deliver on our promise of realising Africa's digital future."

Referring to the diversity of its portfolio, he added, "For this to be achieved, Liquid, as part of Cassava Technologies, will leverage all possible innovations, combining fibre, data centres, satellite (including the new LEO constellations), cloud technologies, solar and renewable energy and fintech. We will continue to connect the continent and also offer innovative solutions that promote enterprise and economic development. Through strategic partnerships with industry leaders like Microsoft, Liquid is pioneering the future of collaboration and connectivity, especially in the new hybrid work environment."

That's the future of Liquid Intelligent Technologies What is the future of FTTH in Africa?

FTTH has excellent potential in many countries of Africa, it seems. Liquid alone has invested extensively in building FTTH networks

The number of broadband connections in Africa crossed the 400 million mark in 2018 – nearly twenty times 2010 levels.

Photo: Liquid Intelligent Technologies

David Eurin: "Fixed connectivity is also a key enabler for the rollout of high-growth services."

providing high-speed internet in Kenya, DRC, Zimbabwe, Uganda, Tanzania and Rwanda. To enable affordable fixed broadband, Liquid has invested in over 100,000 km of cross-border fibre routes and most subsea cables connecting to other continents, delivering a high-capacity international network.

That's connectivity that spreads from Cairo to Cape Town and from Addis Ababa to Dakar. And Liquid is of course not the only company working in this area, underlining how far African fixed connectivity has come and, even though it has a long way to go, how fast it is expanding. ✆

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resolution coverage predictions of each site and then information from each site is aggregated to develop a regional view of coverage and its complement, uncovered areas.

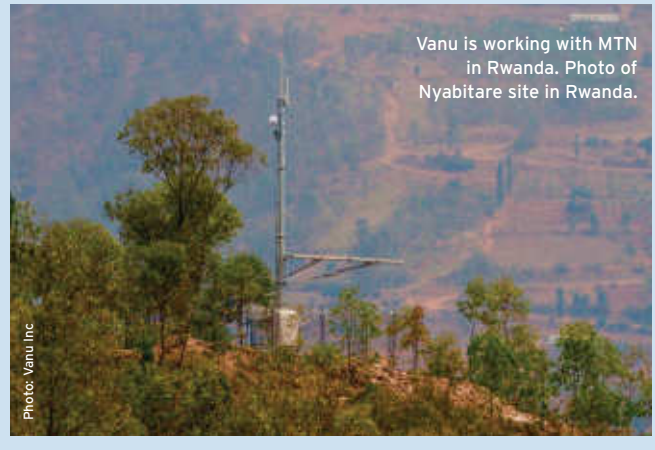
Population, economic activity, tourism, displaced populations, conflicts, natural resources, and other activity that generates need for connectivity can then be layered on top of the coverage model to assess areas of greatest need. Finally, the mapping tool can be used to plan the optimal placement of sites based on the identified areas of need, topographical, terrain and propagation information, while simultaneously ensuring sites integrate successfully with pre-existing coverage.

CAF: You're working with MTN in Rwanda. What do you offer that MTN cannot?

AB: Most telecommunications equipment vendors and the MNOs they sell to have invested in solutions that have been optimised for the challenges of serving urban markets, where spectrum scarcity and population density lead to solutions that can deliver higher bandwidth and higher capacity in a congested radio environment.

The rural and off-grid markets that Vanu serves do not have the same spectrum scarcity, radio interference or capacity requirements. They require solutions that minimise operating and capital cost to enable profitable operations where revenue potential is minimal.

To be clear, MNOs are doing the right thing: they are investing in the solution that results in the best and lowest-cost service for the greatest number of people. It happens that an offshoot of that approach is that fewer investment dollars flow to rural markets and that is why Vanu's coverage-as-a-service business model was developed. Vanu works closely with MNOs to supplement their existing and planned future coverage to act as a complement to their existing network footprint.



Vanu is working with MTN in Rwanda. Photo of Nyabitare site in Rwanda.

Photo: Vanu Inc

CAF: Do you see any other markets in sub-Saharan Africa as being promising?

AB: Vanu has entered into contracts covering several countries in West, Southern and East Africa and expects to announce several expansion initiatives over the course of the next few weeks.

CAF: What further improvements and innovations do you hope to implement over the medium to long term?

AB: Vanu continues to focus on reducing the total cost of ownership of a cellular network.

Integrating all of the subsystems that compose a site into an easily deployed and maintained system will further reduce costs and enable local businesses to play a greater role. Vanu intends to empower regional businesses to use their local knowledge and connections to better serve local MNOs and their subscribers, instead of relying on multinational business es and expatriate workforces that charge multinational prices. ✆

Photo: Adobe Stock

On the journey to a net-zero world

Earth Wind & Power (EW&P) is a Norwegian company that plans to support the siting of power-hungry data centres in places where energy might otherwise be wasted. It announced late last year that it had signed up for several potential projects in Africa. Ingvil Smines Tybring-Gjedde, CEO and co-founder of the company, tells Phil Desmond why this approach is important for both data centres and power.

"EW&P'S BUSINESS MODEL is simple: we match the excess energy from one sector/economy to the energy deficit of another. Based upon two mega-trends unfolding in the world today – tackling wasted energy as part of the transition to a net-zero world and the ever-growing demand for power associated with digitalisation – we harness the wasted energy from traditional oil and gas fields, as well as from wind, solar and geothermal farms, and use it to power data centres and associated high-performance computing services."

That's a brief summary of the work of Earth Wind & Power (EW&P), which is taking its business model to the African continent, by its CEO and co-founder, Ingvil Smines Tybring-Gjedde.

EW&P's approach is a described as a way of providing a commercial offtake for energy that would otherwise be wasted, contributing to a reduction in gas flaring and associated methane emissions and helping to incentivise and incubate renewable energy projects, while enhancing digital infrastructure and data security and sovereignty.

Capturing methane that would otherwise be wasted and using it as fuel gas to power data centre applications can have a transformative effect.

And speaking of flaring, the company is working on a feasibility study to put data centres on oil platforms. What sort of issues and opportunities does Tybring-Gjedde feel this is likely to address?

She explained, "Capturing methane that would otherwise be wasted and using it as fuel gas to power data centre applications can have a transformative effect on the environmental impact of both offshore and onshore oil and gas projects, providing a powerful ESG (environmental, social, and governance) solution for producers."

At the same time, of course, this could be an opportunity to support the ever-increasing demand for energy to power digitalisation as data centres form an increasingly critical and energy-intensive part of our infrastructure.

"To put this in context," she added, "demand growth for electricity to power data centre services is expected to represent as much as 20% of global power use by 2025, up from its current level of just 1%."

It's not just about otherwise unused gas; solar and wind are another focus. However, wind and sunlight are not always available. How then does the EW&P use of renewables work?

Tybring-Gjedde explained, "Each site offers different opportunities and limitations for the type of services that can be developed. Therefore EW&P engages with renewable power companies to map the conditions, energy availability and data centre operation possibilities." But that's not all. "Furthermore," she said, "redundancy between sites and locations can compensate for limited uptime in wind and solar projects."

It's also worth mentioning that Earth Wind & Power's solution supports and incentivises much-needed solar and wind projects. These often struggle to attract investment due to the challenges of intermittent power generation and the cost of building the necessary infrastructure to connect to the grid, often in remote areas. "Offering an immediate off-take without needing any prior connection to the grid provides certainty and cash flow that can act as an incubator for these projects and encourages further investment," said Tybring-Gjedde.

This, however, begs the question of co-location. That is, how the company is able to build a data centre, or any other project requiring power, next to an appropriate or underused power source.

"Our infrastructure is modular and mobile, which enables us to position it off-grid, in remote locations and in proximity to the power source as necessary." It's also useful for countries keen to keep data relatively close to home. "Being able to position data centre infrastructure in remote locations – which would otherwise not be considered optimal for data centres – enables us to offer data handling sovereignty to governments and institutions

which can keep their data within their own borders."

Which brings us to Africa. Why is Africa appropriate – both as an oil producer and as a region that needs data centres – for the EW&P business model?

In fact Africa is a key market for Earth Wind and Power and has been central to the company's thinking from its inception. Many of the senior management team have a long history of working on the continent in various roles at leading energy producers and have seen first-hand the twin challenges of wasted or stranded energy, primarily through flaring of gas, and the need to develop infrastructure to ensure more people than ever can have access to electricity. The World Bank estimates that 60% of Africans lack access to electricity currently.

"At the same time," said Tybring-Gjedde, "while the world is rightly focusing on the transition away from fossil fuels, there is a growing recognition that traditional resources such as oil and gas will continue to play critical roles on the journey to a net-zero world. By providing an ESG solution to existing oil and gas fields that reduces their environmental impact we can support a just transition that ensures local communities and host governments are able to reap the socio-economic benefits that will enable the necessary investment to bridge the gap to a sustainable future."

Redundancy between sites and locations can compensate for limited uptime in wind and solar projects.

She mentioned earlier the ever-increasing demand for energy to power digitalisation, and, with its young populations and growing economies, Africa perfectly encapsulates this trend. With the UN forecasting that 50% of global population increases by 2050 will take place on the continent, and urban populations set to grow by 50%, there are clearly significant requirements to power this digitalisation of the economy to meet the demands implied by this demographic shift.

Which is one reason why, last year, the company signed some letters of intent in Africa. So is interest in the EW&P approach strong in this region? What does EW&P hope will result from these agreements?

