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Africa offline amidst cable outages

On 14 March, large swathes of Africa were left without internet connectivity following a catastrophic subsea cable outage. The WACS, ACE, MainOne and SAT3 subsea systems have all been affected, impacting on connectivity across Liberia, Benin, Ghana, and Burkina Faso, the Gambia, Guinea, Ivory Coast, Niger, Namibia, South Africa, and Lesotho, among others.

MainOne, owned by Equinix, said that an external incident resulted in the damage to its cable system, and has ruled out human activity as a cause.

"Our preliminary analysis would suggest some form of seismic activity on the seabed resulted in a break to the cable," said MainOne. "Given the distance from land, and the cable depth of about 3kms at the point of fault, any kind of human activity – ship anchors, fishing, drilling etc. has been immediately ruled out."

While outages have occurred before, this disruption "points to something larger and this is amongst the most severe," said Isik Mater, director of research at NetBlocks, which documents internet disruptions around the world. Data transmission and measurement showed a major disruption to international transits, "likely at or near the subsea network cable landing points."

To mitigate the impact of such outages – which are always a possibility · many network operators have invested in capacity in multiple subsea cables to ensure redundancy and maintain the stability of their networks.

Seacom confirmed that services on its WACS were down and that customers who relied on that cable were being automatically redirected to the Equiano cable, while Paratus is offering alternatives to customers via its capacity on both Equiano and SACS.

"In today's world, reliable internet connectivity is no longer a luxury but an absolute necessity," said Paratus Group chief technical officer, Rolf Mendelsohn. "As a responsible network operator, we have invested heavily in building a robust and resilient infrastructure, including redundant undersea cable systems. Thanks to our proactive approach, our customers remain connected and are experiencing minimal service disruptions during this challenging period."

Liquid Intelligent Technologies confirmed a similar message: "Liquid Intelligent Technologies confirms that multiple undersea cables operating along Africa's West coast are experiencing outages around the Abidjan area; the exact location and reason are being investigated. Our investment in multiple undersea cables along the East and West coasts has allowed us to carry traffic with minimal disruption."

Angola Cables – which owns and operates SACS with a joint venture of five Angolan operators · is also redirecting traffic via SACS. The company added that it "has network backup and restoration solutions available through cables that have not been affected by the faults off the Ivory Coast... Our technical team is currently diligently working with industry partners to stabilise international connectivity and to ensure that we can provide support and guarantee the stability of services to African network operators and entities that need it."

Chris Wood, Group CEO of WIOCC, meanwhile, confirmed that "immediately the four subsea cables were severed off the coast of Cote d'Ivoire, our engineering, operations and field teams swung into action. Our clients connected directly at OADC data centres in South Africa and Nigeria are already protected from the impact of the subsea outages due to the unique levels of redundancy and scale of the WIOCC core backbone. In Lagos, the Equiano cable, in which WIOCC owns a fibre pair, has not been affected by the incident off Cote d'Ivoire. WIOCC lands the cable directly into the OADC data centre, establishing the most resilient digital ecosystem hub in Lagos and offering the most direct connectivity to Europe and South Africa. As a result, OADC's data centres and WIOCC's hyperscale network are playing a key role in restoring services to other facilities and operators currently suffering outages in Lagos and elsewhere on the continent."

Satellite is playing a key role in bridging the connectivity gap while the subsea cables remain offline. CMC Networks – which utilises a combination of technologies, including subsea cables · has now added low Earth orbit (LEO), medium Earth orbit (MEO) and geostationary orbit (GEO) satellite connectivity to its portfolio of solutions.

"The recent damage to subsea cables and the subsequent disruption to businesses across South Africa has highlighted the need for a wide variety of connectivity options and digital infrastructure that has the resiliency to ensure business continuity during unforeseen events. Our satellite solutions enable service providers and enterprises to manage risk and maximise uptime," said Marisa Trisolino, CEO at CMC Networks.

As for restoration timelines... According to the National Communications Authority of Ghana and landing service providers for the various submarine cables involved, complete repair of ACE, MainOne, SAT-3 and WACS submarine cables could take up to five weeks. Cable landing service providers have remotely identified the approximate locations of the damage and are sending repair vessels to the site to carry out physical assessments and refit.

"We are actively working with our maintenance partners, vessel owners and relevant authorities to expedite the repair of our submarine cable. We are very optimistic that our cable will be repaired as planned and services will be fully restored, so that we can continue to operate with continued integrity of the submarine cable," said MainOne on X (formerly Twitter).

Ghana to gain 5G mobile technology from September

5G mobile technology will be launched in Ghana from September, according to Ursula Owusu-Ekuful, minister of communications and digitalization.

The announcement promises consumers a better connectivity experience with faster download speeds, low latency, improved bandwidth, among others.

5G spectrum and license will not be auctioned, as the government has instead decided to create a neutral shared infrastructure company that will make appropriate mobile technologies available to telecom operators. This should ensure that 5G is fully and quickly available nationwide, even in rural areas.

Once launched, the adoption of 5G in Ghana will depend on the availability on the market of smartphones compatible with this technology, as well as on the ability of consumers to acquire them.

Africell Sierra Leone enables wider smartphone adoption

Africell Sierra Leone has signed a deal with Samsung to facilitate people's access to smartphones with instalment payment options.

The collaboration was formalised at the LOR Restaurant, Levuma Beach, Freetown, and signals a shared commitment to expanding access to cutting-edge technology and internet connectivity..

"Recognizing the financial barriers to owning a smartphone, Africell has partnered with Watu Simu, a financial technology company, to offer affordable and flexible financing options, with weekly instalments starting from NLe 71," said Africell Sierra Leone in a statement.

Smartphones remain important in a context where digital transformation continues to accelerate in Africa.

With the new deal, Africell Liberia can expect an increase in revenue, especially due to new digital consumption patterns that require more internet data.

Nilesat opts for Hughes system gateway, due by fourth quarter

Nilesat has purchased a Hughes JUPITER™ System Gateway and will use Hughes JUPITER terminals for its Nilesat 301 satellite. The implementation will begin in the second quarter of this year and is expected to be complete by the end of the third quarter.

"The Nilesat vision is to be the role model for satellite services in the MENA region," said Major General Sameh Katta, chairman and CEO Nilesat. "After careful technical and commercial evaluation, we verified that the Hughes JUPITER System provided the efficiency, reliability, flexibility and high performance needed to help us offer the best service delivery to Nilesat subscribers."

"The need for internet access is growing in the MENA region, and Hughes is pleased to be working with Nilesat to deliver access to rural areas," said Vaibhav Magow, vice president, Hughes. "Our JUPITER System is the de facto standard for satellite connectivity, and it will serve Nilesat very well."
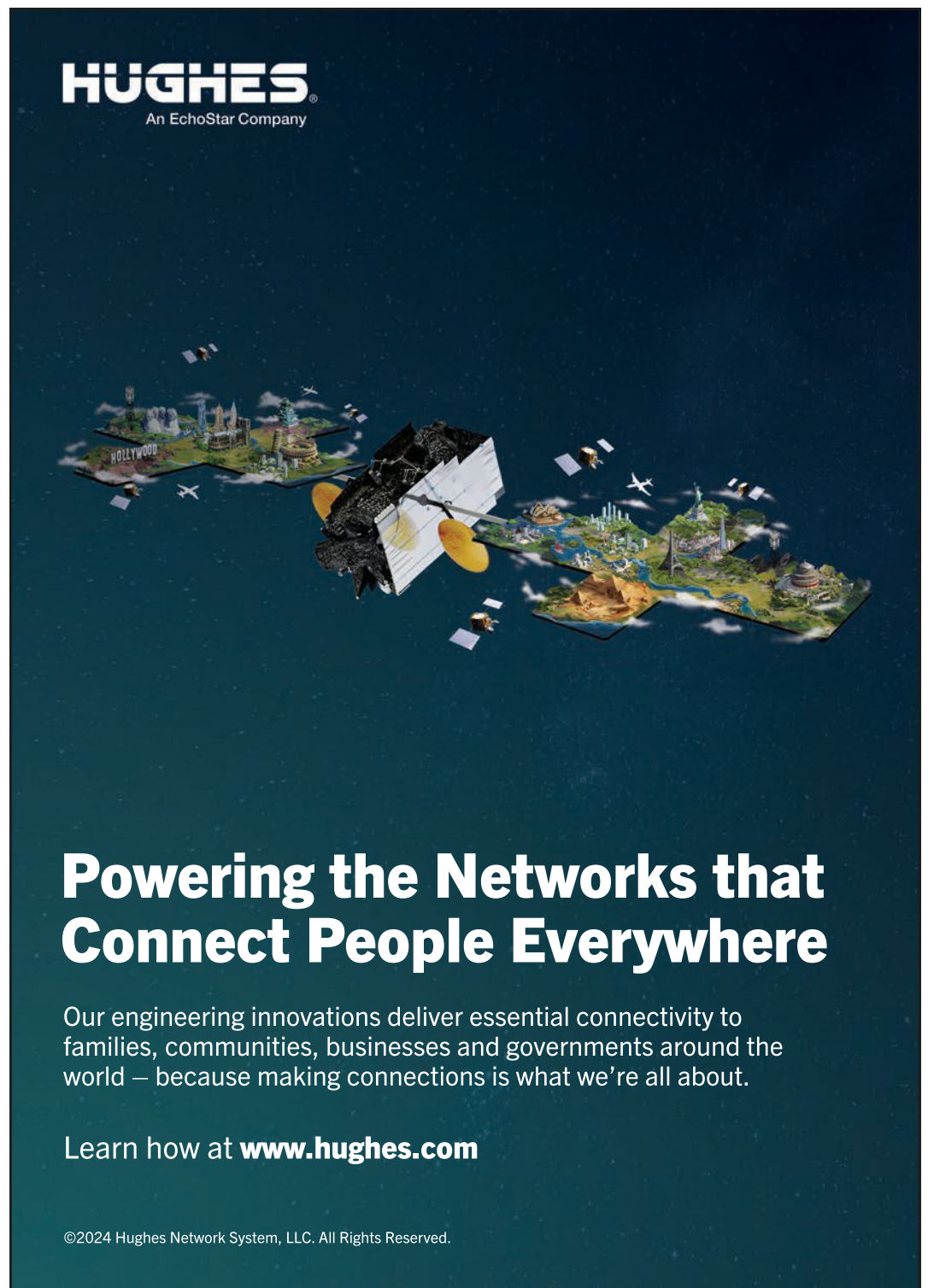
Tunisia announces 5G commercial roadmap

Tunisia now has a roadmap for the commercial deployment of 5G mobile technology.

According to the roadmap, the licensing and commercial launch of 5G are planned for September and November 2024 respectively. The government has tasked the National Frequency Agency (ANF) with identifying and providing the required frequency bands. The National Telecommunications Authority (INT) will be responsible for studying the economic feasibility of launching ultra-broadband and determining the price of the license.

The advent of 5G is part of the implementation of Tunisia's 'National Digital Transformation Strategy 2025.' This strategy aims to accelerate the digitalization of administration, secure national cyberspace, ensure digital sovereignty and establish a climate of digital trust essential to the implementation of digitalization projects.

"5G will represent an important qualitative leap in strengthening the infrastructure to be able to absorb the developments of different digital applications in various strategic areas such as digital health, smart industry, smart agriculture, distance education, intelligent transportation and other areas," said Nizar Ben Neji, minister of communication technologies.

Telecom Egypt and EXA Infrastructure partner on East-to-West traffic flows

Telecom Egypt and EXA Infrastructure have announced their partnership to reshape East-to-West traffic flows entering the Mediterranean and reinforce Egypt's role as a pivotal hub for global telecommunications.

EXA Infrastructure will become a one-stop-shop for traffic from the Middle East and Asia into Europe, uniquely combining multi-route solutions, while providing protected capacity solutions from Egypt – via Telecom Egypt's robust infrastructure and WeConnect model – to hundreds of endpoints in Europe and North America.

In September 2023, Telecom Egypt unveiled WeConnect, a unique ecosystem offering agile access to Egypt's extensive subsea cable infrastructure. WeConnect enables users to seamlessly navigate connectivity between subsea cable systems in the Mediterranean and the Red Sea, fostering an open and neutral model. As part of the partnership, EXA

Infrastructure will serve as the European and North American-based service provider to access WeConnect.

Telecom Egypt plays a pivotal role as the enabler of more than 90% of the international Eurasian traffic, accounting for more than 200Tbps of international traffic across Egypt. The company is actively expanding its international infrastructure by establishing new landing stations on the Mediterranean and Red Sea coasts, which are connected via diverse terrestrial and subsea routes. This partnership is another step in the strategy to position Egypt as the main gateway to Asia, Africa, and Europe, and as an emerging intercontinental interconnection hub.

"This agreement is an important milestone in the series of partnerships forged with major international telecommunications service providers to expand the reach of the international digital infrastructure globally, keeping

pace with the growing demand for internet services worldwide and in line with the government's strategy to position Egypt as a global digital corridor for data," said Amr Talaat, minister of communications and information technology. "The Ministry of Communications and Information Technology is keen to maintain Egypt's distinctive edge in the field of international subsea cables infrastructure, capitalizing on its unparalleled geographical location as a unique hub for submarine cables worldwide."

"Today, we are collaborating with EXA Infrastructure enabling our customers to pick their traffic from Egypt to any point of presence (PoP) in Europe via Telecom Egypt's Mediterranean cable landing stations," said Mohamed Nasr, managing director and CEO at Telecom Egypt. "Through this strategic partnership, Telecom Egypt avails a

unique experience to global networks and dedicates its capabilities to serve the growing demand for international connectivity coming from the Far East and Africa. Using WeConnect ecosystem, 19 subsea systems can easily and seamlessly scale-up and extend their reach to major PoPs in Europe hopping on EXA Infrastructure's well-established network."

"We are excited to embark on this new partnership with Telecom Egypt," said Nick Read, executive chairman at EXA Infrastructure. "Partnerships are a cornerstone of how this industry will scale to support the huge growth in data traffic in the coming years. This partnership brings together Telecom Egypt's formidable role as a hub for traffic from the Middle East and Asia, and EXA Infrastructure's critical role in providing modern infrastructure and multiple routes via an expansive network, into and around Europe."

Senegal's Free launches 5G in Dakar

Free has launched commercial 5G in Senegal. The new service is currently available in Dakar, where the group has already deployed 5 sites. It will be gradually extended with the upcoming deployment of around 50 5G sites in other regions of the country.

"With exceptional speed and reliability, Free's 5G goes far beyond just improving connectivity. It offers innovative opportunities to transform the business landscape in Senegal. 5G is an unprecedented opportunity for Senegalese companies to evolve, develop, but above all to innovate, an innovation useful to the development of our nation," said Mamadou Mbengue, general director of Free.

Free acquired its 5G license from the Telecommunications and Postal Regulatory Authority (ARTP) for 13.5 billion CFA francs in December 2023. Free beat out rival Sonatel (Orange) with its 5G launch by just one day.

Kenya to gain first geothermal-powered data centre in historic first

Kenya has signed a Memorandum of Understanding with the United Arab Emirates to build the first geothermal-powered data centre.

EcoCloud and the UAE's G42

signed the deal, which intends to capitalise on Kenya's large untapped geothermal potential by constructing an initial 100MW facility that will be ramped up over time.

"By harnessing geothermal energy, we are not only meeting the region's data needs but also setting a new standard for eco-friendly infrastructure," said Amos Siwoi, founder and chief executive officer of EcoCloud.

"This geothermal-powered data centre is a milestone towards realising Kenya's potential as a global digital hub and fulfilling our mission of making intelligence accessible to everyone, everywhere," said Peng Xiao, group chief executive officer of G42.

At full capacity, the 1GW mega data centre facility will reduce Kenya's reliance on fossil fuels, reduce carbon emissions, and aid in environmental conservation.

This development in Kenya comes at a time when data centres have faced scrutiny about their environmental impacts. Their rapid expansion in Africa has continued to raise concerns about their environmental impact, particularly in terms of energy consumption, carbon emissions, and waste generation.