Tybring-Gjedde said, "We were thrilled by the interest shown in EWP while attending the recent Africa Energy Week, which we see as a clear validation of our approach. We have already engaged in several feasibility studies and look forward to having projects for FID [final investment decision], during 2022 which will serve as the blueprint for our ongoing strategy on the continent." ✆

Photo: EW&P

Ingvil Smines Tybring-Gjedd: "Our infrastructure is modular and mobile, which enables us to position it off-grid."

How networks are evolving to better address real-world needs

Network architectures in the mobile space are evolving. Simon Fletcher, CTO, Real Wireless, looks at how mobile network architectures change and develop in order to serve different requirements, and at the models – in particular the use of DAS and small cells – that might apply in developing economies.

Within urban conurbations, it's not just the number of subscribers that grows but the complexity of data-compatible devices.

Photo: Adobe Stock

TODAY, MOBILE NETWORK operator (MNO)-owned networks are still primarily about serving outdoor, mobile, voice-driven consumer requirements. But as the use of devices expands to more data consumption, network architectures must evolve to cope with a capacity crunch that impacts both indoor and outdoor service delivery.

Let's defer any discussion of 5G for the moment. In terms of current real-world deployments, recent architectural network evolution has often been driven by a rather belated focus on improving indoor coverage, largely in the context of improving cellular services for business. This in turn is bringing about changing business and ownership models, from infrastructure owned and controlled by the MNOs to more third-party or 'neutral host' deployment models, which in turn are evolving towards architectures to support specialised, higher-value, enterprise-focused needs.

Within urban conurbations, it's not just the number of subscribers that grows but the complexity of data-compatible devices. As more people use their devices for different applications, or to access different services, it stimulates further demand in the networks. It's on the back of this that we start to witness the dynamics shift towards new architectures – going beyond the standard high-power, high-tower offering.

As urban areas become more densely populated and mobile network demand increases, macro networks start to hit capacity limits.

The IFC/World Bank recently commissioned a study from Real Wireless (the wireless advisory firm of which I am CTO), working in partnership with international investment and consulting firm Axon Partners Group, to consider the ways in which the new network architectures enabled by evolved DAS (distributed antenna systems) and small cells might bring benefit and present investment opportunities in developing markets. We identified three main use cases – urban densification, indoor coverage and private cellular networks.

While there are big changes underway, as service providers begin to address the digital transformation of business and industry, we should start by considering how outdoor coverage is currently addressed.

Once you've covered the 'basic' urban needs provided by MNOs with their own infrastructure, how should networks evolve as the demands on coverage and capacity increase?

As urban areas become more densely populated and mobile network demand increases, macro networks start to hit capacity limits. In the first instance, this can mean using small cells to plug urban not-spots and tackle heavy and growing network capacity demands in urban areas.

Although small cells were originally designed to deliver improved coverage indoors, today they are deployed in a wide range of scenarios to improve capacity and coverage where additional macro deployment is unnecessary, uneconomic or impractical. Small cell network architectures are undoubtedly one of the key changes to recent network evolution, both indoor and out, but the deployment of small cells to plug gaps is more a fix than a long-term solution, unless it is supported by a more strategic approach to connectivity planning.

At Real Wireless we have recently been engaged by regional authorities planning a strategic boost to connectivity in their cities. This is because government and local authorities

TECNO SRC announces collaboration with HackerOne

TECNO SECURITY RESPONSE Center (SRC) has announced a partnership with HackerOne, the world's most trusted provider of ethical hacking solutions.

This partnership is a strategic move from TECNO's playbook to pre-emptively combat cyber crime and protect its growing global user base against potential security risks.

The partnership with HackerOne complements TECNO's efforts to improve its software protection capabilities following the establishment of the TECNO SRC in 2021. TECNO SRC leads the charge in enhancing hardware protection capabilities with its bug bounty programme.

"As a leading smartphone manufacturer in over 70 emerging markets, TECNO is cognisant of how our devices can be deployed for good and for worse," Stephen Ha, general manager of TECNO said.

Orange, Sonatel and SES to deploy first African O3b mPOWER gateway in Senegal

ORANGE AND SONATEL are to partner with SES to deploy and manage the first O3b mPOWER gateway in Africa, allowing the African continent to enjoy easy access to high-performance and low-latency connectivity services.

The three companies announced that the gateway for O3b mPOWER, SES's next-generation medium earth orbit (MEO) communications system, will be located at the Sonatel teleport in the Senegalese territory of Gandoul among other local satellites antennas.

This first O3b mPOWER gateway will be used by Sonatel and Orange to deliver high-performance, low-latency, and cloud-optimised connectivity services throughout Africa. SES will also use the gateway to support telemetry, tracking and command (TT&C) functions for the O3b mPOWER fleet from an additional location and the first one in Africa. The terabit-scale O3b mPOWER constellation and its automated, advanced ground infrastructure can dynamically deliver multiple gigabits-per-second beams of managed data services to customers.

Orange, Sonatel and SES intend to establish a memorial on site at the Gandoul gateway. It will highlight the history of satellite connectivity in Africa and the positive impact that advanced technologies and solutions such as O3b mPOWER can have on the continent.

"The Sonatel teleport is Senegal's pride, as it was home of the very first 30-metre satellite dish to be installed in Africa ever. Not only has Senegal played a key role in developing the telecommunication industry in the African continent for the last 50 years, but we will also continue to lead in bringing new technologies to the market with the introduction of O3b mPOWER, a next-generation MEO satellite network," said Sekou Drame, CEO of Sonatel.

"We are particularly pleased of the consolidation of our partnership with SES which will add a major new component to Orange's mission to build intelligent, open networks in order to foster usages and access to digital technologies for the greatest number of people," explained Jean-Luc Vuillemin, executive vice-president of Orange International Networks.

"In the last decade, we have connected communities and industries around the world with our O3b communication system, positively impacting their lives and their businesses. We have partnered with Orange to improve cellular backhaul and internet connectivity for its African affiliates, and to enable enhanced operations for its enterprise customers," said Steve Collar, CEO of SES.

"With the O3b mPOWER system launching in a few months, our customers are already looking forward to how they can expand their networks with much-increased throughput and enhanced flexibility. With a gateway located in Senegal, this new partnership will enable Sonatel and Orange to deliver more bandwidth more flexibly via O3b mPOWER to remote and underserved regions, helping ensure that everyone across Africa becomes truly connected with no one left behind."

Cellulant granted a payment service provider authorisation by Central Bank of Kenya

CENTRAL BANK OF Kenya has granted Cellulant, a payment service provider authorisation in Kenya, enabling the company to expand its payments offering for businesses, banks and consumers.

Photo: Adobe Stock

The aim is to simplify the payment experience and provide merchant tools to manage all their payments.

The authorisation permits Cellulant to continue enabling businesses to collect payments online and offline while allowing anyone to pay from their mobile money, local and international cards or directly from their bank.

"As the payments industry has evolved globally, we are fortunate that the Central Bank of Kenya has provided a regulatory framework and environment that has allowed companies such as Cellulant to operate while adhering to the highest standards in providing payment solutions to businesses and their users. This authorisation will enable us to continue serving our customers better with guaranteed secure and regulated conditions for us to facilitate payments," said Faith Nkatha, Cellulant's country manager in Kenya.

Commenting on the state of the payments ecosystem in Africa, David Waithaka, group chief revenue officer at Cellulant, said, "A connected payment network is integral to the prosperity of businesses in Kenya and Africa at large. Because of the industry's fragmentation, most businesses are forced to integrate multiple payment providers simply to operate on a day-to-day basis."

"For Cellulant, simplifying the payment experience and providing merchant tools to manage all their payments frees businesses to focus on their growth and consequently create opportunities that accelerate growth for all."

Zanzibar receives Africa's first EDE Covid scanners

THE GOVERNMENT OF Zanzibar has received EDE Covid scanners from Abu Dhabi to detect a possible COVID-19 infection by measuring electromagnetic waves.

This move by the government is indicative of its vision to harness modern technology to create opportunities out of challenging times. In the height of the Covid-19 pandemic and as the virus continues to mutate into more variants, the EDE scanners are a sure precautionary method that will help create safer spaces and maintain public health.

Speaking during the reception of the EDE scanners at Abeid Amani Kurume International Airport, HE Hussein Mwinyi said, "The pandemic has had an unprecedented impact on individuals, communities, and industries, in particular the travel industry. For this reason, we are pleased to collaborate with Sanimed, a subsidiary of IHC Group to launch these innovative EDE scanners in Zanzibar, to introduce greater efficiency for travellers coming through Zanzibar as a port of entry."

The reception of these scanners, which will be the first of their kind in Africa, will mark Zanzibar as the country setting a precedent in the fight against Covid and cement the dedication of the Office of the President as well that of the Ministry of Health towards ensuring that the people of Zanzibar and Tanzania at large have access to the best healthcare technology there is.

"Africa continues to be a hotbed of innovation and technology. We are pleased to roll out these first-of-a-kind EDE scanner to revolutionise Covid-19 testing in collaboration with the Government of Zanzibar," Ajhay Bhatia, CEO of Sanimed International said.

"As the operator of the world's largest Covid-19 diagnostics facility, we have decided to partner with Alfa care to deploy one of our state-of-the-art laboratories and testing facilities in Zanzibar to integrate with the scanning technology in order to provide travellers with convenience that complies with the changing world we are living in," he added.

have realised they can attract and support key industries and businesses with the promise of advanced high-quality wireless connectivity as standard. In fact, there's global as well as local competition to attract blue chip firms that can power economic growth and employment: the availability of high-quality cellular connectivity has become table stakes in a very competitive arena.

In our work with city authorities, it was immediately clear that delivering dense network architectures is not just a case of identifying the equipment and the balance between macro and targeted small cell coverage. It's also about ensuring that there's a clearly defined planning and permission granting process in place to speed roll out and make deployment economically viable.

In addition, local authorities will need to have business models that can be used for the deployment of wireless infrastructure that makes use of their street assets (trees, lampposts, buildings etc). They will need to understand and manage the impact of wireless infrastructure rollout on public thoroughfares and streets – commercially, technically and aesthetically.

But urban densification in the service of economic development might also mean a consideration of who pays for deployment, especially when the need to create high-quality connectivity in a business area is important to the local authority but not mandated through regulation.

In these situations, local authorities and MNOs are increasingly partnering with third-party infrastructure-as-a-service providers that build and own network infrastructure that is built on commission, and then leased to the local authority (while the MNO continues to own and control the core network).

Small cells and DAS also have a key role in improving indoor coverage, where around 80 per cent of mobile usage takes place. Macro towers have never been able to deliver indoor coverage reliably. This was irritating rather than important while most businesses continued to rely on fixed line connectivity for voice and data. But the mobility, reliability and security of connectivity is now critical for many businesses and poor outdoor-in cellular coupled with often insecure and mobility-averse Wi-Fi is now no longer good enough.

Small cells and DAS can undoubtedly fix the challenge of poor indoor coverage. The problem is that regulation is unlikely to stipulate how and how well macro networks deliver signals into commercial properties, and it simply doesn't make commercial sense for MNOs to provide enterprise-quality coverage to individual buildings (unless they are huge venues). In fact, even if building owners are prepared to pay extra for improved coverage for their staff and customers, the MNO business model doesn't scale to make such deployments worthwhile.

Small cells and DAS also have a key role in improving indoor coverage, where around 80 per cent of mobile usage takes place.

Photo: Adobe Stock

Could private networks benefit Africa's ports – such as the railway station and port in Durban?

As with outdoor coverage, building owners and landlords can commission services from third-party or 'neutral host' infrastructure-as-a-service providers to deliver coverage via a bespoke indoor network that optimises the performance of the public network. As disaggregated architectures – associated with virtual RAN and 5G networks – become more common, both DAS and small cells are being used by neutral hosts to address these new deployments.

Small cell multi-operator solutions can scale from large buildings or public spaces right down to SMEs. In the context of commercial property, such networks deliver in-building coverage that makes a property more attractive to tenants and provides an improved service to commercial tenants and their customers.

Neutral hosts can be effective in supporting high-footfall venues or public spaces such as sports stadiums or transport hubs. Such service providers manage the various networks and relationships and offer lower costs compared to installing dedicated infrastructure for each MNO – but they will need to factor in the levels of capacity each MNO will need for an effective service, based on the number of subscribers per MNO within the premises.

The neutral host model applies equally where improved coverage is needed in rural or remote areas.

Next we come to private networks. A private cellular network is an industrial-grade network that can only be accessed by designated users with the appropriate credentials – for example, the employees of a particular business or the machines operating in a particular factory or industrial complex.

Perhaps the most important characteristic of a private cellular network is that the business or organisation that has commissioned the network also establishes the rules for its access and use – for example, setting the coverage, performance and service priorities.

Private networks are typically deployed to give an enterprise more security and control: who can access or where coverage is available. This might apply to large-scale enterprises in ports, logistics, shipping, manufacturing, airports or other major transport hubs. It could be niche or industry-specific use cases such as IoT device connectivity, sensors etc. It might be broadband requirements for operational data or specific services to support the enterprise.

Private networks have the potential to massively boost the competitiveness of strategically important industries – applications that make for ideal private network use cases. Private networks can make significant productivity enhancements in ports for example, but also in the energy sector, natural resources or oilfields, and diamond mining. There are many other examples of vast, and remote, locations where private networks can add a lot of value to security, productivity and safety in these mission-critical applications.

In conclusion, then, what's important about evolving network architecture is the extent to which it addresses real-world needs. Yes, the technology is evolving and 5G development is already impacting the way the wireless industry is thinking about network architectures. But the architectural changes that really matter are the ones that enable new business models, that allow enterprise and consumer service delivery to scale – and that support the digital transformation agendas of business, government and society. ✆

**Real Wireless is the world's leading independent wireless advisory firm. Its network of experts includes engineers, physicists, economists, security advisors, business strategists and deployment specialists. www.real-wireless.com*

Are apps good for you?

The growing penetration of smartphones across Africa is changing the way a number of people access services. In Kenya this change has been especially noticeable in the medical sphere, with many end users now accessing health services via a growing number of apps. Mwangi Mumero reports.

PRECISE FIGURES ARE never easy to come by, but this time last year Kenya's mobile penetration stood at 59.24 million connections or a penetration rate of almost 109% – although this indicates that many people have more than one SIM card.

Nevertheless, there are clearly many mobile users in the country. In addition, a report released in 2020 by Statista indicates that Kenya is one of the leading consumers of the internet through the use of smartphones in the world. That's not too surprising, given the lack of fixed access.

Data Reportal indicates that there were 21.75 million internet users in Kenya in January 2021 and that internet penetration in Kenya stood at 40.0% in January 2021. Most of these people will be accessing the internet by a smart or feature phone, both of which are getting cheaper.

Increased access to the internet has allowed Kenyans to embrace all types of applications, from banking and transport to money transfer services and healthcare services, among others, easing the way people live and do their business.

Of course, when Covid-19 prompted lockdowns and restriction of movement this highlighted the role of apps in running businesses and other affairs. It also made them more popular. In fact the halt to hospital and doctor visits boosted the acceptance of health services apps among the Kenyan populace – and especially the educated middle class.

Experts say that these apps help to improve communication between health care providers and patients – and thus accelerate the patient care process. "Medical apps are gaining prominence, especially among the upcoming middle class. They are convenient for seeking medical guidance or drug prescriptions and deliveries," observed Mr James Gitahi, a Nairobi-based pharmaceutical assistant working with a drugs delivery firm.

Among the healthcare apps in service is Daktari Popote App. In Swahili this means 'Doctor Anywhere' and is an on-demand web-based and mobile app that connects patients to health consultant services. Users of this app are able to contact medical practitioners from the comfort of their home or office or any other place within the country.

With only 7,333 doctors in a population of 47 million, which translates to one doctor for every 6,355 citizens, this service – and others like it – has become very important for many people in Kenya, especially those in rural areas.

Over 70% of Kenyans live in rural areas with limited access to health services.

Photo: Adobe Stock

Over 70 percent of Kenyans live in rural areas and largely rely on community health workers and volunteers to provide health care services like vaccinations. In addition, research has shown that over 50 percent of Kenyan doctors are practicing in Nairobi, the capital city, with the rest of the country poorly served.

Can apps make a difference? Well, a phone on which Daktari Popote has been installed allows doctors to send prescriptions through the app. Patients can then visit the nearest pharmacy to buy medication.

Daktari Popote also allows patients to take and send pictures to doctors or attach test results such as X-ray and ultrasound, among others, for diagnosis. Patients have five days to chat with the health specialist for free after paying the consultation fee.

When Covid-19 prompted lockdowns and restriction of movement, this highlighted the role of apps in running businesses and other affairs.

Another interesting health app is called M-Tiba. This is a mobile health wallet launched by Safaricom, Kenya's leading mobile network provider. The app allows subscribers to save money for medical expenses. Money saved through the app can then be used to pay for services and medication at specific healthcare facilities which carry the M-Tiba logo across the country.

Again this helps to bridge an important healthcare gap. At least four out of every 100 people in the country are unable to afford hospital treatment; the app allows them to save funds for future medical expenses.

M-Tiba has so far partnered with over 300 healthcare facilities and has over a million users.

Then there's MedAfrica. Developed in 2011 by Shimba Technologies, the MedAfrica app acts as a 'pocket clinic'. It is used to diagnose the symptoms caused by diseases, making it easier to provide treatment. It also gives users access to a doctors' directory and nearby hospitals and doctors.

MedAfrica is a free mobile app used to supply information, one that provides direct access to health-related content and services. It allows users to search, filter and view health information and locate reputable doctors and hospitals near them, as well as connect with doctors on the go.

A similar mobile app, Hello Doctor, provides free essential healthcare information that is updated daily. The app also provides access to healthcare advice, answers to health-related questions in live group chat forums, confidential one-on-one text conversations with a doctor, and the ability to receive a callback from a doctor within 60 minutes.

This app was developed in South Africa and introduced in Kenya as Sema Doctor in a partnership between Commercial Bank of Africa (CBA) and Safaricom.

The app allows M-Pesa (a mobile money service) and M-Shwari (a savings and loan service) subscribers to access medical facilities such as hospitals, pharmacies and clinics. Users can also get mobile loans through their handsets.

Photo: Adobe Stock

Uganda is one of a number of countries in Africa where safe transport is offered through apps.

Medical apps are convenient for seeking medical guidance or drug prescriptions and deliveries.

And that's not all. Another app in the market is MyDawa, an e-health platform that is both mobile and web-based and that enables users to conveniently purchase authentic medicines and wellness products.

Users can upload their prescriptions via a website or mobile phones. These are then verified by MyDawa pharmacists and an order is generated. Upon payment, the medicine is sent to the preferred location. This is an app developed by ION Equity, an Irish investment company.