Nigeria launches investigative committee to solve telco service challenges

The Nigerian minister of communications, innovation and digital economy Bosun Tijani has established a ministerial committee to provide solutions to the challenges facing the country's telecom operators.

The committee is responsible for examining the operational conditions of telecom operators and proposing fiscal measures to mitigate the impact of macroeconomic pressures on their activities. It will also investigate issues related to the industry's dependence on foreign currencies, shared services and infrastructure agreements, local content.

The establishment of this committee comes a few days after Nigeria suffered disruptions to the internet network due to the cutting of certain submarine cables serving it. It is part of the measures undertaken by the government to restore internet service to populations as quickly as possible, but also to guarantee optimal quality services for end users in the long term.

However, this vision could be slowed down by the recurring challenges complained of by players in the ICT sector. These include multiple taxation, shortage of foreign exchange, devaluation of the naira, high price of diesel. For example, the sector would have invested 50.28 billion naira in diesel during the month of February 2024 alone.

"As a major contributor to our country's GDP, the telecommunications industry is critical to the development of our nation, as it helps drive innovation and promote digital inclusion among Nigerians," said Tijani.

Algeria to benefit from satellite services

Algérie Télécom signed a partnership agreement with Algérie Télécom Satellite (ATS) to improve connectivity services for citizens and businesses.

The partnership is part of Algérie Telecom's global strategy focused on technological innovation and continuous improvement of service quality. The company has already signed agreements with Djezzy and Ooredoo and is now turning to satellites, which offers a greater range, allowing it to reach even populations living in rural, remote areas and difficult to access for its terrestrial networks.

This initiative is expected to help improve the adoption of connectivity services in the country. This should also help accelerate the Algerian government's ambition to develop its information society through infrastructure, telecommunications means and the use of ICT.

Airtel Africa breaks ground on Lagos DC

Airtel Africa has officially broken ground on its first data centre in Lagos, Nigeria.

Nxtra by Airtel is set to be one of the largest networks of data centres in Africa, with high-capacity data centres in major cities located strategically across Airtel Africa's footprint, complementing its existing edge sites.

The development underscores the company's commitment to meeting the continent's data management needs by providing trusted and sustainable data centre capacity to serve the fast-growing African digital economy.

"We strongly believe that the establishment of NXtra Data Centers will enhance data sovereignty, security, and preservation within the continent, reflecting our commitment to make Nigeria a major hub for access to digital services as we propel Africa towards a sustainable and inclusive digital age," said group chief executive officer, Airtel Africa, Segun Ogunsanya. "This mega project will provide over 1000 jobs. And more significantly, once deployed and at capacity, it will create over 250 permanent jobs for Nigerians whilst supporting companies in the manufacturing, financial services, health care as they move their data and computing into third party data centres like ours. Ultimately, we have to store data and content closer to where it is being consumed."

"The NXtra Frontier is not merely the construction of a facility, but the dawn of a new era in data control, security, and preservation throughout Africa," said governor of Lagos State, Babajide Sanwo-Olu. "Airtel's commitment to the highest standards in data management, technological innovation, and extensive network infrastructure is truly commendable. With a total capacity of 180MW distributed across 13 major data centres and over 48 edge data centres, NXtra is poised to redefine data storage and accessibility in Africa."

"Data is a key driver in our economy. Not only do we need to connect our people, we also must invest in the digital economy, and through the investment that companies like Airtel have made in our economy, we are fully able to participate in the digital economy," said minister of communications, innovation and digital economy, Bosun Tijani.

Burkina Faso calls for fourth MNO

The Consumers' League of Burkina Faso (LCB) is campaigning for the entry of a fourth mobile telephone operator into the market to strengthen competition and guarantee quality services to end users.

During the discussions, the LCB asked the Head of State to "whistle the end of recess so that consumers stop being the object of abuses by mobile telephone operators."

The government launched an international call for tenders for this purpose in 2013, with Viettel as the only candidate. The process was meant to be finalised in several months but has still not been completed - although no further details have been made available.

Consumers are increasingly complaining about the quality and cost of services provided by operators active on the market. In mid-April 2023, users of Burkinabe mobile telephone services began a protest campaign against the high cost of mobile services called "Wind of Salvation."

Huawei to modernise Ooredoo's networks across Tunisia and Algeria to 5.5G

Ooredoo has signed a partnership agreement with Huawei to modernize its core network to 5.5G in some of its markets, including Tunisia and Algeria, among others in the Middle East and Africa region.

The initiative will allow the telecoms operator to improve the quality of services provided to its subscribers in the various markets concerned.

"With a focus on continuous innovation, Ooredoo is committed to delivering transformative connectivity solutions that will enhance our customers' experiences and meet their evolving demands in the digital age," said Aziz Aluthman Fakhroo, general manager of the Ooredoo group.

The commercial deployment of 5G and 5.5G in Algeria and Tunisia should allow Ooredoo to strengthen its positions in its two markets., a strategic move amidst growing demand for high-speed services.

Sonatel launches fixed 5G

Sonatel has introduced commercial fixed 5G connectivity offers for residential and business customers and will soon add mobile internet offers.

Sonatel promises its customers instant download and streaming speeds, as well as increased responsiveness for real-time applications, such as online gaming, virtual reality, telemedicine, e-education and many others.

The launch of commercial 5G by Sonatel comes approximately seven months after the company acquired the first ultra-broadband operating license in Senegal from the Telecommunications and Postal Regulatory Authority (ARTP) for 34.5 billion CFA francs.

Avanti to bring satcoms to Senegal

Avanti Communications will soon be able to provide high-speed connectivity in Senegal with capacity from its HYLAS 4 satellite.

The company obtained an infrastructure operator authorisation from the government to operate the gateway station that it built for its satellite in Diamniadio, 30km from Dakar.

"Avanti's satellite coverage will provide reliable, high-speed voice and data services to rural communities, schools, hospitals, businesses and government agencies in Senegal, while playing a crucial role in improving national security," said Avanti in a release.

Hormuud Telecom deploys broadband for Somalia

Hormuud Telecom has deployed 5G in Somalia – broadband is currently available in Mogadishu, Kismayo, Galkayo, Baidoa, Dhuusamareeb, Beledweyne, Afgoye, Merca and Dhobley.

"We want to ensure that the benefits of 5G faster internet, improved services in sectors such as healthcare, education and agriculture become accessible to everyone," said Ahmed Yusuf, director general of Hormuud Telecom.
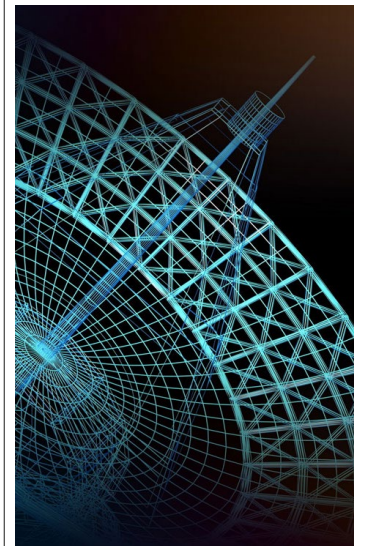
MTN to reduce GHG emissions by 47% by 2030

During 2023, MTN Uganda upgraded 3,241 cell sites (92% of its total sites) to solar and lithium-ion battery storage as the primary power source, while also connecting 2,329 sites (67% of total sites) to grid, moving away from diesel generators, reducing reliance on backup diesel generators.

As a result, "we registered a 60.5% reduction in carbon emissions in line with our Net Zero goals," said Sylvia Mulinge, CEO of MTN Uganda.

MTN Group and its operating companies have pledged to reduce greenhouse gas emissions by 47% by 2030 and reach Net Zero by 2040, as well as achieve workforce gender equality by 2030, and increase rural broadband penetration to 95% by 2025.

MTN has completed one of its primary targets for the year, which was to improve network efficiency through the acquisition of extra spectrum.

"We upgraded our existing infrastructure and expanded our network with an investment (excluding leases) of Ush353.5 billion, as we work towards the fulfilment of our coverage and quality of service obligations," said Mulinge. "This enabled us deploy an additional 350 sites focusing on 4G LTE, which increased coverage by 6.7 percentage points (pp) to 85.1%, while our 3G and 2G coverage increased to 92.6% and 98.6% respectively."

In addition, MTN became the first network in Uganda to go live on 5G closing the year with 37 sites rolled out.

"MTN Uganda was recognised as the mobile operator with the fastest internet speed this year, according to user-initiated tests completed in Uganda by Ookla, a global leader in mobile and broadband network intelligence," added Mulinge.

Tunisia needs 6-7 more international fibre cables

Tunisia has identified a need for 6-7 international fibre optic submarine cables reported Kamel Saadaoui, chief of staff of the Ministry of Technologies and Communication.

The initiative should make it possible to strengthen Tunisia's national telecoms infrastructure to accelerate the development of telecommunications networks across the country and facilitate the commercial deployment of 5G.

Tunisia is served by several international submarine fibre optic cables including SEA-ME-WE 4, Keltra, Hannibal, Didon and most recently, Ifriqiya. Orange announced in April 2023, an underwater cable linking Tunisia to France which should be put into service at the end of 2025.

Strengthening the national telecoms infrastructure should help improve the quality and coverage of telecoms services to meet the growing demand of populations and businesses for high-speed connectivity. According to the National Telecommunications Authority (INT), the average international bandwidth capacity consumed increased from 782Gbps in the third quarter of 2021 to 980Gbps in the third quarter of 2023. Over the same period the equipped capacity increased from 1,210Gbps to 1,710Gbps.

Nigerian economy stutters amidst mobile network outage

The Nigerian economy has suffered a major setback due to recent network disruptions experienced by MTN and Airtel.

The disruption in mid-March has raised concerns about its impact on the country's stability. The network disruption was caused by damage to undersea cables, which occurred along the western coast of Africa. The affected cables are WACS, MainOne, SAT3 and ACE.

Both internet and mobile communication services were affected, leading to significant connectivity issues and disruptions in business operations.

The Nigerian economy has been particularly hard hit by the disruption. Reliable network services are crucial for online transactions, and the disruption has led to a decline in sales for online retailers, with customers facing difficulties in accessing e-commerce platforms.

Temidayo Adefioye, CEO, Switchcon said that the disruption has dealt a severe blow to the Nigerian economy. The e-commerce sector has been a major contributor to employment and revenue generation, and this disruption will result in substantial financial losses, hinder market growth, and dampen investor confidence.

"The network disruption has, to a large extent, affected the financial sector, hindering online banking services and mobile payment platforms. Also, access to banking services has been impeded, leading to delayed transactions, limited access to funds, and difficulties in conducting business operations. This has affected individuals as well as corporate entities, including payment processors and financial institutions, with implications for financial inclusion and the efficiency of payment systems," said Adefioye.

Talking critical

Harald Ludwig,
chair, TCCA Technical Forum

Mission critical services – ensuring a smooth transition

Amidst all development within 3GPP, and the mission critical broadband features emerging, national TETRA network operators and users are investigating and preparing to adopt the new mission critical technologies. However, it is accepted that TETRA will be needed to work in parallel with the emerging critical broadband networks, and for that to happen there needs to be a mechanism put in place for the two networks to operate in harmony.

Since 2021, stakeholders in critical communications have been discussing if an interworking function (IWF) is to be made available in the market so it can be used for the communication between the existing narrowband TETRA systems and the 3GPP MCX services. These are mission critical Push-to-Talk (MCPTT), mission critical data (MCData) and mission critical video (MCVideo) collectively known as MCX, running on 4G/LTE and 5G bearers. As mission critical broadband technologies are deployed, this requirement for interworking with existing TETRA systems is becoming increasingly important.

To facilitate the adoption of MCX, and to enable communication between users on each system, a connection between the two types of technology is needed. A means to provide this bridging functionality is under development by ETSI to standardise into a logical IWF that will be located within the TETRA network infrastructure.

TCCA has produced a white paper that describes the relation between the IWF and the TETRA infrastructure from the perspective of operators and users. The focus is on the usage during transition and what the expected features needed from this perspective are. It designates priorities in a clear overview of 1) must-have, 2) nice to have and 3) not prioritised. Included are use cases which are reflections from operators considering how the IWF can be managed during operation.

The white paper puts into an operational perspective how TETRA operators and users might want to use an interworking functionality for pilots, proof of concepts, migration, hybrid deployment and, at a later stage, the transition towards MCX.

From an operator perspective there could be several phases in the IWF deployment cycle. These phases will be part of planning the national migration projects and will have variable durations, hence they indicate the business and use case for the IWF. The four main phases (which have overlaps) can be categorised as:

- Pre- IWF Planning Phase: the pre-migration phase defines the outlines for the migration and deployment, including the definition of the national or international project deliveries for the MCX services, requests for information, definitions on use cases, pilots, test setup, user configurations and establishment on a small scale as the proof of concept before rollout. What are the available options in the market for LMR operators and users to facilitate per today and near future in the core infrastructure or command and control centres to connect both systems? What is the preferred scenario to start migration and deploy the different architectures to keep the TETRA networks in operation during transition? Here, the possible solutions are validated as strategies to make plans on how to migrate. The basic features to have available in and across TETRA and MCX to be able to provide critical communications in a time of transition are considered.

- Interworking roll-out Phase: the scale-up of the agreed connections to maintain during migration. It is the deployment phase where there is a functioning IWF between the TETRA and MCX systems to guarantee business as usual for critical communications for and with the end users in both the systems. It will be dependent on the user, operator, or network as to how long this phase will be, depending on many factors that will be part of the national migration plan and roll out. These include budgets, expectations, end user agreements, investments and maturity of deployment of the future technologies. The needed interworking functionality could be in a range from basic simple communication between systems to more sophisticated deployment.

- Interworking Phase: a hybrid phase where both solutions need to coexist, interwork and gradually move end users from the TETRA system over to the new ecosystem on the MCX servers. Again, this phase will be coloured by national rollout plans and timelines and could define the extend of functionalities required from the old and new network and the IWF in between. This could span between the absolute needed minimum up to what new features need to be in place from day one on the MCX platforms. These requirements may vary per national scenario, so the usage of IWF functionality could differ in deployment per operator.

- Retirement Phase: if an operator is considering replacing an existing TETRA network with MCX, an optional Retirement Phase can be added. This is the downsizing or dismantling of the IWF functionality and the TETRA system once most of the users are migrated over to the MCX services.

With all planning ongoing for migration to a next generation infrastructure and ecosystem, it is likely that most of the major TETRA operators will go through these phases when making this transition to MCX, although there are exceptions and not all providers and operators will follow these phases.

The IWF was added to the 7th ETSI Plugtests™ event hosted in Malaga in November 2022 for the first time. A standardised and preferable certified TETRA IWF solution supporting the basic set of voice and data services should be available in the market to facilitate the transition so operators and network owners can start dimensioning future scenarios of making the transition from TETRA to MCX. The white paper **'Service Overview: TETRA-MCX Interworking (TETRA IWF)'** can be read here

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Cutaway illustration of Vertiv™ SmartMod™

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You don't have to overspend, or overbuild based on uncertain future needs – with right-sized systems designed to work together and optimized for constructability; you can build just what you need today, better aligning your capital plans to your business challenges.

SmartMod leverages core Vertiv Critical Power, Thermal Management, and Monitoring & Control technologies.

SmartMod incorporates:
- Modular and scalable Vertiv™ Liebert® UPS power protection
- Close-coupled in-row Liebert® CRV thermal management units with intelligent iCOM™ Edge controls
- Classic and cost-effective Vertiv racks and Vertiv rack PDUs
- Thermal containment to isolate hot aisle and cold aisle airflows for optimum thermal performance
- Automatic Transfer Switch (ATS) to reliably select normal or emergency power sources
- Overhead infrastructure, including piping, electrical distribution, and fiber ducts
- Clean agent fire suppression and aspiration smoke detection
- (as optional items)
- Vertiv™ Environet™ Alert real-time monitoring and visualization for critical infrastructure (as optional item)

All subsystems are factory installed into a secure, weatherproof and transportable enclosure – simplifying and drastically shortening the on-site time required to install and startup, and reducing the potential for risk, quality, or schedule delays.