The mHealth app, by contrast, allows users to book an appointment instantly with any medical professional or hospital within their geographical region, and to book laboratory tests as well as chat with practitioners via message and video. Users can also get their prescription and over-the-counter medication online and have it delivered to their doorstep.

The mHealth app was launched by startup Play Zuri Health, a branch of Play Communications Limited. "Millions across Africa do not have access to quality medical care. The app will give doctors a wider and easier platform to reach patients who need their service", observed Arthur Ikechukwu, Co-Founder Zuri Health.

The TeleAfya app is another useful innovation. It has a contact and networking function. It is open to medical service providers from any location. Medical professionals can register on the app and offer their services via smartphones.

"The app helps to build a network of medical care givers and patients to solve the healthcare crisis in the country especially during the Covid-19 pandemic," said Vincent Chepkwony, the app founder.

Other smaller apps include First Aid, developed by the Kenya Red Cross for emergency health services, and Baby Centre, which is used by over 400 million expectant women worldwide to track pregnancy and baby development calendar.

Even the government is getting in on the act. The Integrated Management Childhood Illness (IMCI) app was developed by the Ministry of Health Kenya and is designed to help health workers access early childhood illnesses diagnosis information.

Most of these apps are easily downloaded from the Google Play store. They are also available for Android and IOS. There will no doubt be many more, though whether are all health apps are good for you remains to be seen. ✆

Apps for everything?

A GLANCE AT Africa's fast -growing technology press makes it clear how popular app-based services are becoming in many parts of the continent.

For instance there was great online interest in a report called The African Mobile Apps Landscape (and How to Succeed in It) from AppsFlyer and Google. This revealed a booming African mobile app market, driven in part, by the pandemic. It found that between Q1 2020 and Q1 2021, overall app installs increased by 41%.

The first set of restrictions in March 2020 had a huge impact on downloads of gaming apps, which increased by 50% in Q2 2020 compared to Q1, compared to non-gaming apps which only increased by 8%. In addition, 33% of the in-app revenue was generated in Q3 2020, while between Q2 2020 and Q1 2021 in-app advertising revenue increased by 167%.

And the app market is evolving to meet demand. Apps such as We Chat, a well-known messaging app, have expanded into other activities such as shopping, gaming and video sharing. Uber and Bolt's expansion from car hailing apps into food delivery in a number of Africa countries is another example.

Africa has the potential to be a significant market for fintech apps in particular as hundreds of millions of users of mobile money upgrade to app-based services when they abandon basic phone functionality for feature or smartphones. It's hardly surprising. Finance apps offer convenience to consumers, as they provide the basic infrastructure needed by the unbanked population and easy access to a wide range of services.

And locally developed apps are now attracting both customers and investors. Uganda's SafeBoda app was launched in 2017 to connect passengers to a community of safer and trusted drivers. Since then SafeBoda has grown to serve over 1 million customers, expanding into rides, parcel delivery, food and shop payments, savings and other financial services.

Over the last three years, Asilimia, a Kenyan fintech firm, has provided a lifeline to Kenyan traders by allowing them to conduct mobile money transactions with no transfer fees via its Leja app.

And the Ghana-based fintech startup OZÉ mobile/web app helps businesses to manage tasks and operations including tracking sales and expenses, sending digital receipts and invoices as well as business coaching.

All are attracting investors. But this doesn't mean all apps will make money. As in any other business there will be both boom and bust. However, given all this activity it's no wonder that the AppsFlyer report concluded that Africa is one of the fastest-growing regions in the global app market, presenting a huge opportunity for marketers and developers alike.

Problems on the ground. Solutions in space

Photo: Adobe Stock

Intelsat, the leading satellite operator, has served Africa since 1965. Some of the countries in Africa where it is currently busy include South Sudan, Somalia and Zambia. But this isn't just about helping operators and remote communities. Remote industries and government entities are also benefiting from Intelsat's service offering, as Hans Geldenhuys, director, Africa sales, tell Phil Desmond.

Satellite is aiding the expansion of mobile broadband coverage in rural South Sudan.

INTERNET CONNECTIVITY IS a crucial tool that helps people across the globe work, learn, shop, visit friends and family, and access healthcare. Only satellites can quickly and cost-effectively bring reliable connectivity to hundreds of Wi-Fi access points and cell sites.

This is something leading satellite operator Intelsat knows well, not least thanks to recent projects in South Sudan, Somalia and Zambia.

For example in South Sudan, Intelsat is helping a leading mobile telecommunications group operating in the country to expand its mobile broadband coverage to communities in deep rural areas of the country. Which begs a few questions – for example, what sort of devices will end users employ? And is Intelsat enabling 2G, 3G or 4G?

Hans Geldenhuys, director, Africa sales, Intelsat, explained, "When it comes to deploying 2G/3G/4G coverage in rural and hard-to-reach areas, satellite backhaul is ideal from a feasibility and economic standpoint. Without satellite, it would have been both a logistical nightmare and prohibitively expensive to connect these networks in South Sudan to the backbone."

In this case, Intelsat helps mobile network operators in South Sudan expand or augment their footprint by providing backhaul connectivity between an operator's network core and 2G, 3G or 4G cell sites requiring voice and/or data coverage across metro-edge and remote locations. Consumers and end users are able to communicate using any device – from ultra-low-cost feature phones to very-high-end smartphones (or tablets or PCs) to access the full range of voice and data services (2G, 3G, 4G) provided by the mobile network operator.

Geldenhuys added, "The use of space-based solutions facilitates mobile operators' network planning strategy, especially the coverage of rural areas. Their ubiquitous nature means that distance, topography and even line of sight are not constraints or factors of cost, and mobile operators can quickly deploy backhaul not just one site at a time, but [for] an entire network of sites."

The ubiquitous nature of satellites means that distance, topography and even line of sight are not constraints.

Another benefit for mobile operators is the cost of satellite backhaul, which is all opex, determined by the amount of bandwidth required to support a network of cell sites. There's minimal capex for satellite equipment at the site.

Geldenhuys explained, "A single pool of capacity can provide high-performing backhaul for mobile broadband to an entire network of cell sites based on the dynamic traffic demand across the network of sites. As a result, the cost of satellite capacity is dynamically distributed across the entire network of sites based on demand, maximizing use of capacity."

In Somalia, by contrast, the service focus is on industry rather than operators. Of course, for industries such as banking, mining, oil and gas, government organisations, or private and aid-oriented agencies, an always-on, robust connectivity is crucial to distribute information to, and gather information from, remote places. Small business owners can also hugely benefit from connectivity.

"Yet," Geldenhuys said, "network access is unequal, with disparities between cities and rural regions, and according to recent studies, 45.3% of the population in Somalia had access to mobile connectivity, while only 12% were using internet in January 2021."

Connectivity has the power to enable new services, such as mobile money, which has become an essential and widespread part of Somalia's economic ecosystem, and the government's National ICT Policy pledges to reach total 4G coverage between 2024 and 2025.

Thus, said Geldenhuys, "Our partners in Somalia capitalise on Intelsat's expertise and leverage our high-performance next-generation satellite network to expand broadband and enterprise networks into Somalia and regions where terrestrial technology cannot provide

services. They combine our services with their innovative technology, capabilities, and world-class support to provide unique solutions to their end customers. Our satellite platform also complements their terrestrial services by serving as an instantly available back-up to protect against any service interruptions."

This can also involve training of course. Training can be provided to primary and subcontractor bandwidth customers, third-party installers, field service organisations and operators supporting customers. The objective is to enable them to become more efficient while making an impact on reducing interference across the arc.

Geldenhuys pointed out, "The training is part of our efforts to reduce radio frequency interference (RFI), which we believe will result in improved installation quality and enhanced network performance for customers."

There's no doubt that the leveraging of information and communication technology (ICT) for the modernisation of public administration and service delivery is receiving increased attention from governments in Africa. The Zambian example certainly underlines the role of satellite connectivity in public administration. In fact here Intelsat has claimed that it has modernised an entity's current satellite network.

In this case, Geldenhuys said, "a government entity in Zambia wanted to connect its most remote sites to its primary network and increase its reliability at critical locations to help drive improvements for the administration and enable mobile tax offices to better serve the taxpayers and traders.

"Under the agreement, Intelsat modernised the entity's current network by providing a turnkey solution including satellite capacity, equipment, implementation services, training and support services. The plan also bolstered the reliability of customer services through the addition of redundant capacity."

Which leads to an obvious question. Is there likely to be a lot of this sort of modernisation work going on as better satcom systems become available?

Geldenhuys agreed that the ground segment is evolving to adapt to significantly higher levels of data downlink in the coming years. He added, "By partnering with Intelsat, an organization can focus on how their core products and services impact their customers – and leave it up to us to manage and maintain the hardware or transport systems required to deliver them."

That's not the whole story of course. Intelsat is working closely with ground equipment manufacturers and service providers to make satellite connectivity simpler and more cost-effective.

"For example, we work with [network-as-a-service-specialist] Africa Mobile Networks (AMN), whose low-cost, easy-to-deploy, solar-powered mobile connectivity solution is quick to set up and completely operational in less than six hours. Modernized systems enable [us] to more rapidly, and cost effectively, expand an MNO's reach and deliver critical connectivity to communities who many previously thought were impossible to connect."

When it comes to deploying coverage in hard-to-reach areas, satellite backhaul is ideal.

Photo: Adobe Stock

It's evident that Intelsat often helps mobile providers on the ground to extend coverage. However, while partnering with mobile providers may seem more common than it used to be, satellites have always been there to support mobile network operators, expanding their network coverage and improving the profitability of their networks considerably – and Intelsat works with the leading mobile network operators in the world and in Africa. "In fact," said Geldenhuys, "seven of the world's largest mobile network operators rely on us for reliable, high-performing cellular backhaul."

He continued, "We believe in the power of partnership to build a more digitally inclusive society. Operators' perfect understanding of local requirements, combined with our 50+ year expertise and our extensive coverage of the region, means that we can deliver quickly and cost-effectively connectivity where most needed, even in the most remote areas."

But there's more to do. "We are engaging with the broader telecom ecosystem and we have long advocated for the integration of standards across this ecosystem, which are now making it even easier to integrate satellites into new and innovative connectivity solutions. This will enable us to deliver even more value and should strengthen our partnerships with operators."

The use of space-based solutions facilitates mobile operators' network planning strategy, especially the coverage of rural areas.

Intelsat was the first operator to introduce satellite services to Africa and has been an integral part of Africa's communications fabric since 1965. It has enabled critical communications infrastructure throughout the continent and has watched the region change and grow over the past 55 years. The inevitable question then is what happens next. The answer seems to be quite a lot.

"Today," Geldenhuys explained, "we are building the future of connectivity and are investing $2 billion to build Intelsat's Unified Network, the world's first multi-layer, multi-orbit 5G software-defined network, which provides broadband connectivity on a global scale, supported by a seamless network, uninterrupted service, and continuous innovation. We are progressing fast and announced recently two new software-defined satellites designed to advance Intelsat's global fabric of software-defined GEO connectivity as part of its next generation Unified Network – bringing our total number of software-defined satellites to four. This will enable us to add high-speed dynamically allocated connectivity across Africa, but also Europe, the Middle East and Asia, for commercial and government mobility services and cellular backhaul."

And it doesn't end there. "We are also encouraged by the initial results of our partnership with MaxIQ Space (formerly Xinabox) in Africa in delivering space-focused STEM learning tools to teenagers across the African continent. Sparking that tech interest at such a young age inspires future leaders who will soon lead the way with advancements we never dreamed possible." ✆

Developing low-cost wireless broadband in MENA

Hamad Al Mannai, Vice President Commercial, Es'hailSat, speaks with Communications Africa and highlights the company's growing portfolio across the Middle East and North Africa (MENA) regions and the company's future plans.

Communications Africa (CAF): How Es'hailSat is boosting broadcasting, broadband delivery and global connectivity in MENA and beyond?
Hamad Al Mannai (HM): As Qatar's satellite operator of choice, Es'hailSat has served broadcasters, telecom companies, enterprise and government customers for the past 11 years from our headquarters and teleport in Qatar. Services include fully encrypted, secure, fixed and mobile communications, anti-jamming capabilities as well as robust and reliable broadcasting services catering to audiences across MENA.

The primary objective is to provide critical communications infrastructure, wherever and whenever required. Some of our best practices include end-to-end service delivery with high levels of availability. These are further augmented by secure and reliable connectivity across fixed ground networks and mobility sectors.

CAF: What are challenges you face in the MENA region?
HM: First would be piracy as content protection is still a concern for the region. Although majority of the large piracy incidents have been addressed and discontinued, there is still rampant online piracy of content. A consolidated effort is required on the part of the satellite and media industry and local governments to address this issue. Then there are always price pressures when it comes to satellite capacity, services, and equipment. This has come to the forefront in the last few months, with supply chain issues causing delivery delays and further delaying implementation, service roll out etc.

CAF: How is low-cost broadband technology getting a pace in this region?
HM: Over the past two years, the pandemic has shown us how important it is to have cost-effective connectivity solutions to enable people to remain connected and productive. While the industry can do a lot more, the pace of broadband growth in MENA has been quite encouraging. The deployment of 4G and 5G infrastructure has been critical to developing low-cost wireless broadband in MENA. Furthermore, the arrival of both high throughput satellites and fibre-to-the-home has reduced the cost per Gigabyte of data consumed, as every household and workplace continues to consume more data with every passing day. Es'hailSat's satellite services and our teleport infrastructure located in Doha are well positioned to deliver cost effective broadband solutions across the MENA region.

Photo: Es'hailSat

Hamad Al Mannai is the Vice President Commercial, Es'hailSat.

CAF: Can you tell us about your ongoing and upcoming projects in MENA? How cost-effective are they?
HM: Over the past year, Es'hailSat has signed many strategic connectivity partnerships, some to offer enhanced VSAT support services in the Maritime segment while others to cater to communications infrastructure required for vessels at sea. One noteworthy example is the successful proof-of-concept that we completed in 2021 using low profile flat panel VSAT terminals for the maritime environment using our Es'hail-1 satellite. To boost broadcasting of upcoming mega-events, we at Es'hailSat have enhanced our Satellite News Gathering services capabilities.

These, along with our Es'hail-1 and Es'hail-2 satellites at 25.5/26 East hotspot, will provide the backbone required to carry these events across the region and beyond. To ensure cost-effectiveness, Es'hailSat offers end-to-end service delivery so that the end-user has minimal overheads once they engage us to provide the service. ✆

Over the past two years, the pandemic has shown us how important it is to have cost-effective connectivity solutions to enable people to remain connected and productive.

Es'hailSat, the Qatar Satellite Company, is a communications satellite operator headquartered in Doha, Qatar. Es'hailSat was established in 2010 with the goal of managing and developing Qatar's presence in space. The company provides independent, high-quality, advanced satellite services to broadcasters, businesses and governments in the MENA region and beyond.

https://www.eshailsat.qa/

"The space sector is growing everywhere – including Africa"

A recently announced partnership between Viasat and the Ghana Space Science and Technology Institute (GSSTI) brought the ground-station-as-a-service (GSaaS) business model to Ghana. John Williams of Viasat explains why this is significant.

Photo: Adobe Stock

Viasat's first Real-Time Earth facility in Africa is located in Accra.

VIASAT, A GLOBAL communications company, recently announced the launch of its first Real-Time Earth (RTE) facility in Africa, located in Accra, Ghana. Here's an extract from the announcement made late last year.

"Viasat worked in partnership with the Ghana Space Science and Technology Institute (GSSTI), a government-based institution under the Ghana Atomic Energy Commission (GAEC), focused on coordinating all space, science, technology and related activities in Ghana, to bring new space opportunities and jobs to the region, while expanding Viasat's ability to deliver critical earth observation and remote sensing data on-demand around the world. With this new station, Viasat's RTE global network is now active in five continents.

"Viasat RTE provides Ground-Station-as-a-Service (GSaaS) capabilities in support of environmental, insurance, shipping, energy and government operations. This is a fully-managed, affordable ground network that supports next-generation and legacy geosynchronous equatorial orbit (GEO), medium earth orbit (MEO) and low earth orbit (LEO) satellites using the S-, X-, and Ka-bands, enabling operators to meet current and future data requirements.

"Viasat's RTE satellite ground station facility is located at the Ghana Radio Astronomy Observatory, Kuntunse. It includes a Viasat full-motion 7.3M S/X/Ka-band antenna and associated infrastructure. The antenna is currently ready to provide global satellite operators the ability to perform telemetry, tracking and command (TT&C) capabilities as well as rapidly download, stream and/or disseminate valuable satellite-based data in a timely and secure manner."

That's the quite extraordinary story that we heard back in November last year. But what's the background? We asked John Williams, vice president, Real-Time Earth at Viasat, to give us some more information on this ground-breaking initiative now under way in Ghana.

> **"The RTE ground station is helping to cultivate interest in space for the region."**

Communications Africa (CAF): Could you tell us more about your RTE global network? What services does it offer?

John Williams, vice-president, Real-Time Earth at Viasat: Viasat Real-Time Earth is a global ground segment-as-a-service (GSaaS) offering that provides a means for satellite operators to communicate with their satellites without having the expense and maintenance of building out their own antenna network. RTE fields our own Viasat antenna technology with 7.3m S/X/Ka-band antennas as the baseline. Typical customers include commercial remote sensing companies engaged in taking various types of imagery of Earth. That imagery is then downlinked over Viasat RTE antennas and transmitted directly to the satellite owner's endpoint of choice.

CAF: Why Ghana? Is it to do with the country's position on the map, government support, local technical capabilities or something else?

JW: All of the items listed were contributing factors to our build-out in Ghana. Geographically, it provides a great location to quickly downlink satellite imagery taken over Europe and North and West Africa. It is also ideal for satellites in equatorial orbits. Politically, the government has been very supportive. They have a nascent but thriving space sector and the RTE ground station is helping to cultivate interest in space for the region. Finally, our partner Ghana Space Science and Technology Institute (GSSTI) offers technical antenna expertise and brings years of experience through its partnership with the South African Radio Astronomy Observatory and the SKA antenna collocated at the Kutunse site with the RTE antenna.

CAF: What does GSSTI bring to this partnership?

JW: GSSTI brings a passion for growing the space industry in Ghana, technical expertise and indispensable local area knowledge.

CAF: Is GSaaS a recent business model? How does it work? Why has it been developed?
JW: GSaaS is not new, but it has grown dramatically in the last five years driven by the unprecedented growth of satellites, both commercial and government. GSaaS allows satellite operators to focus on their mission and not worry about the operating and capital expenses that come with running a global network. GSaaS drives down the entire ground segment cost because multiple users share the resource.