SmartMod is not a one size fits all system. It is designed to be configurable to right-size to your rack footprint, IT load, desired redundancy, location, and other additional options so you can achieve the optimal solution based on a specific need.

When deploying multiple units or at numerous locations, having a standard look and feel, layout and equipment kit simplify maintenance and operations activities.

Vertiv backs it all up with the service and support network you have come to expect from us.

For more information or to chat to the experts, please email Jacqui.gradwell@vertiv.com ■

Explore the Vertiv™ SmartMod™
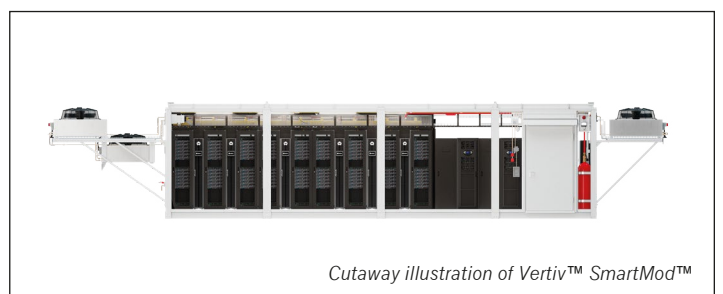
Cutaway illustration of Vertiv™ SmartMod™

40 million SIMs disconnected in Nigeria for failure to register

Nigerian telecoms operators have permanently disconnected about 40 million SIM cards whose owners failed to submit their National Identification Numbers (NIN) by February-end.

"The disconnected lines are mainly those that have been in 'receive only' mode since 2022. These are either numbers that only receive calls, or lines used for data devices, including smart devices, electricity meters, car trackers, Mifi and Wifi devices," said Gbenga Adebayo, president of the Association of Licensed Telecommunications Operators of Nigeria (ALTON).

Another wave of disconnections is expected to follow by the end of the March, particularly for subscribers who have submitted their NIN, but are not yet verified.

In December 2023, the Nigerian Communications Commission (NCC) ordered telecom operators to permanently disconnect SIM cards that have not been identified with a NIN. The measure is part of a subscriber identification campaign carried out since December 2020 to combat insecurity, extortion, and kidnappings in Nigeria. The campaign led to the partial blocking of 73 million SIM cards in April 2023.

In its financial results for the 2023 financial year, MTN Nigeria said it had disconnected 4.2 million lines, many of which were 'low value subscribers, minimizing the impact on revenue.'

"We remain engaged with the relevant authorities to expedite the verification process and minimize service interruptions to our base as well as the potential impact on our revenues," said MTN Nigeria in a statement.
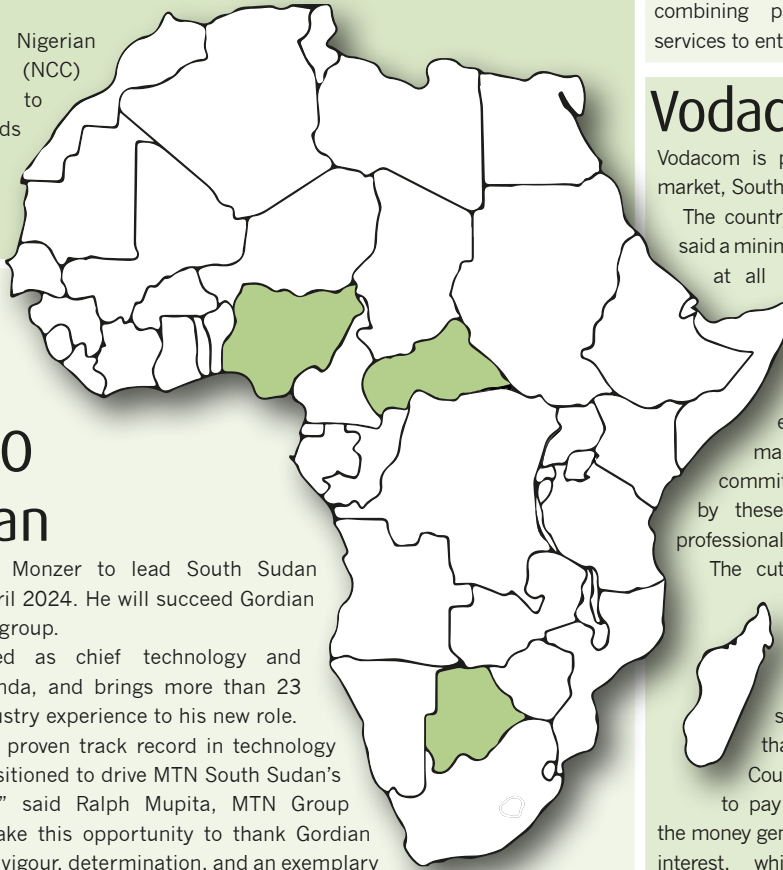
MTN Group appoints Ali Monzer as CEO of South Sudan

MTN Group has appointed Ali Monzer to lead South Sudan operations as CEO, effective 1 April 2024. He will succeed Gordian Kyomukama, who will retire from group.

Monzer most recently served as chief technology and information officer of MTN Uganda, and brings more than 23 years of telecommunications industry experience to his new role.

"His wealth of experience and proven track record in technology and operations make him well-positioned to drive MTN South Sudan's continued growth and success," said Ralph Mupita, MTN Group president and CEO. "I wish to take this opportunity to thank Gordian Kyomukama for always displaying vigour, determination, and an exemplary work ethic in his role."

Interswitch plans to acquire PSB license

Interswitch wants to acquire a Payments Bank (PSB) license as part of its diversification into the Nigerian telecommunications market.

To accelerate the process, Interswitch opted to merge with mobile money service provider M-Kudi. The transaction is subject to regulatory approval.

The PSB license would allow it to offer many services provided by commercial banks: payments and funds transfers; money deposits for individuals and small businesses; issuing debit cards and prepaid cards, etc.

The move came days after Interswitch revealed that it had acquired a mobile virtual network operator (MVNO) license from the Nigerian Communications Commission (NCC) in May 2023 for 500 million naira. The company is seeking to launch a low-capex virtual telecommunications model using licensing, combining payments and telecommunications services to enterprise and consumer customers.

Vodacom to cut jobs

Vodacom is planning to cut jobs in its biggest market, South Africa, to help it reduce costs.

The country's largest mobile network operator said a minimum of about 80 jobs will be impacted at all levels of its operations. Currently, the telco employs 5,400 people.

Vodacom said that it continues to proactively implement various cost reduction measures to ensure sustainable operations and maintain financial resilience. It is also committed to supporting those affected by these changes with utmost care and professionalism during the transitional period.

The cut follows a long legal battle with Nkosana Makate, who is credited with inventing a solution called Please Call Me (PCM), which allows mobile users without any airtime to send a free text message requesting that someone call them. The Supreme Court of Appeal (SCA) ordered Vodacom to pay Makate between 5% and 7.5% of the money generated from the PCM idea, including interest, which included revenue generated over 2001-2019.

BoFiNet teams up with DZS on service expansion

Botswana Fibre Networks (BoFiNet) has partnered with DZS to help expand its services.

BoFiNet has implemented key solutions from its Access and Subscriber Edge portfolios to provide digital connectivity. BoFiNet is also using DZS Velocity Fibre-To-The-Business (FTTB) systems and DZS Helix premises solutions.

BoFiNet provides multi-gigabit digital services to licenced communications service providers, governmental bodies, and other backbone institutions.

As part of the project, BoFiNet is delivering DZS solutions that use 10-Gigabit symmetrical passive optical networking (XGS-PON) technology to connect enterprises and institutions in Mahalapye, Kanye, Tlokweng, and Molepolole. This network enables BoFiNet to expand its existing communications infrastructure, enabling for the integration of next-generation data, voice, and video services.

"We needed proven, reliable, cost-effective fibre technology that would allow us to easily scale and rapidly deploy the next-generation communications services our customers and their end-users are demanding," said Keabetswe Segole, CEO, BoFiNet, of the momentous deal.

BCG brings Mamello Selamolela to Johannesburg team

Boston Consulting Group (BCG) has appointed Mamello Selamolela as partner to join its team in Johannesburg, South Africa.

Selamolela joins BCG from Vodacom Group, where she managed the Group's strategy and innovation in Africa and led several large-scale transformation initiatives across the continent.
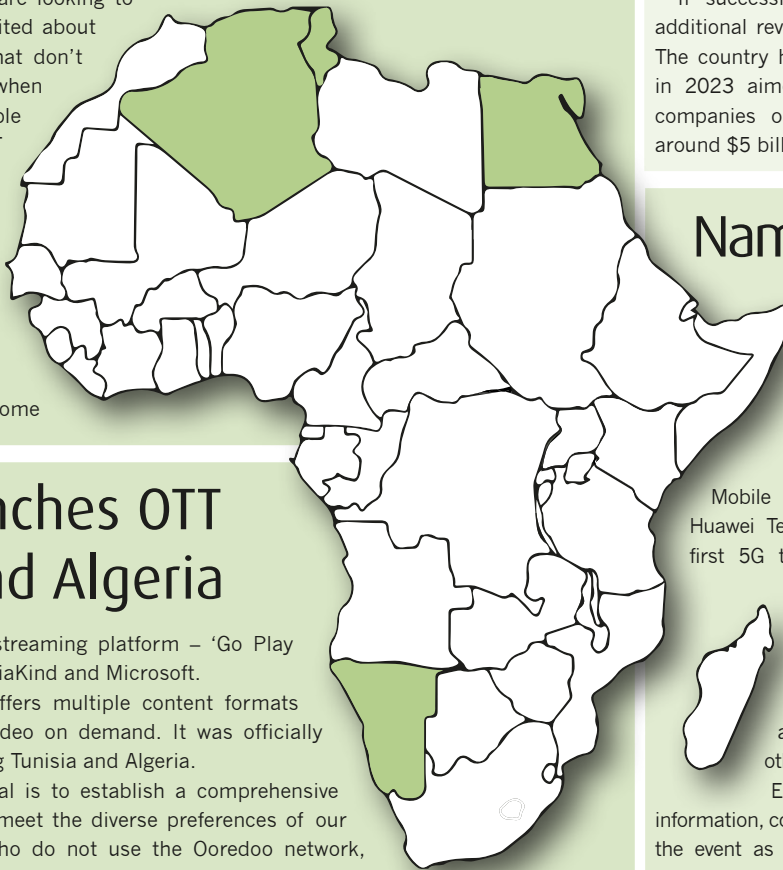
"This role provides me with the ability to combine my practical understanding of the industry, and the unique challenges faced on the continent, with my management consulting background when engaging with our clients. With my experience in different roles within the telco industry, I have full appreciation and empathy for our clients, the challenges they face and the new opportunities they are looking to seize," said Selamolela. "I'm excited about helping to address challenges that don't have easy answers and that when solved, will have a considerable impact on the growth of TMT players, the acceleration of digital infrastructure across the continent and the advancement of societies and economies."

Selamolela has previously worked at MTN and McKinsey & Company in London and Johannesburg.

"We are pleased to welcome Mamello as a partner to our leadership team and to complement our TMT consulting team," said Jan Gildemeister, managing director and senior partner and office leader at BCG, South Africa, on the topic.

"Our clients will benefit from her hands-on industry and consulting expertise as we work collaboratively to build a foundation for delivering tangible and lasting change. TMT companies don't just look to the future, they define it and we help them to think boldly and respond quickly so that they can turn possibilities into reality and advance digital transformation and societal impact, especially in Africa," continued Gildemeister.

QIA resumes talks for 45% stake in Vodafone Egypt

The Qatar Investment Authority (QIA), the Qatari sovereign fund, has resumed discussions with the Egyptian government for the purchase of the 45% stake held by the State in Vodafone Egypt. The resumption of negotiations comes after measures taken by the Egyptian Central Bank to stabilize the exchange rate of the Egyptian pound.

It was in October 2022 that the QIA initiated talks with the Egyptian government regarding the acquisition of approximately $2.5 billion of state stakes in various companies, including Vodafone Egypt. The stake is held through Telecom Egypt, while Vodacom Group holds a 55% majority stake.

If successful, this transaction should bring additional revenue to the Egyptian government. The country has committed to a vast program in 2023 aimed at selling state stakes in 32 companies operating in 18 sectors to raise around $5 billion.

Namibia sees country's first 5G technology trials proceed

Mobile Telecoms Company (MTC) and Huawei Technologies have held the country's first 5G technology trials in Windhoek, the country's capital.

These trials came after the government lifted a 5G moratorium and the Communications Regulatory Authority of Namibia allocated 5G spectrum to MTC and other telecom providers in Namibia.

Emma Theofelus, minister of information, communication, and technology, called the event as a watershed moment for Namibia, emphasising the necessity of embracing emerging technologies to propel national growth: "The vision can only be achieved by keeping up with relevant technology such as 5G. Productivity gains are enabled through 5G's enhanced capabilities of fast speed, lower latency and greater traffic capacity, which will continue to unlock value across industries through new use cases, applications and services."

"This is just the beginning, as we plan to continue expanding our network across the country, ensuring wider coverage and capacity to meet the evolving needs of Namibians and contribute to the national development agenda, and economic and social progress," said Telecom Namibia CEO, Stanley Shanapinda.

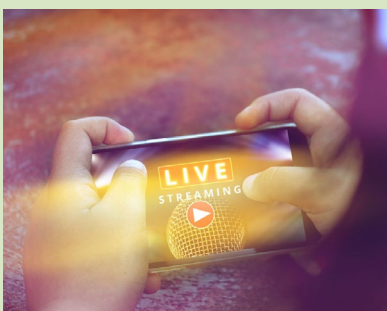# Ooredoo launches OTT for Tunisia and Algeria

Ooredoo has launched an OTT streaming platform – 'Go Play Market' - in partnership with MediaKind and Microsoft.

The entertainment platform offers multiple content formats such as live TV channels and video on demand. It was officially launched in six markets, including Tunisia and Algeria.

"With Go Play Market, our goal is to establish a comprehensive entertainment hub, designed to meet the diverse preferences of our customers, as well as people who do not use the Ooredoo network, across multiple markets," said Aziz Aluthman Fakhroo, managing director of Ooredoo Group.

The launch is part of Ooredoo's broader strategy to expand its range of services, which includes mobile telephony, data, SMS, as well as value-added services. The company will thus be able to diversify its sources of income and accelerate the growth of its revenues. It generated revenue of QAR 23.16 billion ($6.36 billion) in the 2023 financial year, up slightly from QAR 22.7 billion in 2022, in another note of positive news for the company.

Ooredoo is positioning itself to better benefit from the strong demand and expected growth of the streaming market over the coming years. MarketsandMarkets reports that the global OTT streaming market is expected to generate revenues of approximately $434.5 billion by the end of 2030, up from $202.5 billion in 2022.

Zain Sudan reports 22% revenue increase for 2023

Zain Sudan generated US$558 million of revenue in the 2023 financial year, a 14% increase over the company's 2022 revenue.

In 2023, Zain Sudan recorded earnings before interest, taxes, depreciation and amortisation (EBITDA) of $269 million, up 7% with a margin of 48%. Net income for the financial year reached $216 million. This performance is mainly attributed to data services, whose revenues increased by 22% year-over-year. Revenues from data services also represented 35% of Zain Sudan's total turnover.

Ongoing conflict in Sudan has significantly affected the activities of telecom operators who have suffered service interruptions on several occasions.

In 2023, Zain Sudan recorded a loss in value of SDG 25.5 billion on its goods and equipment, as well as a provision for depreciation of its inventories of 2.3 billion SDG. Access to goods and equipment worth SDG 4.57 billion is currently restricted due to insecurity. However, the company has assured that these losses are fully covered by insurance, and it has already filed a request for provisional compensation of $47.9 million from the insurer.

Helios says 2024 will be tipping point on free cash flow

Helios Towers anticipates the financial year (FY) 2024 to be the tipping point for free cash flow, and to continue growing beyond that.

The company believes that tenancy ratio expansion will accelerate beyond its previous medium-term estimate.

"As such, we have adjusted our strategic target of '22,000 towers by 2026', which included meaningful inorganic site growth, to '2.2x tenancy ratio by 2026', prioritising organic growth and returns expansion," said Tom Greenwood, CEO, Helios Towers. "Consequently, we expect FY 2024 to be our inflection year for free cash flow, and continue to grow thereafter. We have built a compelling and unique platform in some of the world's fastest growing mobile markets and through our focus on customer service excellence, are well placed to capture the structural growth and deliver sustainable value for our stakeholders."

FY 2023 revenue increased by 29% year-on-year to $721.0 million, driven by organic tenancy growth, complemented by acquisitions in Malawi and Oman. Operating profit increased by 82% year-on-year to $146.1 million, driven by adjusted EBITDA growth, while loss before tax improved to $112.2 million, primarily driven by a $65.8 million year-on-year increase in operating profit.

"Higher finance costs reflect the non-cash impact of foreign exchange movements on the group's intercompany borrowings and the full year impact of increased debt, largely related to the Oman acquisition, which closed in December 2022," said Greenwood.

During the year, Helios' portfolio free cash flow increased by 33% year-on-year to $268.2 million. This was driven by adjusted EBITDA growth and proportionately lower increases in payments of lease liabilities and taxes paid.

"FY 2023 portfolio free cash flow exceeded updated guidance of $260-265 million, due to the timing of non-discretionary capex," said Greenwood. "The Group's capital allocation policy is focused on growing portfolio free cash flow while consistently delivering return on invested capital above its cost of capital."

Equinix names Adaire Fox-Martin CEO

Equinix, owner of MainOne in Africa, has announced that Adaire Fox-Martin will become its new president and CEO, starting in the second quarter of 2024.

Charles Meyers, current president and CEO of Equinix, is taking on the post of executive chair, vacated by Peter Van Camp. Van Camp will relinquish his formal responsibilities as a board member to become a special advisor to the board.

"Digital transformation is reshaping the basis of competition for industries across the globe, and the rapid adoption of AI is accelerating that dynamic," said Meyers. "These pivotal shifts have created an extraordinary demand environment for digital infrastructure, and our distinctive advantages create an exceptional long-term opportunity for Equinix. I am confident that Adaire's capabilities and experience will be deeply additive to our team and our culture, helping us meet the evolving needs of our customers."

Equinix plans to invest an additional $390 million in Africa data centres in South Africa, as well as expand its West African footprint.

Fox-Martin, who has 25 years of expertise in the technology industry, is now anticipated to spearhead Equinix's expansion, including growth in Africa.

Prior to joining Google, Fox-Martin held senior positions at some of the world's leading technology and software businesses, including SAP and Oracle.

"In today's dynamic digital landscape, Equinix has uniquely amassed global reach, highly differentiated ecosystems, strong partner relationships, and an innovative range of product and service offerings - collectively forming a robust and future-proofed platform to address diverse customer challenges," said Fox-Martin.

West Africa key in MoMo sector

West Africa has emerged as a key mobile money player with the number of registered mobile money accounts doubling between 2013 and 2023, driven mostly by growth in Nigeria, Ghana, and Senegal, as per the GSMA's 2024 State of the Industry Report on Mobile Money.

"For over two decades mobile money services have grown exponentially, driving financial inclusion for billions of people, opening up incredible opportunities for entrepreneurs and small businesses across the world," said GSMA director general Mats Granryd.

Zambia receives 156 Starlink kits

Zambia's National Assembly has received 156 Starlink kits from the Ministry of Science and Technology, in partnership with the Smart Zambia Institute. The kits are intended for distribution in all parliamentary constituencies around the country.

This comes as neighbouring Zimbabwe is confiscating Starlink equipment and Zimbabwe's telecom regulator, POTRAZ, has warned that persons and businesses discovered supplying and advertising Starlink Internet service equipment may face arrest. Authorities have since initiated nation-wide efforts to capture those utilising Starlink.

Zambia's first deputy speaker of the National Assembly Malungo Chisangano said that the Starlink kits were a generous gesture that could not have come at a better time, given the National Assembly's desire to boost the use of information communication technology in its activities.

The Zambia National Assembly recently introduced the My e-Parliament app, a digital solution designed to improve contact between MPs and citizens.

"However, for this application to work, it requires strong Internet connectivity. Therefore, the Starlink kits being donated will facilitate the full implementation of the e-Parliament and will go a long way in bringing parliament closer to the people," said Chisangano.

Situmbeko Musokotwane, minister of Finance and National Planning, stated that the kits would boost digital connection with constituents and transform legislative operations. Musokotwane said that members of parliament will use the kits to effectively communicate with constituents on important issues, such as the Constituency Development Fund. Such connectivity will eliminate the need for physical travel "to address a matter that can be resolved in good time using the Starlink device."

Talking satellite

Daniel Batty, space & policy analyst, Access Partnership

Earth observation's unique role in Africa

It is trite to state that we live in the age of data. Advancements in computing have augmented every sector of society and the economy, with these effects set to increase drastically with the introduction and adoption of artificial intelligence in different sectors. However, this is dependent on access to high-quality data, which is the lifeblood of computing and decision-making. An increase in the quantity and quality of data is directly proportional to an increase in service offerings and insights.

One of the most influential and important data streams impacting development initiatives in Africa is geospatial data generated by Earth observation satellites. These satellites may be fitted with a number of different camera lenses and sensors, enabling the satellite to capture a wide range of different data. This may include standard optical images, thermal imagery to monitor heat levels and outputs, and synthetic aperture radar to monitor changes in soil, urbanisation, and deforestation. The data captured by these lenses and sensors form the basis for important government and private sector decision-making on town planning, agriculture investment, mining and mineral extraction, ocean conservation, and fisheries, etc.

Earth observation in Africa

Africa undergoing a rapid industrial and digital transformation. While it has many unique development challenges, the continent is compelled to simultaneously address global challenges such as climate change.

The rate of development in the continent is increasing, propelled by access to new technologies and investment opportunities that catalyse further development. Crucially, heightened access to data enables sustainable, well-informed informed development pathways for Africa's advancement. Earth observation has firmly claimed its place as one such catalysing technology. The African Space Policy and Strategy acknowledges Earth observation as a strategic thematic focus and highlights the need to study the private sector and academia's involvement in the Earth observation sector.

At the national level, the South African National Space Agency (SANSA) has invested heavily in Earth observation, with a division dedicated to the practice. SANSA provides data services that promote socioeconomic benefit, including resource management and disaster response. In 2022, SANSA launched the 'Digital Earth South Africa Earth observation data cubes platform,' which houses over 30 years of archived geospatial data covering 1.2 million square kilometres of South Africa and its neighbours. The platform facilitates in-depth analysis of this data and allows actionable insights. One such example of actionable insight was the use of Earth observation data to map infrastructure damage following severe flooding in the Eastern Cape province in 2023. This enabled the disaster recovery operations to be coordinated and prioritised addressing the most urgent needs first.

Meanwhile, the Rwandan Space Agency is working to establish a Geospatial Data Hub in partnership with the French Development Agency. The Hub will serve as a centralised infrastructure project where data can be processed to improve evidence-based development, planning, monitoring, and evaluation.

Challenges for increased adoption

Earth observation is a highly specialised sector in all aspects, from satellite design and manufacturing to operations and data collection to data processing and analysis. To achieve the benefits of increased geospatial data, governments must commit resources towards upskilling citizens and developing the skills required to advance and effectively leverage this data. Investment into human capital and local startups is needed to develop local African Earth observation products and services which can be used by governments for enhanced policy decision-making but can also generate revenue when sold to the private sector to enhance mineral extraction, commercial agriculture, and resource management.

Alongside the need for investing in and increasing human capital in Earth observation, there is also need for increasing digital infrastructure. Access to stable electricity, internet, and telecommunications infrastructure is vital for the development and use of domestic Earth observation products and services. Geospatial datasets can be very large, requiring advanced digital infrastructure to transfer and process the information into usable analysis.

Lastly, raising awareness of the impact and importance of Earth observation and geospatial data is necessary. Policy initiatives should be developed and earmark how Earth observation can contribute to the local needs of a country and outline targeted investment and development initiatives. A lack of dedicated national strategies or policy initiatives will leave Earth observation development directionless and slow progress towards development and adoption.

Conclusion

As a region undergoing industrialisation whilst still having to be cognisant of modern global policy concerns, Africa faces unique development challenges. As such, the region is forced to be specific and targeted in its development initiatives. Maximising the possible gain while ensuring growth remains sustainable and reducing wasted cost and effort is of great importance. Geospatial data and the broader Earth observation sector directly contribute to ensuring administrations make informed policy decisions. From mapping oceans and fish stock, water and soil quality, deforestation, mineral wealth, city and town development, and temperature increases, geospatial data ensures that development is informed and sustainable.

Digitally transforming West Africa

An interview with Majda Lahlou Kassi, vice president and head of customer unit West Africa and Morocco, Ericsson

Question: You've only recently been appointed to your current role at Ericsson: what can you tell us about your experiences so far?

I joined Ericsson 1998 and have worked with them for the last 25 years. I came to the company when we really started to see mobile technology coming into Africa.

At my beginning with Ericsson, I had responsibilities over North Africa, from Morocco (my home at the time) to Egypt, Sudan, etc. For the last five years, I have been working in sub-Saharan Africa, mostly on the western part of the continent, but I do also have clients on the eastern part in Madagascar, Tanzania, Mauritius, and so on. I'm in charge of three major groups on the continent; Maroc Telecom, Orange, and Axiom Group.

When you start a new role, you go out and meet the teams that meet the customers and get their feedback. My first 90 days is all about assessing how we've been performing, both from internal efficiencies and ways of working, but also how well we are serving our customers - what are their challenges, what are their priorities, how do we help them serve in this very complex environment?

Africa as a continent has a lot of challenges of its own, but there are also all the global challenges that hit Africa very hard, like inflation.

Question: What are your views on the current state of play of digital transformation in West Africa, and how will Ericsson help drive efforts forward?

When we talk about digital transformation, we must look at it in a holistic view.

Africa has realised post-pandemic that there is so much that can be done in terms of relying on new digital platforms to transform not only businesses and the way we address the consumer, but also to transform the resilience of society.

Before COVID-19, we were talking about how to make sure that we have ready availability as a priority, how we could help small enterprises gain access to financing; but now digital infrastructure has become essential to take society to the next level.

During the pandemic, 4G uptake across Africa was phenomenal - unlike other continents, fixed broadband penetration is very low. Since then, we've seen double-digit increases in 4G in most of the countries in West Africa.

Connectivity is the basis for digital transformation, but the operators are asking what can they do, how can they help the enterprises? That help comes in many forms. First, it's about building digital skills - we've been bringing in fresh graduates from across the continent and putting them through a structured programme.

The second thing is helping the operators to unleash the potential that they have from their networks. We often have this discussion with our customers and partners, through exercises that deliver insights into their networks. One example is fixed wireless access (FWA), one of the most important use cases for 4G, and 5G too. With such low fixed broadband penetration, particularly in West Africa, FWA can help the operators monetise their investments, making use of unused capacity and increasing efficiency. Time to market is very fast, and the cost is cheaper than fibre.

We see how smartphones have completely transformed society in the way the interaction between small and medium enterprises, and consumers. It's all about mobile money, financial inclusion. This is having a huge impact on digital transformation, in West Africa, the continent, and the world.

Question: Looking specifically at West Africa and Morocco, how do customer demands differ from the rest of the continent?

Maturity levels vary widely across the continent. South Africa, Morocco, Egypt - these countries are a bit ahead of the game in terms of digital infrastructure, while other parts of West Africa lag.

But what is fundamentally similar is end user behaviour. The consumers and especially the younger generation (the digital natives) demand the same end user experiences as the rest of the continent. They expect to use the same applications, play the same games, interact in the same way with their friends. West Africa, like the rest of the continent, has one of the highest rates of youth generation. From that perspective, when we look at consumer behaviour, there is no difference.

During the pandemic and after it, we've seen fast-growing data consumption in all networks. Operators are trying to catch up on that growth and make sure that their infrastructure can handle this, as well as the increase in use of streaming videos, gaming, etc. All this usage is becoming more widely spread, so I think the growth is there and it will continue until we reach the next level - the introduction of 5G. Most of our customers in West Africa have started commercial trials and even small-scale deployments, and they are now asking "what can we do with it?"

Question: What should global players consider when embarking on business in Africa?

We're a global company, but a local player – that's very important for anyone that comes to the continent. Africa comprises many countries with multiple realities. When you come in, you have to be open to understand the realities of each country you operate in and see how you can adapt to this reality to be successful.

It's important for global companies to bring in knowledge and experience to new markets, but it's also very important to be curious and gain insights from these markets. We try to do this all the time, in every new country and with every new customer. We do a lot of research and analysis, and leverage on our knowledge on how to manage and operate the networks to bring insights to the operators on how to evolve the network.

This global reality, the knowledge and experience sharing that comes from all the experience we have across the globe, is matched to the reality of the continent. One very good example is that we've looked at the reality of the continent in terms of need for efficiency, power,

cost, etc. We took this input, and we went to our R&D centres and we managed to develop a product rating that is better fit for African realities. This product has now become a global product.

Question: With Morocco developing mass solar farms with the ability to provide power to Europe, is the country becoming one of the leaders on sustainable power?

Absolutely. Morocco is one of the leading countries in renewable energy and that has been on the country agenda for a very long time.

If I take it from the telecom side, one of the things that gives me pride is that we've started with this strategy of leveraging on renewable energy in powering our sites very early in the development of our technology. I still remember back in 2000, we were among the very first teams to launch what we called 'Sun Sites,' which is solar powered sites. Today, the use of solar energy in rural sites is becoming mainstream. We believe that if we want to connect all the rural areas, we need to look at renewables.

Question: What do you feel are the key challenges in the region when it comes to delivering meaningful connectivity and how does Ericsson address these?

It all depends on what we mean by meaningful connectivity. The availability of digital infrastructure is still in its build up phase and we continue to advocate for the importance of accelerating this development and the positive impact that it has on the society at large.

One of the challenges we see today is device affordability. Now we've reached a level where we are somehow at sub-$100 4G devices - which are still quite expensive for a large part of the population - we do believe that by just having a smartphone in hand, we can unleash the full potential.

We're also seeing challenges with spectrum. If we want to see these fast networks, we need to have spectrum that can be used for any technology, be it 2G, 3G, but most importantly for the newer generations, 5G, etc. The question of spectrum neutrality becomes

essential for the development of the networks moving forward.

A topic that is always discussed is use cases. How can we unleash the potential of the network by creating an ecosystem and a way to collaborate around the capabilities of the network? When we look at the industry, it's all about 5G, but for us on the continent, we continue to work with our customers to see how they can unleash the potential of 4G. Orchestrating the ecosystem can sometimes be challenging.

There are so many things that are happening across the continent, so many startups and good ideas coming from the younger generation, yet they need some support. Financing could be one of the challenges etc., so that they can leverage on these new ideas on how to transform the continent.

Question: What are your expectations for the region in 2024 and beyond?

I think 2024 is going to be another challenging year, not only for the continent, but globally. We are looking into how we can support in the best way by becoming more efficient ourselves in the way we address these challenges.

The continent itself is going through a major transformation on many fronts, economical, geopolitics, etc. That context makes it challenging for us to predict what could happen. We can see some challenges in delivering in some countries for safety reasons; Ericsson puts the safety of our people at a priority.

There's also the question of when the 5G licences are coming into our countries. There is still a lot of discussion, some have taken that step already and we're there to support them, some are still assessing, and we are trying to help them get the right insights.