CAF: Why will environmental, insurance, shipping, energy and government operations in particular benefit?
JW: In the last five years there has been an unprecedented growth of sensors in space. Some are optical imagery, some are synthetic aperture radar that can image at night and through clouds. Others track radio frequencies of ships and still others improve weather prediction. The applications of these new sensors are only just starting to be tapped into. For example, tracking AIS signals to look for illegal fishing, tracking crop health, identifying deforestation as it happens and quickly measuring property loss after a major storm are just some of the applications that satellite-based remote sensing is bringing to the world. They have the potential to influence local economies or change global policies.


Photo: Viasat

John Williams, Viasat: "There has been an unprecedented growth of sensors in space."

"GSaaS is not new, but it has grown dramatically in the last five years driven by the unprecedented growth of satellites."

CAF: Eric Aggrey, research scientist and project manager of Ghana Radio Astronomy Project, GSSTI, says, "The development of Viasat's new antenna site has been an extremely positive opportunity for the people and economy of Ghana." How?
JW: Not only does GSSTI host our antenna, but we also have an extensive maintenance agreement where we have trained locally employed staff on the operations, maintenance, and upkeep of the Viasat antenna system bringing new opportunity and a new hands-on knowledge of remote sensing ground stations to the country.
CAF: It is said that the new facility will contribute to Africa's technology and space growth initiatives. Is this becoming an important sector across Africa? Is Viasat well positioned to serve it as it grows?
JW: The space sector is growing everywhere, including Africa. Viasat is committed not only to growing our RTE business in Africa, but in the coming years with the Viasat-3 global broadband constellation we will be providing connectivity throughout Africa to help bridge the digital divide. The internet brings opportunity and Viasat is working hard to ensure everyone, everywhere has access to that opportunity. ✆

Ghanaians getting a new life insurance product, Allianz4Life

MOBILE MONEY LIMITED, MTN Ghana's subsidiary, and Allianz Life Insurance Company have launched a life insurance product, Allianz4Life, an initiative that is set to support Ghanaian families with affordable life insurance cover.

According to a report in *The Ghanaian Standard* newspaper, the partnership is expected to utilise the benefits of financial technology to provide services to more than 10 million Ghanaians. The services will be available on the MTN mobile money platform.

According to Gideon Ataraire, CEO of Allainz Life Insurance Ghana, the partnership aims to help the people of Ghana in securing their future and solving a long-standing problem of accessibility for insurance companies in the country, the source added.

Ataraire assured that the new minimum capital requirement for insurance companies in the country would in no way affect their operations and said, "in terms of payment of claims we will not even blink."

Esther Armah, head of reinsurance and anti-money laundering at the National Insurance Commission (NIC), said that improving insurance inclusion and penetration had been part of the vision of the NIC and for that matter, commended Allianz Insurance Ghana for taking a step to diversify its client base, reported the source.


Photo: Adobe Stock

The aim is to support Ghanaian families with affordable life insurance cover.

According to Armah, the subscribers would be treated fairly and the initiative aims to ensure that the needs of the customers are met.

The initiative also focuses on providing the most comprehensive benefits and great value to cater to the people and family to secure their future.

TECNO unveils an inclusive camera technology

SMARTPHONE BRAND TECNO has partnered with BBC StoryWorks to create a short film called The Future Lens: Looking Ahead with TECNO to explore how the mobile camera lens provides inclusive mobile camera technologies to local consumers.

Photo: TECNO

The company aims to make a significant impact in resolving the technical challenges regarding exposure, colours and hues in portrait photography.

"Cameras have evolved over the years, but unfortunately, it feels like the technology isn't created with everyone in mind. As a photographer, I think one of the most intimate things you can do is take a portrait of someone that accurately portrays who they are," according to photographer, Justin Amoafo.

"The Future Lens is the world without limit. Technology should include everyone and let us to be our true selves, instead of being depicted through a subjective lens. I believe that it should be the mission of humans to create the technology that is more understanding and inclusive of all of us," said Li Jiangtao, senior director of TECNO Imaging Product and head of TECNO TAIVOS Camera Lab.

As a rising innovator in mobile camera technology, TECNO devotes itself through an inclusive and emerging market-specific approach to bringing its "Future Lens" camera concept to consumers.

MTN launches RCS Business Messaging with Google and Dotgo in Nigeria

OPERATOR MTN HAS LAUNCHED RCS Business Messaging (RBM) services in partnership with Google and Dotgo, a Gupshup company and a leading cloud communications provider of RBM Solutions.

RBM uses the rich and interactive features of Rich Communication Services (RCS) – the next generation SMS that allows sharing of audio, video, images, location etc – to enable branded business messaging.

Dotgo's messaging-as-a-platform (MaaP) is integrated with the Google Jibe RCS platform for business messaging, the world's most advanced RCS platform that provides a high degree of scalability. As a partner, MTN would leverage the services provided by Dotgo such as the RCS APIs, chatbot directory, billing, payments, reconciliation and more, to drive monetisation from RCS.

"As Nigeria's largest carrier, MTN is all set to onboard brands that can reach out to a vast majority of Nigerian customers and delight them with a user experience like never before, to boost lead generation and conversion rates. This is a great opportunity for brands to connect with the end consumers of Nigeria for sales and support," said Lynda Saint-Nwafor, chief enterprise business officer at MTN Nigeria.

"With the highest number of subscribers in the region, RBM services on MTN will be a game changer. Dotgo has excelled once again as one of our top partners for monetising RBM with mobile operators," commented Juliet Ehimuan, country director, Google Nigeria.

"The launch of RBM by MTN, the largest operator in Nigeria, will accelerate adoption of RBM by brands in Nigeria. With the launch done, we will be working with MTN and Google to help CPaaS providers and brands in Nigeria to upgrade and incorporate RBM into their business applications," added Dr Inderpal Singh Mumick, CEO, Dotgo.

Liquid Intelligent Technologies launches gaming bundles in Zambia

LIQUID INTELLIGENT TECHNOLOGIES, a business of Cassava Technologies, has deployed its gaming bundles in Zambia to encourage the gaming and e-sports industry in the country.

The launch of these bundles aims to attract a growing and loyal gaming and e-sports market and harness developers and gaming talent in addition to providing users localised data capped access to gaming services such as Steam and the PlayStation Network.

The new gaming bundle is a niche product that targets the gaming community in the country. The 30-day bundle costs US$22.88 (K400) and can start on a day that suits the user. It comes with free downloads and online play from Nintendo, Steam, EA App, PlayStation and more gaming platforms between 22:00hrs and 06:00hrs daily, and six GB of data for browsing.

Mike Siachitema, head of products and solutions at Liquid Intelligent Technologies Zambia, said, "Gaming is not only an entertainment activity for young people; it ignites their passion for programming, coding, and software development. We aim to be the provider of choice for gamers by presenting cost-effective solutions in meeting the gaming demand. Through this, we intend to stimulate the growth of ICTs in Zambia and unlock the potential for the youth in Zambia."

"If you consider games like Pokémon Go, for example, they involve algebraic-like equations and young people play these games without actively realising that they are learning. Gaming makes subjects like maths, that are traditionally considered to be difficult or boring, cool and easy to learn, fostering a generation of potential young mathematicians and scientists," added Dennis Banda, an active member of the gaming community in Zambia.

Photo: Adobe Stock

The launch of these bundles aims to attract a growing and loyal gaming and e-sports market.

The bundle will provide Zambia's growing audience of more than 10,000 avid developers and gamers who already use Liquid's unique connectivity services with cost-effective gaming solutions that will help improve their gaming and e-sporting experience. Liquid is the only provider of gaming bundles in Zambia, and the company aims to deliver and sustain a premium experience for gamers.

The bundle can be purchased via https://zm.retail.liquid.tech/myliquid/

Speedcast SmartView to boost remote operation management

SPEEDCAST, ONE OF the leading communications and IT services providers, has launched Speedcast SmartView, a remote video and audio communications solution that is set to help the energy, maritime, enterprise, telecommunications and government sectors in accelerating their digital transformation agenda.

Speedcast SmartView aims to allow secure, high-definition video and audio to be streamed in real time via satellite at a fraction of the bandwidth previously required. As a result, organisations looking to transform their operations through digitalisation can use Speedcast SmartView to conduct inspections and repairs for assets operating anywhere in the world, without requiring technicians to travel and work at remote sites.

Available in multiple formats, Speedcast SmartView can be used on remotely operated vehicles (ROVs) for subsea inspections and research, at remote sites for monitoring, and on wearable devices.

Photo: Speedcast

Speedcast SmartView aims to allow secure, high-definition video and audio to be streamed in real time via satellite at a fraction of the bandwidth previously required.

"Video collaboration technologies can significantly improve operations in the field and in subsea," said Jeffrey Irwin, vice-president, product management at Speedcast.

"Speedcast SmartView's unique proposition is its ability to deliver high-quality video and audio content over satellite connection. When an ROV, staff or crew member is conducting work at a remote site, the ideal scenario of minimal delays, little-to-no operational wait times, and seamless collaboration enables effective, real-time decision-making."

"Diving, subsea and marine services are the core of our business and it is critical for our team to stay connected, as well as collaborate with headquarters, via real-time video feeds," said Mike Sharp, director at New Plymouth Underwater. "Speedcast SmartView's ability to deliver high-definition video content over satellite connectivity is able to help us to achieve operational efficiency, increase worker safety and drive cost savings."

In October 2021, Harvest Technology Group executed a formal reseller agreement with Speedcast. Today's announcement of the integration of Harvest's Network Optimised Livestreaming capabilities with Speedcast SmartView is the next step in that agreement between the two companies.

World Mobile and Altaeros to launch aerostat balloons in Africa

WORLD MOBILE, THE first mobile network built on blockchain and run by the people, has partnered with Altaeros to provide low-altitude aerostats (tethered balloon platforms) with a coverage area of approximately 8,000 sqkm each, forming a part of World Mobile's Dynamic Network.

World Mobile plans to launch these balloons across Africa to connect hundreds of millions of people. Several aerostats will launch in Zanzibar anchoring the network and delivering connectivity near to 100% of the island. Each aerostat will connect hundreds of thousands of subscribers and each subscriber on the network will create a blockchain wallet. World Mobile will be deploying thousands of aerostats across the continent.

The aerostat system consists of a helium-filled envelope and stabilising fins. The unique three-tethered architecture limits the aerostat's movement in the air (pitch, roll and yaw), which is essential in stabilizing telco coverage so connectivity doesn't drop in and out.

The aerostat is attached to a movable mooring platform with built-in software that adjusts the balloon's position depending on wind conditions. The onboard communication system, using beamforming technology (a technique that focuses a wireless signal towards a specific receiving device) will allow 3G, 4G and 5G handsets to connect directly and will also connect WM AirNodes in the vicinity via traditional and alternative spectrums.

Photo: World Mobile

The aerostat is attached to a movable mooring platform with built-in software that adjusts the balloon's position depending on wind conditions.

"World Mobile is on a mission to connect the unconnected and build the first mobile network powered and run by the people. Working with leading tech partners who share our values will make us stronger," said World Mobile founder and CEO Micky Watkins.

"We're on a journey to bring modern infrastructure to billions of unserved and underserved people around the world. We're driven by a belief that business and technical innovation are the keys to creating a positive, scalable impact. World Mobile is the perfect partner to work with to deliver our vision as they strive to connect the unconnected, everywhere," said Altaeros CEO and chief technical officer Ben Glass.

Samsung launches fingerprint security IC for biometric payment cards

SAMSUNG ELECTRONICS HAS introduced its fingerprint security IC (integrated circuit) S3B512C with enhanced security features.

The solution is EMVCo and Common Criteria Evaluation Assurance Level (CC EAL) 6+ certified and performs in line with Mastercard's latest Biometric Evaluation Plan Summary (BEPS) specifications for biometric payment cards.

"S3B512C combines a fingerprint sensor, secure element (SE) and secure processor, adding an extra layer of authentication and security in payment cards," said Kenny Han, vice-president of System LSI Marketing at Samsung Electronics. "The S3B512C is primarily designed for payment cards but can also be used in cards that require highly secured authentications such as student or employee identification, membership or building access."

The security IC is the industry's first all-in-one security chip solution that reads biometric information through a fingerprint sensor, stores and authenticates encrypted data with a tamper-proof SE, and analyzes and processes data with a secure processor. With the three key functions integrated in a single chip, the S3B512C can help card manufacturers reduce the number of chips required and optimize card design processes for biometric payment cards.

With the new security IC embedded, biometric payment cards will allow faster and safer interactions when making purchases. The biometric authentication removes the need to enter a PIN on a keypad and also prevents fraudulent transactions made with lost or stolen cards as it verifies the cardholder's identity using a unique and securely stored fingerprint.

The solution's encrypted fingerprint data is stored in an SE that has received globally accredited certifications such as EMVCo and CC EAL 6+. To safely and accurately verify the user's identity, the new IC comes with a proprietary fingerprint authentication algorithm and a secure processor that extracts and analyzes the unique features of the fingerprint placed on the sensor. Furthermore, the chip's anti-spoofing technology prevents unauthorized users from circumventing the security system with illegitimate methods such as artificial fingerprints.

EV tech startup Opibus unveils first electric bus designed in Africa

The total operating expenses are lowered by 50% and will revolutionise the public transport sector in Africa.

Photo: Opibus

OPIBUS, SWEDISH-KENYAN electric vehicle technology startup, has introduced the first all-electric bus in Kenya as well as the first African designed electric bus ever.

The launch is in line with the company's vision to provide a locally designed and developed electric bus that can be mass-produced for the pan-African market, by the end of 2023. Opibus focuses on realising its goal of electrifying Africa's public transport system, deploying products tailored for the local use case.

The bus is designed and developed in-house with local engineering talent, while at the same time utilising local manufacturing partners.

The key to the technology is the Opibus proprietary electric vehicle platform, which is modular and can be the foundation for several types of vehicles. This bus will be significantly lower cost than importing fully built electric busess. However, it also has superior performance compared to its diesel counterpart. With the installation of a powerful motor, the bus has maximum torque which improves performance while enabling the driver to accelerate more responsively.

National Social Security Fund of Uganda introduces AI-based chatbot

THE NATIONAL SOCIAL Security Fund (NSSF) of Uganda has introduced an AI-powered digital customer assistant named 'Sanyu' based on Avaya technology.

Sanyu, an advanced chatbot that now serves as the NSSF's front line of customer service, aims to reduce waiting times for customers who contact the NSSF by providing easy self-service for routine transactions – in the process freeing up human agents so that they can address more complex requests.

"We estimated that our customer service personnel were spending around three-quarters of their day on easily answered queries, such as statement requests, registration, and FAQs," said Richard Byarugaba, managing director, NSSF.

"By automating most of these interactions, our agents now focus on transactions that require human intervention, typically at the higher end of the value chain. This transformation paid off during the pandemic, as lockdowns and distancing reduced our customers' visits to physical branches and increased the demand on our call centres and online platforms."

The deployment is the NSSF's latest effort to digitise the customer experience. Over the last two years the organisation has moved over 94% of its member transactions and interactions over to digital channels, with only the remaining 6% of customers using walk-in service centres. That digital shift, however, necessitated a transformation in how inbound requests are handled.

The deployment comes as the NSSF's latest effort to digitise the customer experience.

Photo: NSSF

"We had been struggling to keep up with the high volume of frequent queries coming in, and we did not have a solution that offered customers the same experience and convenience on our various different digital platforms. We wanted to have unlimited capacity to respond instantly, any time, to customer queries. There was also a need to free up our front-end employees from routine support requests and enable them to focus on more complex tasks," said Byarugaba.

Since October 2020, nearly 164,000 customer transactions and interactions have been registered through Sanyu, and the NSSF is confident the solution will contribute to an improvement in its Net Promoter Score and first contact resolution rates.

SEACOM acquires Africell Uganda Assets

SEACOM, the pan-African telecommunications service provider, has announced it will acquire selected infrastructure assets from Africell in Uganda. The acquisition marks a significant step for SEACOM to providing end-to-end connectivity and ICT solutions.

This latest expansion comes on the heels of SEACOM's recent acquisition of Kenyan service provider Hirani Telecom's metro fibre network. SEACOM is poised to take over a comprehensive portfolio of infrastructure essential for connecting enterprise customers. This includes 760 km of fibre within the Ugandan capital city of Kampala and surrounding towns, a 250 sq m data centre and office space for SEACOM representatives and staff members.

SEACOM has provided wholesale solutions to Uganda since its inception in 2009, and corporate solutions since 2018.

Netflix Commits US$1mn towards Scholarships in Africa

NETFLIX, THE WORLD'S leading entertainment streaming service, has announced a commitment of US$1 million towards the newly-established Netflix Creative Equity Scholarship Fund (CESF) for film and TV students in Sub-Saharan Africa. The scholarship fund forms part of Netflix's global Netflix Creative Equity Fund launched in 2021 to be allocated to various initiatives over the next 5 years with the goal of developing a strong, diverse pipeline of creatives around the world.

The scholarship fund will cover the costs for tuition, accommodation, study materials and living expenses at institutions where beneficiaries have gained admission to pursue a course of study in the TV & film disciplines in the 2022 academic year.

The Netflix CESF is targeted for rollout across the region in the academic year commencing in 2022, starting with an open call for applications in the Southern African Development Community (SADC) region, in partnership with social investment fund management and advisory firm Tshikululu Social Investments as implementing partner/fund administrator in Southern Africa. Fund administration partners for East Africa and the West and Central Africa regions will be announced in due course.

The Netflix CESF is targeted for rollout across the region in the academic year commencing in 2022.

Photo: Adobe Stock

The Netflix CESF is designed to provide financial assistance, through full scholarships, at partner higher educational institutions (HEI) in South Africa to support the formal qualification and training of aspiring creatives from a SADC region country that wish to study in South Africa, and are able to obtain the necessary permissions to do so. The following countries will be eligible: Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe.

Adanian Labs expands into South African tech start-ups

PAN AFRICAN TECH lab Adanian LABS has expanded into South African tech start-ups with the Venture Building Programme investing US$6,00,000 into the SA tech-startup economy.

Five tech start-ups are set to join Global Innovations through Adanaian Labs Venture Building Programme 2022.

As part of its vision to be the leading pan-African tech lab investing in African Innovations created to solve problems on the continent and beyond, Adanian Labs will be hosting a Demo Day where 16 shortlisted start-ups will pitch in-person to a panel of adjudicators for a chance to be selected as the final five successful start-ups to be incubated at Adanian Labs South Africa.

"Local partnerships are key in realising the Adanian Labs vision. It excites us to have created strategic partnerships with local entrepreneurs. As Adanian Labs, we aim to build the next generation of socially impactful and commercially driven companies that will change the world from Africa," said Adanian Lab's CEO John Kamara.