Overall, we like to be optimistic, and we believe still in the potential of the continent. We continue to see the right foundation for growth, and that's why we're putting so much effort on staying very close to our customers. I've been there with them, to help them unleash the full potential. ■

Building sustainable cities

Smart cities are changing the way we live. From 'greenscaping' major urban centres with sustainable initiatives, to enhancing citizen safety, smart cities have a lot to offer...

Smart cities are big business. As per Statista, African smart city revenues are expected to expand at 16.28% annually over 2024-2028 to reach US$19.71 billion. During the same period, the number of smart city connections is forecast to more than double, from 231.40 million in 2024 to 543.10 million in 2028.

Africa's smart cities integrate a wide array of technologies and data-driven solutions to enhance the quality of life for its residents, improve efficiency, sustainability, and economic development. Relying on robust ICT infrastructure, data analytics of traffic patterns, energy consumption, air quality and waste management enable city planners to prioritise sustainability by targeting green buildings and eco-friendly practices.

But what's the difference between innovation for innovation's sake, and the development of genuinely smart, next generation cities that are beneficial for both people and planet?

"A city is truly smart when it can work for its people by improving safety, quality of life, efficiency, sustainability, and more," shares Rony Cohen, co-founder and head of business development, floLIVE. "Take for example, the ability to time traffic lights with ambulances or fire trucks or rerouting traffic in real-time when an accident occurs. Cities become smart when waste disposal and street lighting can be automated; when air quality can be monitored; and when public transportation routes and timing are communicated at the moment."

"One smart city may look very different to another - but smart technologies will help alleviate some of the pressures they are facing today and in the future," says Phil Beecher, president, Wi-SUN Alliance. "According to the UN, just over half of the population lives in urban areas, but this is expected to increase to around 68% by 2050. In real terms, this means adding another 2.5 billion people to urban areas in the next 30 years."

This shift from rural to urban, alongside huge population growth, will put massive pressure on authorities, municipalities, and city planners to tackle major urban issues like rising traffic levels, transport infrastructure, and environmental issues like air quality, as well as growing social issues associated with increased urbanisation such as crime.

"We will see major developments in smart grid technology as city populations increase, to help manage the load on the electricity supply, reduce peak demand and enable optimum use of newer forms of energy, like renewables," predicts Beecher. "Street lighting is another example, with smart lighting initiatives becoming an enabler for more ambitious smart city development."

Enabling technologies

Smart cities inherently rely upon secure, robust, reliable communications networks. Several technologies will play a crucial role in facilitating communication and data exchange.

"The right wireless communications network is critical to smart city development, one that is based on open standards, enabling true interoperability between devices," asserts Beecher.

Cellular, and in particular 5G, is expected to be crucial to tomorrow's smart city applications. Offering high-speed, low-latency connectivity, 5G enables faster data transmission and real-time communication, which is vital for enabling smart transportation and remote healthcare. Additionally, smart cities combine myriad use cases, all competing for speed and bandwidth – where again, 5G can deliver.

"Many of these use cases require real-time data communication, as well, so you're creating a scenario where you need powerful, reliable connectivity," says Cohen. "5G cellular connectivity is going to be paramount in supporting smart cities because of its high speed, massive bandwidth, throughput, and low latency. Layered on top of this is the ability to create private mobile networking with 5G. With private networking, smart cities leverage a dedicated network, which offers more reliability, dedicated bandwidth to the specific application, and greater control."

Overhauling infrastructure is essential to bringing smart cities to life: "key to this is 5G, offering ultra-fast, low-latency connectivity that can support a wide range of smart city applications, such as autonomous vehicles, real-time data analytics and remote healthcare services, and crucially can be retrofitted in cities much more easily than fibre infrastructure. Outside of the cities, satellite broadband has a vital role to play providing access to support smart city initiatives in remote or underserved areas," says Dominic Smith, marketing director, Cerillion.

Internet of Things (IoT) sensors and devices are another enabling smart city technology, supporting a truly staggering number of applications designed to advance sustainability and quality of life. Street lighting, air quality, traffic control, building maintenance, waste management, utilities, etc., are just a drop in the ocean of potential use cases.

Moreover, a single set of IoT sensors can be utilised for more than one application: "streetlighting is a great example of how a smart lighting network canopy can be used for other smart applications, such as IoT sensors for environmental monitoring, such as air quality," explains Beecher. "Smart devices in one area could as easily be used for other smart applications that are essential to Africa's smart city development. One of the most promising areas is in smart agriculture, such as irrigation control linked with solar generation. Water management is another interesting use case as a way to more sustainable agriculture, and also for detecting leakages particularly in areas of Africa where water scarcity is severe. Smart technology can also play a vital role in creating and managing smart spaces and encouraging citizens to make better use of green spaces."

Fibre, mesh, WiFi, narrowband IoT (NB-IoT), LTE and hybrid solutions, too, will all have their role to play improving digital access and harnessing smart city solutions, however, "the network infrastructure in place must be able to scale to support millions of devices (often from multiple vendors), and future-proof smart city development," says Beecher. "Scalability is key when designing wireless communications for smart cities. The networking technology must be able scale and be highly resilient, capable of providing coverage even in very demanding conditions and where cellular or other communications technologies struggle to cope."

Smith adds that it's not only the physical infrastructure which needs substantial investment, "but also the back-office BSS and OSS which play a crucial role in automating and future-proofing the smart cities of tomorrow. By leveraging the latest AI-powered BSS/OSS solutions, African cities can improve efficiency, sustainability and quality of life for residents, while addressing urban challenges and driving economic growth."

Securing the city

Both consumers and government entities face significant threats from cyber-attacks with the advent of smart cities, however, the nature of the threats and their potential impacts vary.

For governments and local authorities, those in charge of managing smart city infrastructure, public services, and critical systems are prime targets for attack. Bad actors can disrupt essential services, steal sensitive data, or compromise infrastructure for political, financial, or ideological motives. Such attacks targeting government entities can result in significant disruptions, financial losses, and erosion of public trust. (IAN – add Malawi box near here please)

Cohen believes that governments are at a heightened security threat because so much of the information they store is sensitive and could be seen as valuable to bad actors: "if facilities are government-run, such as public transportation, traffic and street cameras, or other safety solutions, then these can be targeted in particular. Devices that are accessible in the open, such as cameras, pose a threat simply by the nature of being more easily accessible. This is not to diminish that cyberattacks threaten consumer devices, but more damage can be done and more valuable information accessed by the government. But anything that is connected to the internet is vulnerable to cyberattacks, so creating solutions that have security protocols built in from the very beginning is the best safeguard for both consumers and the government."

That's not to say that consumers don't also face significant threats. Malicious actors can exploit vulnerabilities in IoT devices, mobile apps, or online platforms to steal personal information, commit identity theft, or launch phishing attacks. Compromised IoT devices can be used as entry points for infiltrating home networks, accessing sensitive data, or launching attacks on other connected devices, leading to financial losses, privacy breaches, and reputational damage.

According to Beecher, the government is responsible for setting the pace on security and privacy legislation and ensuring compliance by vendors, suppliers, developers and services providers – designed ultimately to protect consumers: "we already have much stricter

Malawi suffers passport hack

Underscoring the import of securing smart city networks, back in February, Malawi was struck by a severe cyber-attack that threatened national security.

Bad actors gained control over the country's passport printing infrastructure and demanded an indeterminate ransom. President Lazarus Chakwera temporarily halted the issuance of passports in response and delivered a warning to the attackers and any possible internal collaborators, stating that the government would not comply with the ransom demands or negotiate with criminals.

"I want law enforcement agencies to immediately establish an investigation into the attack of the e-passport issuance system at the department of immigration and citizenship services," said Chakwera. "Those found guilty of the offense should face the long arm of the law."
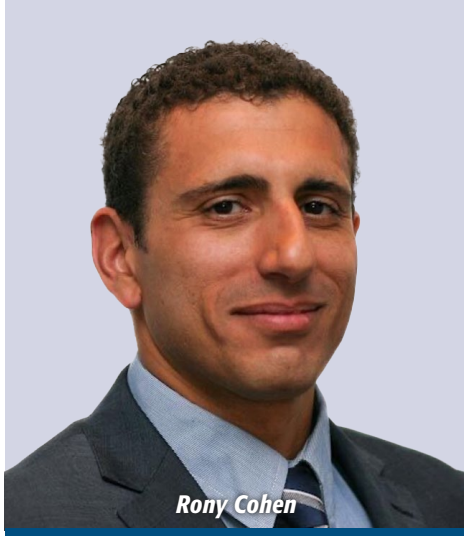
As of mid-March, the government of Malawi has restored the passport system. President Chakwera shared that the bad actors were unidentified 'mercenaries,' and that the act amounted to a 'major violation in Malawi's national security.'

A long-term solution with additional security safeguards is reportedly now under development.

Dominic Smith

Rony Cohen

Phil Beecher

privacy laws in other parts of the world, which have increased pressure on organisations to protect sensitive data, including the General Data Protection Regulation (GDPR) in Europe and California Consumer Protection Act in the US."

It's true that, while connectivity suppliers play a crucial role in supporting Africa's smart cities by providing robust infrastructure and innovative solutions, they also hold a significant level of responsibility in securing the network.

"Cybersecurity is a major consideration in any digital use case, but particularly in smart cities," says Cohen. "If public transportation becomes automated, a cyberattack could grind trains and buses to a complete stop and could even threaten public safety."

"Smart city projects like streetlighting and other applications can use hundreds and possibly thousands of devices and sensors, which have the potential to generate huge amounts of data. Even if information is secure, handling it responsibly represents a risk," adds Beecher.

While cybersecurity must go hand in hand with smart city development, "security remains a challenge for many, with around half of respondents citing security enhancement as their number one choice in recent Wi-SUN Alliance research," says Beecher.

Cybersecurity awareness and training can go a long way in helping mitigate risk. Connectivity suppliers can offer cybersecurity awareness programs and training sessions to educate smart city stakeholders, including government agencies, businesses, and citizens, about cyber-threats, best practices, and preventive measures. Increasing cybersecurity awareness helps build a culture of security and resilience within smart city ecosystems. Moreover, collaboration with cybersecurity experts, industry associations, and regulatory bodies allows connectivity suppliers to stay updated on emerging cyber threats, vulnerabilities, and best practices. By fostering partnerships and sharing threat intelligence, suppliers can enhance their cybersecurity capabilities and proactively address evolving security challenges in smart cities.

Meanwhile, at the network level, end-to-end encryption, network segmentation and access control, intrusion detection and prevention systems (IDPS), regular security audits and vulnerability assessments, and incident response planning, can have a huge impact on securing smart city networks.

"Communications service providers (CSPs) must prioritise security at the network level and also in selecting the devices they use to deliver these services," says Cohen. "They can also offer integrated network security for when customers have their own security systems in place to make it frictionless."

"Taking an authentic layered approach to security is a must for any smart city development, extending from the customer grid-edge to the network, to the substation, and ultimately to the data centre," adds Beecher.

Smart Africa

The creation of smart cities in Africa is essentially a done deal.

"Growing urbanisation, with increasingly limited resources, such as water supply and the demands on clean electricity, will necessitate that utilities adopt smart technologies," says Beecher. "Municipalities have an opportunity to not only improve the efficiency of city infrastructure, but also to improve the quality of life for city residents, to the benefit of all."

"Smart cities are the future, and Africa can see many advantages from embracing smart city functionality into its urban framework," agrees Cohen. "Cameras are a great first point of entry into smart cities use cases as data costs and hardware, together, have become reasonable to support monitoring – even in real-time. These camera-based use cases can later be layered with artificial intelligence to monitor outside of human oversight to detect 'anomalies' such as crime, dangerous driving, and more."

While challenges exist, there is a growing momentum towards embracing smart technologies, and investments in digital infrastructure will be crucial.

"Already, innovation hubs are emerging across the continent, fostering collaboration between governments, private sector, academia and startups, to develop smart city solutions that address challenges in transportation, healthcare, energy and governance," says Smith.

Rampant urbanisation and population growth is one of the key drivers in making African cities smarter.

"Africa is the fastest urbanising region in the world; by the end of the decade, Cairo, Johannesburg, Kinshasa, Lagos and Luanda will all be megacities of ten million residents or more," shares Smith. "As we're seeing with our work at ACUD near Cairo, where a new future-proof administrative capital is being built in the desert, there is a clear trajectory towards leveraging technology to improve urban governance, infrastructure, and quality of life across the continent. With concerted efforts and strategic investments, the vision of smart, sustainable cities in Africa can be realised."

Governments are increasingly recognising the importance of smart city initiatives in promoting economic growth, improving quality of life, and enhancing urban competitiveness, and today, many have launched smart city strategies, policies, and investment programs to accelerate the adoption of digital technologies and drive urban development. Public-private partnerships are playing a key role in driving developments forward, while international organisations, development agencies, and bilateral partners are actively supporting projects with funding, capacity building, knowledge exchange, and technical assistance.
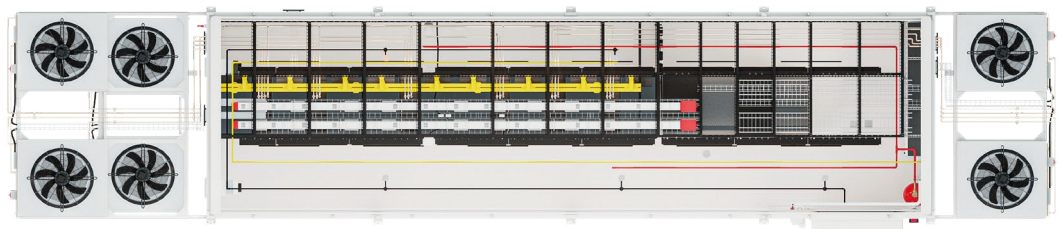
While achieving universal 'smartness' in every major hub will be no mean feat, there is a growing momentum towards integrating smart technologies and principles into urban development strategies. Looking ahead, we can expect to see a proliferation of smart city features and initiatives in many cities, ranging from smart transportation and energy systems to digital governance and citizen engagement platforms. These developments hold the promise of fostering inclusive growth, enhancing sustainability, and improving the overall quality of life for urban residents across the continent. ■

Vertiv Launches Free Online Tool to Streamline Data Centre Planning and Design

Vertiv™ Modular Designer Lite is a web-based application for configuring Vertiv™ SmartMod™ and Vertiv™ SmartMod™ Max prefabricated modular data centres

Vertiv, a global provider of critical digital infrastructure and continuity solutions, today unveiled a new tool designed to transform and simplify the configuration of prefabricated modular (PFM) data centres. Available now in Europe, Middle East and Africa (EMEA), the Vertiv™ Modular Designer Lite is a user-friendly, web-based application aimed at streamlining the process of designing Vertiv™ SmartMod™ and Vertiv™ SmartMod™ Max solutions to meet specific user needs.

The Vertiv Modular Designer Lite offers an array of features to enhance the customer experience. It addresses the challenges of early planning and provides a proposed solution based on customer inputs that can be helpful to a range of technical and non-technical stakeholders. Users can quickly design all-in-one data centres up to 200kW without any technical background. The tool requires no logins or software downloads, allowing users to select from a range of optional configurations to design their modular data centres in just a few minutes.

"The Vertiv Modular Designer Lite empowers users to effortlessly design their own data centres, tailored precisely to their needs," said Wojtek Piorko, Managing Director Africa at Vertiv. "With its intuitive interface and comprehensive features, this tool represents a significant step forward for early planning of modular data centre design."

Data centres configured within the app are tailored to meet the specific needs and geographical location of each user. By incorporating inputs such as site location, weather data for precise cooling equipment sizing, IT load requirements, rack specifications, battery backup considerations, and electrical topology preferences, the app allows optimal customisation and redundancy planning.

With support for 2D and 3D visualisations, users can save configurations for future reference and quick modification, access essential technical documentation and communicate directly with Vertiv experts throughout the process. Vertiv experts can help to enhance the initial design with an internal, more sophisticated version of the Vertiv™ Modular Designer that unlocks additional features to optimize the solution based on site conditions, expected performance, or desired security levels.