Photo: Adobe Stock

The five selected start-ups will join the Adanian labs first cohort of 2022 internationally alongside start-ups from other countries such as Kenya, Tanzania, Nigeria and Zambia.

The five selected start-ups will join the Adanian Labs first cohort of 2022 internationally alongside start-ups from other countries such as Kenya, Tanzania, Nigeria and Zambia. The Adanian Labs venture building programme will offer a blend of technology development, technical support, business mentorship and access to market as well as partnerships and funding.

GCCIA event: Local telco players bullish on industry's growth

GULF COOPERATION COUNCIL Interconnection Authority's (GCCIA) forum has ended on a high note with participating local telecommunication experts expressing their confidence in the sector's continuing growth and development.

The event, titled Global communications networks: Latest technologies and investment opportunities, was held at the Cooperation Council for the Arab States of the Gulf Pavilion at Expo 2020 – Dubai and aimed towards taking a closer look at the latest technologies and current investment opportunities in global communications.

Ahmed Al Ebrahim, CEO at GCCIA, shared that the successful event represented a key opportunity to meet with top local telecommunication players and study the MENA region's overall communications connectivity while also seeking new ways to drive in more infrastructure investment in the region.

"Telecommunications is a very important and essential aspect of the GCC region's growth. It is also positioned as an important player in the further development of local economies. We are truly overwhelmed at the positive response generated by this event, which gave us the opportunity to meet with some of the region's top telecommunication personalities and tackle challenges currently being faced by the industry," said Al Ebrahim.

The forum was composed of two panel discussions. The first session saw the participation of Greg Varisco, CEO, Cinturion Group; Rafik Shafik, chief technical officer, Infonas; Veer Passi, Group CEO, Kalaam; Nicola Tordela, senior vice-president, Zain Group and Faisal Ameer, chief technical officer, Huawei.

Both sessions were highlighted with key insights and perspectives covering the global communications sector.

Liquid Intelligent Technologies brings seamless connectivity in Rwanda

LIQUID INTELLIGENT TECHNOLOGIES (Liquid), a business of Cassava Technologies, has partnered with the Rwandan Ministry of ICT & Innovation and Rwanda Development board to provide seamless connectivity at the Hanga Pitchfest 2021.

The inaugural event, led by the Ministry of ICT & Innovation, was the first of its kind to empower local technology start-ups and entrepreneurs. Hosted over the weekend on 11 December at the Kigali Arena, the platform provided a rare opportunity for start-ups to attract the attention of both local and international investors.

Alexis Kabeja, CEO of Liquid Intelligent Technologies Rwanda, said, "Entrepreneurs and start-ups haven't reached their potential and therefore are still not adding as much to the local GDP compared to international economies. Good connectivity and access to digital technologies are the bedrock of a digitally transformed country."

The event was a hotbed of broadband activity as hundreds of entrepreneurs competed to pitch their solutions to a panel of investors.

Rwanda ranks 38th (second in Africa) on the World Bank's Ease of Doing Business Report, and such initiatives continue to ensure that the country not only retains but improves its attractiveness as an investment destination. The government has numerous incentives to attract and empower local technology start-ups, and Liquid is proud to be chosen to help further develop the local economy.

Liquid Intelligent Technologies is a pan-African technology group with capabilities across 14 countries.

NuRAN announces agreement for Cameroon and DRC projects

NURAN WIRELESS INC, a specialist rural telecommunications company, has announced an agreement in principle for a senior secured credit facility with a development finance institution (DFI) that provides up to US$15mn in total funding.

The purpose of the loan facility is to finance a portion of NuRAN's planned US$30mn of expenditures linked to the installation of network infrastructure roll-out promoted by NuRAN in Cameroon and Democratic Republic of Congo (DRC).

Proceeds will be used for project expenditures relating to the installation of network infrastructure by NuRAN and roll-out of up to 120 rural sites in Cameroon and 850 sites in DRC. The loan facility is conditional on, amongst other customary conditions in a financing of this nature, NuRAN raising the remainder of the US$30mn in funding for the project or USD$15mn.

The balance of funding is to be raised in cash through equity or additional debt. A holding entity for the African operations is to be established for the project and it is expected that the balance of funding will be raised at this level.

The loan facility will be subject to standard security for this type of financing and is subject to the lender's due diligence and customary conditions, events of default and covenants to be outlined in the definitive agreements respecting the financing. Interest under the loan facility is due on all disbursed sums, and is to be paid quarterly, semi-annually or annually in arrears on predetermined payments dates.

FSD Africa and NAICOM to launch BimaLab

FSD AFRICA AND Nigeria's National Insurance Commission (NAICOM) have partnered to launch BimaLab, an accelerator programme designed to boost the development and adoption of digital solutions for the insurance sector.

BimaLab Nigeria aims to address gaps in the insurance market by educating, nurturing and promoting innovators and Insurtech start-ups. The programme will borrow from Kenya's BimaLab I, BimaLab II and global best practices with a focus on local experience to provide Nigeria with the most competitive and attractive start-up accelerator programme.

Ten companies will be selected to participate in the 10-week programme that will provide them with the expertise, resources, and support to develop and scale market-ready solutions that bring social and/or commercial value to Nigeria's insurance sector.

Across the continent, little knowledge of the insurance industry coupled with low income has affected the rate of insurance penetration in the mass market. Yet, a recent report by Deloitte indicates that affordable insurance products play a crucial role in mitigating the effects of negative financial shocks and in doing so reducing financial vulnerability.

To widen insurance coverage, FSD Africa has recently rolled out a similar accelerator programme in Ghana (InnoLab). The solutions being supported through the accelerator programmes will be expected to also speak to the needs of populations beyond their borders of origination.

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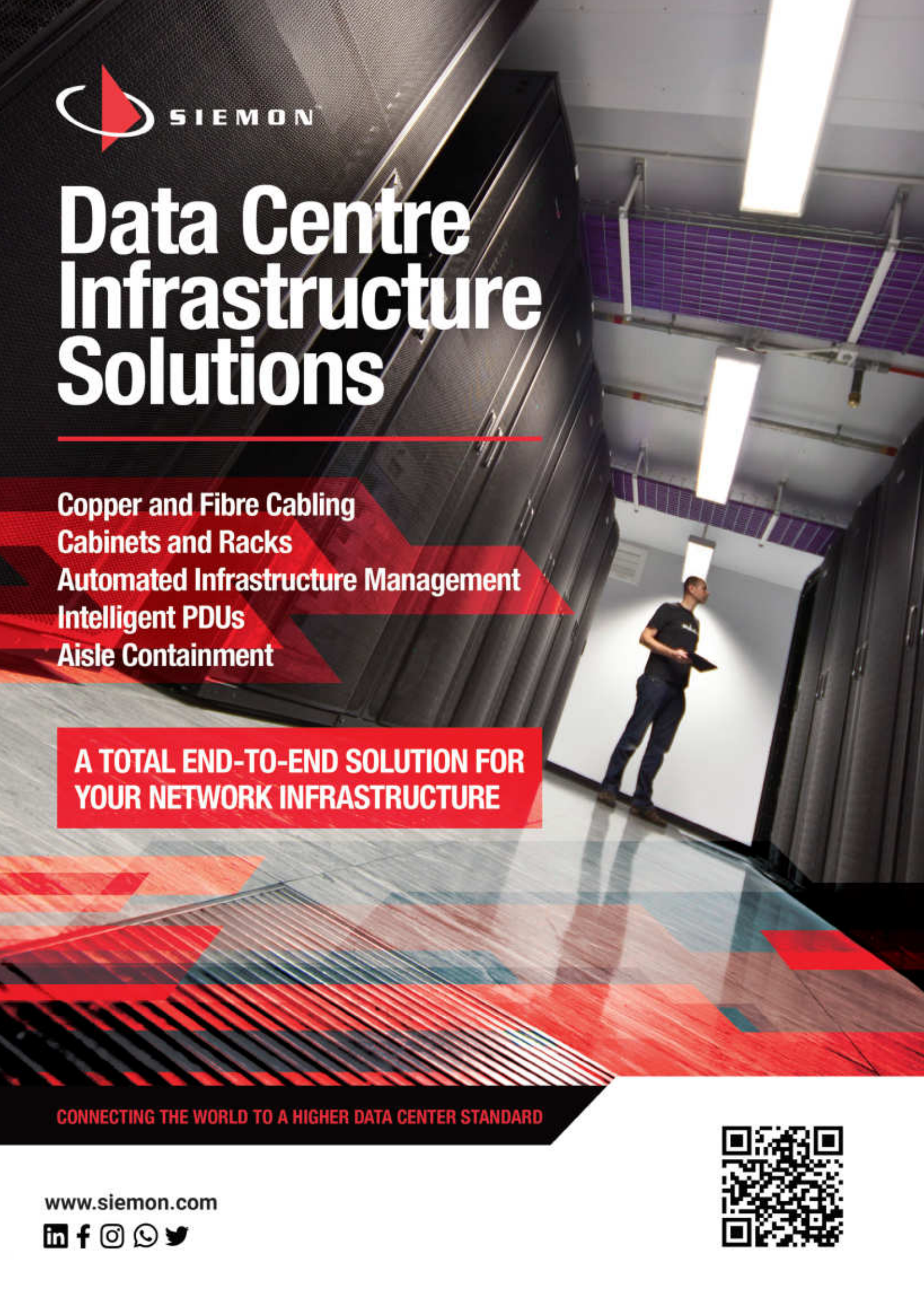
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