"I have personally utilised this tool online during customer discussions, effectively exploring and presenting diverse design alternatives," said Siniša Stojanoski, DCCS BU, X86 specialist, SEE from Dell Technologies. "Its intuitive interface and robust features provide a streamlined solution for designing modular data centres, enabling customers to visualise their configurations effectively and make informed decisions, reducing time and costs."

For more information and to access the Vertiv™ Modular Designer Lite, visit Vertiv.com. ■

Wojtek Piorko, Managing Director Africa

Does Africa need 5G?

5G has long been touted as a key tool to levelling up connectivity on the continent, but is it all it's cracked up to be?

The digital divide remains a huge issue across Africa, with 74% of the continent's population remaining unconnected to the internet, according to the GSMA.

"The digital divide in Africa is staggering. The substantial capital expenditure required for 5G deployment means that the return on investment (ROI) is targeted primarily at major towns and metropolitan areas," says Paul Colmer, EXCO member, Wireless Access Provider's Association (WAPA). "Paradoxically, this exacerbates the digital divide, especially in outlying regions where the divide is most pronounced, widening the gap even further."

"While 5G's primary purpose is certainly not to expand coverage to areas that don't already have it, it doesn't have to be one or the other," reports Abdelkader Najja, managing director Middle East and Africa, BICS. "In some regions where connectivity is more established, 5G promises to open up huge commercial opportunities. Countries that depend on tourism, like Egypt for example, will need 5G to offer a seamless roaming experience to inbound travellers. Alternatively, regions with a strong enterprise or industry focus will benefit from 5G use cases across industries including logistics, agriculture, or security."

Select markets throughout Africa, including South Africa, Kenya, and Nigeria, are rolling out 5G networks because the customer bases can afford to purchase these services and finance the costs of building the necessary infrastructure.

"Most of the continent, however, is very price sensitive. In these areas, the goal remains bringing 3G and 4G networks online and giving citizens access to basic online services," says Vaibhav Magow, vice president, international division, Hughes. "It's important that reliable connectivity be available to anyone who wants it. Satellite plays a critical role in bridging this gap by backhauling cellular traffic to extend network reach to areas where cable and fibre cannot."

Money money money

The greatest potential obstacle to consumer 5G adoption and usage in Africa is device cost and availability. According to the GSMA, some 60% of the sub-Saharan African population lives in an area with mobile coverage, but does not use mobile internet, with device affordability the biggest concern.

"The affordability of mobile devices in some parts of Africa is an obstacle to getting paying customers on 4G networks. Unless the price of handsets drops, we expect this to hold true for 5G networks as well," says Magow.

Very recently we've seen an influx of suitable devices on the market at $100, however, this remains well beyond the means of the majority. Moreover, on top of the device cost is 10-30% extra in taxation and duty fees. Many are now calling for an exemption for low-cost devices to enhance uptake and support socioeconomic progress.

Additionally, "given the impact of device affordability on 4G adoption, device financing schemes will likely be necessary to improve affordability," adds Najja.

Meanwhile, from the MNO viewpoint, Najja reports that the greatest challenge is engaging in 5G investment where the ROI on 4G networks is still not covered: monetisation will be key for this process: "however, the decline in 2G and 3G connections creates an opportunity for network shutdowns and the transfer of resources to 4G and 5G networks."

"Cost is an issue for both 4G and 5G deployments, but the added costs associated with 5G is the biggest challenge," agrees Magow. "5G networks need significantly more cell towers compared to 4G networks. While this infrastructure can feasibly be built in big cities with a high density of people, the business case does not hold up in sparsely populated areas. Additional components, like new infrastructure designs and core networks, make 5G even more costly."

Additionally, "while 5G is technically more energy-efficient than 4G per byte, the power-hungry nature of 5G poses a significant challenge in regions with power shortages and frequent loadshedding, such as South Africa," says Colmer. And with no solution to grid brownouts and blackouts in sight, power sustainability is expected to remain problematic for the foreseeable.

Rolling out 5G across Africa will also be a big challenge in terms of building out the infrastructure "due to the size of the territory and 5G's higher bandwidth meaning it has a shorter range than 4G and so requires multiple radio sites to support it," says Najja. "Since enterprises are the main drivers of 5G Standalone (SA) adoption across Africa, this

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means most 5G deployments will be focused on cities and densely populated areas. The rest of the landscape will operate on lower frequencies (reusing 2G/3G) and will offer different 5G coverage, but still 5G."

Notably, 5G requires a complete change in RAN and the core network: "non-standalone 5G requires an update to the Radio Access Network (RAN) and relies on fully deployed 4G networks, which presents its own set of challenges," explains Najja. "In contrast, 5G SA demands a complete overhaul of the core networks as well."

Spectrum, too, has proven a significant limiting factor, with most countries only just beginning to look at policy and spectrum auctions.

"The acquisition of high-demand International Mobile Telecommunication (IMT) spectrum has been a prolonged process, with operators incurring substantial costs," says Colmer. However, here things are looking up as "more spectrum auctions are anticipated in 2024; and the transition from terrestrial to digital TV has also facilitated the availability of the sub-1GHz band for 5G use."

5G – the next damp squib?

On the lips of almost every mobile industry professional, 5G is a true stalwart hot topic for operators and service providers. Although constructed around different architecture, 4G and 5G share more similarities than 4G does with 3G.

"5G is more of an evolution and while it offers more advanced connectivity, operators see a lot of additional benefits in more advanced network protocols," explains Najja. "It makes 5G networks more efficient with better network provisioning, resource allocation and advanced features like network slicing. This translates into greater cost efficiency which will help deliver faster return on investment for operators and should support further 5G rollout across the operator's region."

Further, from a market share point of view, 5G is a fantastic boon for operators: "in markets where there is significant demand for fast, low-latency connectivity, operators with 5G networks can afford to attract consumers with better average revenue per user (ARPUs) and become more profitable," says Magow. "In the enterprise segment, these operators will also be able to pursue new customers in the professional services vertical that depend on latency-intensive cloud applications to support the flexibility of remote work."

However, according to Colmer, "operators stand to gain relatively little by prioritising 5G over 4G, aside from retaining clients who still believe in the initial hype surrounding 5G..."

For Africa's consumers, 5G offers higher quality connections - more speed, more bandwidth, greater reliability: "while in some countries like South Africa or Egypt, there is a growing demand for this, the difference

Paul Colmer

Vaibhav Magow

Abdelkader Najja

between 4G and 5G is far more significant when it comes to enterprises," says Najja. "We've already seen this play out in other markets around the world - with the benefits and use cases available to businesses driving most of the adoption and growth of 5G SA. Across Africa, 5G could support businesses with its higher data speeds and greater capacity. It will enable the deployment of large-scale IoT solutions and provide low-latency communications for real-time data processing in developing cities and regions. For enterprises and industries, this will mean more efficient operations and the unlocking of new applications and services."

Colmer, however, remains unconvinced about the achievements of 5G, both on the continent and abroad.

"Initially hyped as a revolutionary technology with claims of transforming self-driving cars, enabling remote robotic surgery, and serving as a catalyst for the Fourth Industrial Revolution (4IR), 5G has faced a reality check in recent years," opines Colmer. "Many of these grandiose claims are being exposed, particularly given the practical challenges

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associated with achieving multi-gigabit low-latency connectivity, which is primarily possible using mmWave spectrum (above 26GHz). However, this technology demands high population densities and small cell technology, making it impractical for vast regions. Even in advanced countries like South Korea, 5G has faced setbacks, and in South Africa, LTE remains faster than 5G in many areas."

Helping society grow

Whatever your view on the specifics of 5G, reliable access to the internet is crucial for creating more connected communities and advancing business growth.

"The narrative of 5G connectivity in Africa is largely driven by original equipment manufacturer (OEM) giants manufacturing the equipment," says Colmer. "However, meaningful connectivity, in my perspective, revolves around providing affordable access for all. 5G, given its current limitations and expense, may not be the most effective solution in bridging this connectivity gap."

Najja believes that meaningful connectivity is any technology that can connect communities and create opportunities, regardless of the generation of connectivity this is built on – and not necessarily 5G.

"5G will certainly be a part of this, but it will be a part," explains Najja. "Some markets across Africa will be better served currently by the older generation networks. Rather than getting lost in the weeds, it's important to remember the purpose of mobile technology and focus on this mission - to help societies grow stronger by connecting together."

For sure, satellite will continue to play a vital role in the connectivity ecosystem throughout Africa.

"To drive meaningful connectivity across the continent, three priorities remain," shares Magow. "For one, operators should look to build greater interoperability into their systems so that network deployment costs can shrink, allowing them to serve more customers. Secondly, governments should reduce fees and taxes associated with installing satellite ground terminals and provide ample funding for community WiFi programs. And finally, the International Telecommunications Union (ITU) should ensure there is enough spectrum available to support networks across the continent."

Colmer adds that "it's worth noting that as of now, there are no globally recognised success stories for 5G business cases. As we contemplate the role of 5G in Africa, particularly in the context of the existing digital divide, it's crucial to question the practicality and genuine benefits it brings to the continent."

Something worth considering considering the hefty 5G investments announced most days… ∎

Monetising 5G — lessons we've learned so far

Chantel Cary, director product marketing, Oracle

Five years on from the first commercial launch of 5G, the network has not exactly lived up to early expectations and the industry has collectively struggled to identify viable use cases and monetisation strategies, particularly for the consumer market. This may be especially disconcerting for those communications service providers (CSPs) who have yet to roll out the network.

According to GSMA Intelligence, only 27 operators across 16 markets in Africa have launched 5G as of September 2023, representing less than 5% of mobile network connections. Despite the general disillusionment with where the industry stands with monetising 5G, there are still some valuable lessons that we've learned along the way and that service providers should consider as they plan their deployments.

Many digital transformation and 5G monetisation programs are closely linked

While some may argue that 5G has been overhyped, I would argue that it's because the industry is intent on getting things right this time around. The world and market dynamics have drastically shifted since the rollout of 4G, and service providers are intent on learning from missed opportunities of the past. As such, we've seen over the better part of the last decade the industry entrench itself in a massive digital transformation effort. CSPs are sweating assets, consolidating IT, streamlining operations, and embracing new ways of working in a herculean effort to be more agile and better equipped to thrive in this digital era.

The ability to 'move fast' and adapt quickly is particularly important in the context of monetising 5G. Without a clear use case to drive the 5G monetisation strategy, CSPs must be prepared to try many different things (use cases, pricing strategies, business models, etc.) to see what works best for the customers in their market. This is where we often find that digital transformation and 5G monetisation efforts converge. At Oracle, we are often called upon to help our customers balance these two priorities – improving operations and the customer experience today with solutions and capabilities robust enough to support the monetisation strategies of tomorrow. We have also found that many service providers are undertaking substantial digital transformation programs that include consolidating and modernising IT systems like product catalogs, billing, and customer relationship management

systems while simultaneously exploring new 5G use cases and business models. Ultimately, these providers want to ensure that their IT investments can support their future monetisation strategies.

Success looks a bit different than expected

There are high expectations for 5G, including anticipations of the network spurring the next industrial revolution. While these are still very much a possibility, the slow pace at which 5G innovations have progressed thus far has caused the industry to become somewhat disenchanted. Be that as it may, there are still some successes achieved with 5G that we can tout, though they may be different than originally anticipated.

Foremost, I would be remiss if I did not mention the success of one of the early-identified use cases for 5G – fixed wireless access (FWA). To date, there have been more than 80 global deployments of 5G FWA, with the number expected to grow significantly in 2024. The technology's low barrier to adoption (i.e., no wires, availability wherever 5G mobile coverage is available) and its ability to drive usage of data-intensive services like online gaming and streaming back onto the network are just some reasons to be excited.

> "FWA is not the only 5G success. As we continue to see more 5G deployments around the world, new pricing trends and monetisation strategies emerge."

Service providers that have rolled out FWA are also starting to see its impact on key performance indicators. Early adopter T-Mobile reported 4.2 million 5G FWA subscribers at the end of Q3 2023, with an average revenue per account (ARPA) of $139.83, a 1.70% increase year-on-year. Additionally, in regions like North America and the Middle East, where 5G FWA is widely available, service revenue growth is outpacing subscription growth, offering a beacon of hope to service providers in markets where FWA has not yet been deployed.

Quality over quantity

FWA is not the only 5G success. As we continue to see more 5G deployments around the world, new pricing trends and monetisation strategies emerge. A recent study by Juniper Research, 5G Red Cap, and 5G Advanced anticipate that CSP-billed 5G revenue will increase by 32% in 2024 to nearly $400 billion. This is expected in part due to shifting 5G pricing and monetisation strategies. Today, a significant proportion of the CSPs that offer 5G do so at either no additional charge or price based on data tiers. This trend seems to be changing quickly as CSPs seek to differentiate their offerings with 5G-rich app bundles and speed tiers. Verizon myPlan, for instance, combines 5G data plans with several 5G-rich apps. Customers can choose from pre-defined plans tailored toward customer interests, such as plans for sports fans or video streaming enthusiasts. Alternatively, customers can build a bundle of their choice by selecting a 5G data plan and their apps of choice.

> "There are high expectations for 5G, including anticipations of the network spurring the next industrial revolution. While these are still very much a possibility, the slow pace at which 5G innovations have progressed thus far has caused the industry to become somewhat disenchanted."

Beyond bundles, a growing number of CSPs are now introducing pricing based on 5G speed tiers. Telenor Norway takes a hybrid approach to 5G pricing, offering data plans that are priced based on data and speed tiers. Telenor's customers can select between data plans that offer 5G speeds of 1,000Mbps or 200Mbps. Based on these trends, we expect pricing strategies to continue to evolve.

In Asia, service providers are differentiating themselves with plans that include a guaranteed network experience or quality of service (QoS) for specific customer segments. Three Hong Kong (3HK), for example, offers two 5G Signature Plans. The 5G Live Connect plan is geared towards content creators and includes unlimited 5G streaming with a prioritised network experience to ensure high-quality live streaming. The 5G Stock Pro plan is geared towards day traders and includes a guaranteed QoS with two times the network resources allocated to users, enabling real-time streaming of stock quotes. The plan also includes advanced analytics tools, real-time news and market commentary, and a personal investment portfolio.

African CSPs would do well to observe how others across the globe are differentiating their 5G offerings to enhance monetisation.

Innovation is still to come – will you be prepared?

Throughout Oracle's many conversations and engagements with service providers on the topic of 5G, the biggest lesson that we have learned thus far is that there is much more innovation still on the horizon, and CSPs must be prepared to capitalise on these emerging opportunities. The delay in the rollout of 5G standalone (SA) is to blame for the dearth of compelling 5G use cases the industry has been awaiting. As 5G SA deployments pick up in the next few years, we can anticipate the pace of innovation to accelerate with it. In the coming years, we can look forward to revolutionising use cases like the metaverse disrupting our lives and the way we work. We foresee telecoms service providers becoming industry service providers with 5G fueling monumental transformations across industries.

Moreover, we anticipate that the network, supported by operations and business support systems (OSS/BSS), becoming a platform for innovation. Industry initiatives such as GSMA Open Gateway and CAMARA APIs will play a key role in standardising this platform approach, making it easier for external parties to develop on top of the network. To this end, by opening up the network to external developers, co-innovation, and the support of B2B2X business models will create new revenue opportunities for CSPs. When coupled with new features of 5G SA, such as the ability to configure, monitor, (via the NWDAF) and charge for a guaranteed quality of experience (QoE), service providers can create compelling offers that drive incremental revenue growth.

Who knows what the future has in store for the industry – could we have foreseen the app revolution and subsequent digital economy sparked by 4G? What else does 5G have in store for us? Regardless of what the future holds, ensure your organisation is prepared to rise to the occasion by investing in IT, network, and cloud capabilities that will support a variety of business models, pricing, and monetisation strategies with the agility to adapt and scale services seamlessly on demand. ∎

LNX Solutions deploys rugged LoRaWAN devices for sporting events

LNX Solutions provides self-hosted infrastructure as a service and tailored solutions to resolve IT problems in a creative and effective way. By building their own LoRaWAN network, LNX Solutions is enabling a wide range of IoT solutions across South Africa.

Connectivity during blackouts

Cellular coverage in South Africa can vary widely depending on the region. Local users can find it spotty and unreliable. Moreover, the country has been in an energy crisis for more than 10 years and is now in its sixth period of load-shedding – sometimes lasting many hours - in an attempt to ration power between the different electrical grid areas across the country and urban areas.

During these blackout periods, cellular coverage can be lost. LNX Solutions' ability to build and temporarily deploy LoRaWAN networks is highly beneficial and well-suited during these periods due to its low-power, high-range communication capabilities. Moreover, given South Africa's many harsh environments, it can be extremely challenging to use standard off-the-shelf technologies, as they are not able to withstand the local surroundings for any reasonable length of time.

Large scale asset tracking

LNX Solutions has been providing tracking solutions for prestigious large scale sporting events across South Africa, such as the Cape Town Cycle Tour, the RMB Ultra Trail, and the Old Mutual Double Century, since 2021. During these large-scale events, the health and safety of participants is paramount.

Ambulances and logistics crews are provided with LoRaWAN trackers so that if an emergency situation arises, with lives at risk, the nearest resources are dispatched from the control centre. By deploying LoRaWAN networks during these events, LNX Solutions can provide reliable and consistent coverage during the entirety of the event in challenging environments where traditional GSM technologies do not work.

After trialling a selection of different devices, LNX Solutions found that Digital Matter's Oyster3 and Yabby3 were the best in terms of both quality and performance. The LoRaWAN devices feature a versatile and open payload format, which facilitates integration into third-party platforms. The devices integrate seamlessly into LNX Solutions' custom-built platform, allowing LNX Solutions to build and deploy LoRaWAN networks and effortlessly monitor their devices remotely.

Given the challenging terrain, a rugged solution is required. As such, LNX Solutions has deployed Digital Matter's ultra-rugged Oyster3 and Yabby3, which are placed inside the vehicles and participants' backpacks. They allow logistic crews to locate participants when they call for assistance and the nearest ambulance sweep truck can collect them. The battery-powered devices have been optimised to send location updates over the LoRaWAN network every minute, providing full visibility of the participants as they progress through the events.

"The hardware design of the device is extremely important. We rent out the devices for the events, so they are going to get thrown around, go through water, and dropped, and then we're going to have to find them," said Matt Feinstein, CEO, LNX Solutions.

The robust IP68-rated housing of the Digital Matter's devices means that they can withstand being knocked around whilst out on the courses, an absolute must. Additionally, these compact and lightweight devices fit easily inside the packs of cyclists and runners without causing any strain or – critically for the athletes - competitive disadvantage. ■

Ukhozi Tracker upgrades vehicle tracking via non-steered SIMs

Established in South Africa in 2012, Ukhozi Tracker is a telematics company that provides vehicle tracking and recovery in case of theft or hijacking. Its mission is to provide vehicle owners with an effortless and reliable way to monitor and track their vehicles, ensuring peace of mind.

Ukhozi Tracker is currently operating in South Africa, Eswatini, and neighbouring Mozambique, with aspirations to expand across southern Africa in the years to come.

Expanding network coverage

Accordingly, Ukhozi Tracker has deployed solutions from Onomondo to expand business coverage in line with demand. This has been made possible with Onomondo's Network Marketplace.

With Onomondo's coverage of over 650 networks across more than 180 countries and non-steered SIMs, Ukhozi Tracker has increased device stability and accuracy.

Onomondo's SIMs enable automatic access to multiple networks within a single area based on signal quality. Ukhozi Tracker now has far fewer issues arising from load-shedding events, a common occurrence within southern Africa. Indeed, operators in South Africa deliberately turn off the electricity to areas or consumers in a regulated way, to avoid blackouts or brownouts during periods of excessive demand.

Despite the challenge of today's load-shedding environment, Ukhozi Tracker's partnership with Onomondo has provided exceptional service and an IoT technology stack that empowers the entire team. The new technology and networks enable the team to confidently expand the business into new regions and countries.

Remote troubleshooting

Before partnering with Onomondo, the Ukhozi Tracker team spent a considerable amount of time troubleshooting on the ground. This hampered efficiency since reported incidents did not always turn out to be Ukhozi Tracker issues.

However, with Onomondo's Traffic Monitor and Network Logs, technicians are deployed only when required, and since they were able to diagnose problems remotely, they can arrive at the scene prepared. Given the size of the landscapes involved, in some instances, it can take many hours to send someone out to the field to reach a single device.

Ukhozi Tracker utilizes the Onomondo platform to diagnose devices remotely. Instead of waiting for hours to understand the issue, technicians can diagnose any problems within seconds. Platform features like Traffic Monitor and Network Logs provide insights into their devices' network activity and facilitate instant remote debugging.

The platform features facilitate on-demand monitoring and troubleshooting, but issues outside the ordinary can arise. Through collaboration with the Onomondo Customer Success team, Ukhozi Tracker can resolve unique problems promptly and efficiently. The team's experience and guidance has helped Ukhozi Tracker save time in development and debugging and achieve business goals.

"My experience with Onomondo's customer success team is that they are always on the ball," said Bheki Madide, CEO and co-founder, Ukhozi Trackers.

More time to focus on business

With Onomondo as its connection provider, Ukhozi Trackers have access to not just reliable and dependable connectivity, but also expert support services capable of resolving specific challenges, in addition to a technological stack that allows them to remotely troubleshoot devices on demand.

"We have less problems with connectivity than before, and it gives us more time to focus on other important things," said Madide.

The collaboration has allowed the Ukhozi Tracker team to streamline its existing operations and plan for the future with more efficiency. Ukhozi Tracker intends to expand and scale its operation across more countries in the near future, with southern Africa as the primary objective. ∎
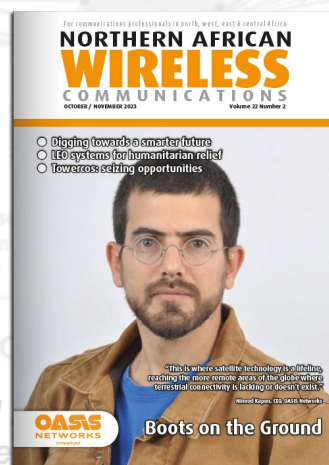
New WiFi 7 test platform emulates real-world conditions

Keysight Technologies, Inc. has launched the E7515W UXM Wireless Connectivity Test Platform for WiFi, a network emulation solution delivering signaling radio frequency (RF) and throughput testing for devices using WiFi 7, including 4x4 MIMO 320MHz bandwidth.

WiFi 7 is the next generation of WiFi wireless communications technology, promising significant performance advancements and improvements over the previous WiFi 6E and WiFi 6 standards. As with any new wireless technology, device makers must perform extensive signaling RF and throughput on clients and access points (AP) to ensure WiFi 7 devices work as intended when deployed. However, existing solutions require extremely complicated test setups with large number of WiFi devices and network channels to emulate real-world operating conditions.

The newest Keysight UXM Wireless Connectivity Test Solution addresses this challenge by giving RF engineers a turnkey solution that simplifies WiFi 7 testing and provides unique physical (PHY) layer and media access control (MAC) layer insights.

The E7515W UXM Wireless Connectivity Test solution emulates hundreds of clients at once – three-times more than existing solutions in the market – with traffic simulation without the need for additional equipment. It supports Wi-Fi 7 4x4 MIMO 320MHz bandwidth and performs WiFi 7 signaling RF and throughput testing on clients and APs, including the latest 802.11 variants. It also uses analysis software to provide PHY / MAC-level information such as rate versus range, enhanced Rx sensitivity, radio unit (RU) sweep analysis, and full-rate throughput to generate relevant WiFi signaling and RF throughput results. The solution tests more complex devices with 5G and LTE capabilities WiFi/cellular interworking validation as well as integrated fixed wireless access (FWA) testing for the fast-growing customer premises equipment (CPE) market; and offers inherent synchronisation, better repeatability, reduced time spent on cabling and test setup, higher automation, and faster debugging and reporting.

"With the introduction of the E7515W solution, Keysight is expanding the market leading UXM 5G Network Emulation Solutions to simulate WiFi devices and traffic to cover new use cases from the latest IEEE 802.11be standards," said Mosaab Abughalib, senior R&D director and general manager for Keysight's wireless test group. "The E7515W solution enables faster test setups with less complexity and delivers better load and bandwidth performance to help WiFi 7 device makers accelerate time to market."

HPE: Simplifying multi-vendor multi-generation telco operations

The new HPE Telco Core Automation offering has been designed to help service providers simplify multi-vendor, multi-generation operations with a new packaged offering built on its leading OSS technology.

The solution can help service providers automate their end-to-end processes with pre-built orchestration and assurance to make rolling out and managing network functions easier. It marries intent-based automation and AI-based assurance, which were previously separate silos, to simplify, optimise, and standardise the lifecycle management of core network functions.

As part of the solution, service providers can drive efficiencies across the NF lifecycle, resource management, automatic remediation, and capacity planning to remove integration risks, decrease operational costs, and speed up time to market for new services.

HPE Telco Core Automation streamlines multi-vendor, multi-generation management and automation for any core network. The cloud-native packaged offering offers closed-loop management extensible to any core, including the 4G/5G core from Athonet, a Hewlett Packard Enterprise acquisition.
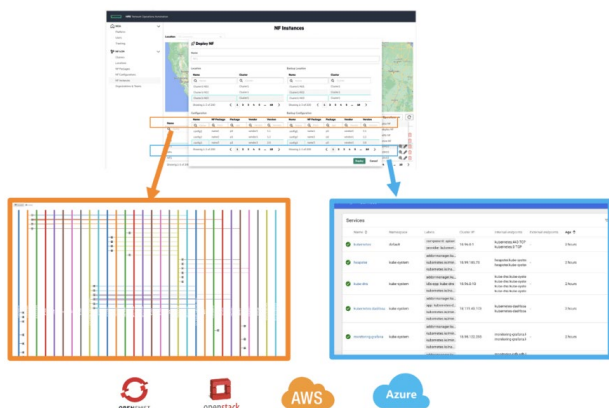
First GNSS/INS smart antenna with ultra-rugged enclosure hits global market

Septentrio, has launched AntaRx-Si3, the first GNSS/INS (Inertial Navigation System) Smart Antenna on the market in an ultra-rugged enclosure, designed for easy installation on machines such as agriculture robots.

AntaRx-Si3 leverages FUSE+, which is designed to answer the need for position availability in tough industrial environments where GNSS signal reception may be temporarily compromised, such as under foliage. The IMU sensor in FUSE+ also improves positioning integrity and reliability, which is critical for autonomous systems.

"With AntaRx-Si3 you get a receiver delivering positioning information with a high level of availability and integrity, that you can install with minimal effort," said Danilo Sabbatini, product manager of GNSS/INS at Septentrio. "This is especially beneficial for after-market upgrades. It also allows removal of this valuable component at the end of the day to protect against theft or vandalism."

The AntaRx-Si3 smart antenna is designed to be mounted outside on a machine for operation in harsh environments. Enclosed in an impact resistant polycarbonate IP69K housing, it can handle high levels of shocks and vibrations. This multi-frequency receiver delivers Septentrio's field proven high-accuracy RTK positioning down to the centimetre level. AntaRx-Si3 has a built-in 4G cell modem, so there is no need for additional modem integration to acquire high-accuracy corrections.

AntaRx-Si3 leverages Septentrio's GNSS+ algorithms with advanced multipath mitigation, which allows uninterrupted operation in environments where satellite signals could be reflected off nearby machinery or high structures such as silos. It delivers positioning at a high update rate and low latency, which are critical for control loops in autonomous movement or rotation.

BSS Magic streamlines telco operations

Totogi has launched BSS Magic, a groundbreaking platform that revolutionizes the telecom sector with the first fully AI-generated custom Business Support System (BSS), eliminating the time and prohibitive costs typically associated with traditional BSS implementations.

Facilitated by an intuitive conversational AI interface, BSS Magic simplifies the BSS construction process by leveraging five types of Generative AI (GenAI) technologies.

BSS Magic offers a streamlined and cost-effective approach tailored for modern telcos. Leveraging the simplicity of natural voice commands, BSS Magic can automatically generate the necessary software code to produce the precise BSS needed - without requiring engineering expertise. This advanced AI platform integrates several types of GenAI, including Natural Language Processing (NLP) and Generation (NLG),

computer vision, code generation, and advanced avatar rendering. It functions as an Integrated Development Environment (IDE) powered by AI, removing the dependence on skilled programmers and making BSS development accessible, customizable, and cost-efficient for everyone.

The telco-trained advanced AI model utilizes a Retrieval Augmented Generation (RAG) model that draws on extensive telecom knowledge to understand and generate the needed BSS components through natural voice commands. This AI acts as a foundation for creating and coding BSS logic and interfaces, simplifying complex software development into conversational interactions. Meanwhile, AI code generation significantly reduces development time from months to minutes, delivering bug-free, fully customized BSS code swiftly and automatically.

The conversational AI interface

makes creating a BSS as simple as having a conversation, accessible to all business users, regardless of technical skill, while seamless extensions enable easy integration of additional components, such as payments and customer support, enhancing the BSS stack with minimal effort. BSS Magic also facilitates smooth data transitions from legacy systems, overcoming common implementation challenges.

"BSS Magic is not just an advancement in BSS technology; it's a paradigm shift in how MNOs and MVNOs manage their customer-facing applications," said Danielle Rios Royston, acting CEO. "Totogi democratizes BSS app creation, putting the power in the hands of business users and allowing CSPs to focus on what matters most: monetization and customer service. Totogi leverages a comprehensive suite of GenAI technologies to redefine what's possible in telecom software."

Xtend Solutions combines WiFi satellite tech to deliver content to schools

Forsway and Cloudpoint have established Xtend Solutions, a new provider of low-cost content streaming solutions aimed at offering robust internet connectivity to serve vast geographies with unreliable or no service.

Xtend Solutions' new offering harnesses Forsway's agile satellite technology and ground equipment and Cloudpoint's expertise in delivering solutions and executing on a wide scale.

The offering from Xtend Solutions will cater to unserved and underserved locations, using WiFi satellite technology to distribute content, and bypassing the need for a traditional internet connection. Cloudpoint will promote and deploy the new offering with technical support from Forsway.

The primary markets the new venture will focus on are India, Africa, and Southeast Asia, within the education, digital outdoor advertising, and OTT services verticals.

Current estimates suggest that

over 100,000 schools in India have fragmented or no internet service. The first roll-out of the new service is planned for remote school use cases in Asia in the first quarter of this year.

Xtend Solutions will set up the hardware for transmitting

educational content to schools, with WiFi hotspots in each school. Content will be downloadable via a WiFi hotspot; it can be viewed offline on mobile phones. Apps and other processes can be customised to bespoke requirements to deliver a tailor-made solution.

Look out for...

If we can connect the moon – why not Africa?

Nokia Bell Labs has recently been selected to participate in the 10-Year Lunar Architecture (LunA-10) program, a U.S. Defense Advanced Research Projects Agency's (DARPA) initiative that will design an integrated multi-service architecture to support a thriving economy on the Moon in the next decade and beyond. LunA-10 will design the essential infrastructure framework capable of supporting industrial activities, as well as scientific discovery.

Nokia will collaborate with the 13 other companies specialising in areas critical to establishing an integrated commercial economy on the Moon. Nokia Bell Labs will be responsible for recommending a reliable, high-performance communications infrastructure, and will work closely with other LunA-10 companies to ensure that infrastructure may be efficiently transported and built on the lunar surface and that it would have reliable power sources once installed.

At the program's mid 2024 conclusion, LunA-10 will deliver a comprehensive blueprint for establishing the infrastructure necessary to support commercial operations on and around the lunar surface by 2035. Communications will be critical as virtually all use cases and applications require or benefit from high throughput, low latency, ultra-reliable and scalable communication capabilities. Networks would allow astronauts to freely communicate directly and with mission control on Earth. Networks would transmit video and telemetry data from cameras and sensors spread across the Moon and integrated into spacesuits, vehicles, structures, and scientific experiments. Networks would supply the connectivity necessary to control robots and automate dangerous tasks on the lunar surface. Exciting stuff indeed. But given that some 24% of Africa's population remains without access to even 3G connectivity, one has to question whether we should be focusing on connecting Earth before the Moon?

Entel brings 5G to South Pole

Entel has activated the first 5G connection in Antarctica, benefiting 191 residents of Villa Las Estrellas, as well as visitors who travel to the settlement.

In addition to military and research personnel, the settlement, situated approximately 1,500km from Punta Arenas in Antarctica on the mainland, includes a bank, a post office, a library, a church, and a hospital.

"Bringing 5G to Antarctica was a huge challenge, especially in technical terms, and we are very proud to be able to affirm that we were pioneers in the world in delivering a public 5G network for our customers, especially in these times where connectivity and communication contribute tremendously to the quality of life of people, mainly in places so geographically isolated," said Entel in a statement. "We hope that this great milestone will allow significant improvements in the connectivity of the white continent and provide important support for the community that works in this area and for the scientific activity that has a great presence in Antarctica."

This milestone is part of its commitment to deliver the best technology available in the territory, where 315 communes from Putre to Antarctica, including Rapa Nui, already have 5G connectivity. The coverage also included modernisation with 3G and 4G technology, allowing a better experience and capacity in the base with an investment of around US$345,000.

Nokia and Siemens to enable Sydney's driverless metro network

Nokia is working with Siemens Mobility to deliver an IP/MPLS backbone communications network and cybersecurity solution for the new metro railway network in Sydney, Australia.

The Nokia mission-critical communication network, which includes an IP/MPLS backbone network and data centre fabric in conjunction with Nokia NetGuard Cybersecurity solution, will support robust secure applications such as CCTV for passenger safety, train-to-ground communications backhaul for in-station, on-board and trackside applications, along with the associated data centre and cloud networking.

"We are pleased to work again with Nokia as we deliver a safe, sustainable transport solution for residents and visitors to Sydney. The new data communications and cybersecurity solution will be vital to support both legacy and new digital passenger and rail communications services," said Vijay Singh, project director at Siemens.

"This exciting project further strengthens a longstanding partnership with Siemens in Australia and around the world. As the threat of cyberattacks on critical infrastructure continues to grow around the globe it is vital that communications networks benefit from the highest level of data security," said Stuart Hendry, head of enterprise and partner sales for Asia Pacific, network infrastructure at Nokia. "As such we are pleased to be able to apply both our local knowledge as well as our expertise in delivering secure mission-critical IP/MPLS and data centre fabric solutions to provide leading-edge mission-critical network for rail and NetGuard Cybersecurity package that will support reliable operations and the safety of passengers. Working with Siemens Mobility, we can replicate this for other metro rail programs."

Marlink completes hybrid network install for Exploris One vessel

Marlink has installed a complete hybrid network solution for French expedition cruise company, Exploris, onboard Exploris One during the vessel's refit in Valparaiso, Chile.

The solution is designed to deliver complete coverage and connectivity to the expedition cruise ship, including LEO from Eutelsat OneWeb, Starlink and Iridium, Marlink GEO VSAT, TV-RO and 5G GSM services. The network solution powers the onboard ethernet/WiFi network and a customer portal. Whether guests are exploring remote islands or venturing into uncharted territories, they can now enjoy seamless, secure connectivity and unparalleled digital experiences onboard.

The remote and sometimes harsh locations that the ship will be travelling to require a hybrid network able to keep the vessel and its guests connected regardless of conditions. Marlink's technical team organised the installation of the antennas, below decks equipment and integration to the ship's network during an extensive refit which saw the ice-capable vessel prepared for sailing to remote and polar regions.

"Exploris has a mission dedicated to bringing new and exciting locations to life for our guests and enabling them to share their experiences with friends and family in real time," said Philippe Videau, president, Exploris. "Marlink shares our vision of providing excellence to our guests and keeping the vessel safe and connected wherever it is sailing."

Yahsat signs up etisalat by e& as first D2D strategy telco

etisalat by e& has become the first telecom operator to partner with Yahsat for its Direct-to-Device (D2D) strategy to enable satellite connections for standard smartphones.

Under a Memorandum of Understanding (MoU), Yahsat and e& UAE will collaborate to explore various initiatives and projects for Yahsat's planned D2D ecosystem, 'Project Sky.'
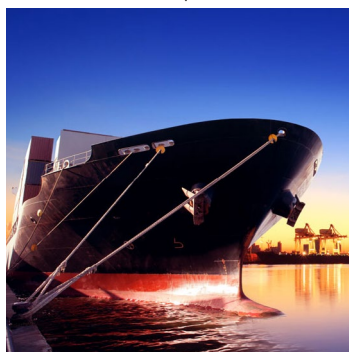
"We are discussing a whole host of areas where we aim to collaborate, which includes developing the ecosystem," said Yahsat group CEO Ali Al Hashemi in a joint statement, adding that the deal with e& UAE was "the first of many agreements we hope to reach with key industry players as part of our D2D strategy."

Yahsat revealed its two-phase plan for Project Sky – which is designed to provide seamless connectivity (including voice, texting, and data) for smartphones, as well as IoT devices – last month.

In phase one, Yahsat will offer voice and messaging capabilities this year before releasing texting and IoT capabilities for smartphones in 2025. That phase will use Yahsat's Thuraya geostationary satellites including Thuraya-2, Thuraya-3 and Thuraya-4, the latter of which is expected to be launched later this year and enter service in 2025. In Phase Two, called 'Project BlueStar,' the company aims to enable full direct-to-device connectivity through a scalable and sustainable satellite network.

Hughes' JUPITER 3 brings 100Mbps of new satellite capacity to the Americas

Hughes Network Systems, LLC's JUPITER 3 satellite is providing services to subscribers in the United States, Canada, Mexico, Brazil, Peru, Ecuador, Argentina, and Colombia.

JUPITER 3 entered commercial service on 19 December 2023 and in the 90 days since, Hughes has launched new Hughesnet services across the Americas for both consumer and business users.

"The feedback from users and dealers has been overwhelmingly positive," said Peter Gulla, senior vice president, Hughes. "The demand for connectivity is tremendous, including in rural areas that are unserved or underserved by other services. Our new Hughesnet plans are meeting the market expectations for speed and price. Our Fusion plans for home and business are giving users a low-latency service that has been unavailable to rural locations previously."

JUPITER 3 provides speeds up to 100Mbps. With more than 300 spot beams, the geostationary satellite uses the Ka-band spectrum plus Q-band and V-band for gateways. JUPITER 3 is supported by a state-of-the-art cloud-based ground system featuring a diverse private fibre backbone and network and traffic management utilizing artificial intelligence (AI) that monitors traffic and makes real-time changes to reduce latency and maximize throughput.

"Internet connection is vital today, and we forget that there are places where that connection is unavailable or unreliable. When we set up a new subscriber with the Hughesnet service, it is a game changer for them," said Tim Robinson, owner, 21st Century Communications. "After completing a recent installation, one of our technicians relayed how the homeowner cried tears of joy over the excitement of the new connection. This is why we do what we do, we are making a real difference in the lives of our customers, and the new JUPITER 3 powered Hughesnet is awesome."
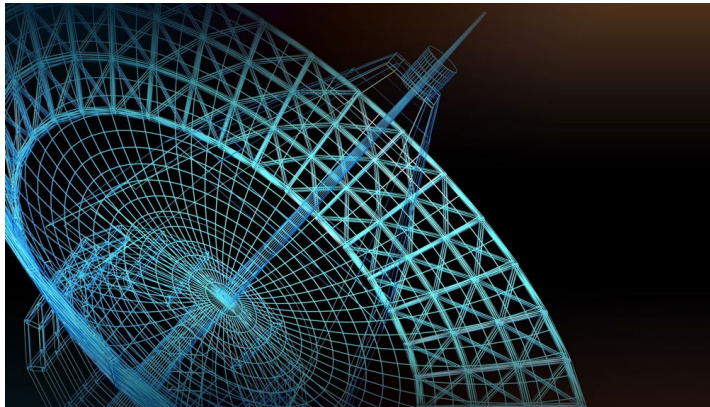
Motorola to provide P25 radios for Victoria's CFA

Motorola Solutions has announced that it will provide Victoria's Country Fire Authority (CFA) with 16,000 new APX series P25 radios in a significant upgrade to firefighting communications technology, marking a new era in critical comms.

Included within the package will be approximately 9,000 of Motorola Solutions' APX NEXT all-band smart radios, which provide mission-critical voice communications and productivity-enhancing data applications to enhance safety and incident awareness for firefighters.

"APX radios enable the reliable communication that's critical for fire and emergency agencies to collaborate, particularly in the face of more frequent and severe natural disasters and other complex events," said Con Balaskas, managing director for Australia and New Zealand, Motorola Solutions. "And our APX NEXT radios bring additional capabilities that maximise the use of data in the field, delivering rich insights to further strengthen workflow efficiency and safety."

APX NEXT data applications include SmartConnect to automatically switch voice communications from land mobile radio (LMR) to broadband networks when users travel outside of radio coverage areas, SmartMapping to pinpoint the location of firefighters and vehicles in the field, and ViQi voice control to enable first responders to quickly manage radio controls through simple and intuitive voice commands.

In line with the new deal, Motorola Solutions will upgrade and support CFA's radio equipment relied upon for frontline firefighting communication, strengthening emergency response from brigades as part of a 10-year services contract. The modernisation program will replace CFA's radios used in the field, on fire trucks, in command vehicles and within fire stations.

The new devices will be used on the Victorian Government's Regional Mobile Radio (RMR) and Metropolitan Mobile Radio (MMR) networks, which provide secure radio communications across regional, rural, and metropolitan Victoria.

stc Bahrain launches AI-powered facial recognition eSIM activation service

stc Bahrain has launched 'the first instant mobile eSIM activation service that uses AI-powered facial recognition to authorise users,' one month after Bahrain's telecoms regulator issued guidelines for facial recognition usage in telecoms services.

Subscribers can use the My stc BH app to buy a new eSIM and download it instantly. The app enables users to choose their favourite number and preferred mobile plan.

After that, stc subscribers can activate the eSIM instantly by capturing a live photo using their smartphone's camera for identity verification. Once facial recognition software on the backend verifies the customer's ID, the eSIM is activated and ready to use.

This makes the remote activation process easier and more secure, and eliminates the need for users to present or upload documents, visit a physical branch or wait for a delivery agent to come and authenticate and/or register their fingerprint.

"By leveraging AI face recognition technology and eSIM capabilities, our existing and new subscribers can get an eSIM number online and activate it without visiting any stc outlet," said stc Bahrain CEO Eng. Nezar Banabeela. "Our aim is to empower customers by offering a seamless digital experience that enhances convenience and efficiency."

Movistar Chile surpasses 1.5 million 5G users, 5G SA trials ongoing

Movistar Chile (Telefonica) has crossed the milestone of 1.5 million 5G customers.
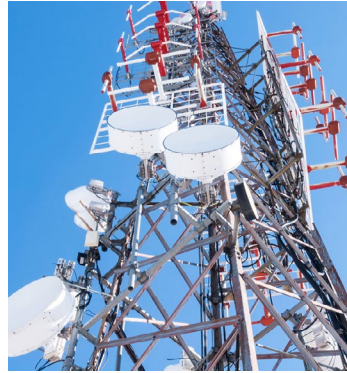
The company's 5G Standalone (SA) Technology pilots are ongoing, as is a renewal plan for migrating all home broadband customers to fibre optics by the end of 2024. As part of its Technological Renewal Plan, the company also plans to end public telephone booths.

Movistar Chile reported that 70% of mobile customers are on free 5G plans at no additional cost and users are consuming 40% more Gigabytes than 4G users.

The company has also announced the inauguration of two new 5G Movistar Experience Laboratories - a project by Movistar Empresas - at the Catholic University of the Santisima Concepcion and at the University of La Serena, both featuring the new Standalone technology.

In 2024, Movistar Chile will execute more than 800 4G and 5G modernization projects and over 260 5G coverage expansions throughout Chile. This will allow coverage expansion to new areas such as Easter Island, Cape Horn, Primavera, and Timaukel, bringing high-speed connectivity to rural areas in the country.

CDL enhances land mobile coverage with Intelsat FlexMove

Cloudcast Digital (CDL) has expanded satellite communication connectivity using Intelsat's FlexMove to deliver land mobile services to customers in hard-to-reach locations throughout India.

CDL's technology services are managed by teleport and video platform services provider Planetcase, which has been a long-time customer of Intelsat, particularly utilizing Intelsat 17 and Intelsat 20 satellites.

CDL and Intelsat introduced Flex services into India in 2022, combining Intelsat satellite capacity over the region, a Flex gateway in Noida, India, and CDL's In-Flight and Maritime Connectivity (IFMC) license to deliver FlexMaritime service for vessels travelling in Indian territorial waters. Intelsat said that the Flex service simplifies the management and delivery of broadband.

Public WiFi OpenRoaming proof-of-concept project completed in London

The Wireless Broadband Alliance (WBA) has announced the successful completion of an advanced public WiFi OpenRoaming proof-of-concept (PoC) in Shoreditch, London.

The PoC enabled phone users to seamlessly connect to WiFi and move between cellular and WiFi connectivity via an existing OpenRoaming profile or app. The PoC was undertaken in partnership with CIN, a provider of streetside telecoms infrastructure assets in major cities; Colt Technology Services, the digital infrastructure company; and GlobalReach Technology, a provider of high-performance wireless ISP services and solutions.

WBA OpenRoaming is an open connectivity framework for automatically and securely connecting billions of users and things to millions of WiFi networks globally through its roaming federation service. It enables users to connect automatically to WiFi securely using a profile of their choice on their device. Mobile carriers can choose to offload their cellular traffic on a selective basis to WiFi ensuring their users are always best connected. OpenRoaming creates new opportunities for all organizations, operators, and municipalities, to deploy secure access to networks and enterprise applications. Users with OpenRoaming natively on their phone, via an existing profile or their preferred app, can access WiFi automatically with no usernames or passwords, safe in the knowledge that the connection is secure, and their privacy protected.

The PoC was based on the CIN 'Street Arc' concept, a streetside infrastructure solution that supports mobile networks, WiFi networks, Edge, and IoT Networks. Originally developed to enable radio densification for mobile operators, Street Arc has been updated to integrate OpenRoaming capabilities, giving seamless secure offloading of cellular traffic to Wi-Fi in high traffic areas, at times when signal may be poor, or periods of high-density traffic such as major events. Street Arc installations use the Cisco Meraki MR36 access point and GlobalReach's GlobalRo.am app to enable users to connect seamlessly to the WiFi network via an automatic connection supported by the OpenRoaming standard. Fibre and network connectivity are provided by Colt.

"Cities and municipalities seek to provide automatic, quality, and secure WiFi connectivity, this is exactly what OpenRoaming delivers," said Tiago Rodrigues, CEO of the Wireless Broadband Alliance. "This is the kind of initiative our organization endorses; it supports our mission to enable collaboration between service providers, technology companies, cities, regulators and organizations. We look forward to the widespread deployment of these services after the successful conclusion of this live proof of concept."

Odido opts for Netcracker for digital transformation

Odido (formerly T-Mobile Netherlands) will consolidate several critical processes across various brands and legacy environments onto Netcracker Digital BSS, including professional and support and maintenance services, as part of a large-scale digital transformation project.

Odido, which recently underwent a major rebranding that brought together multiple brands (Ben, Simpel and Tele2) and introduced its new name, aims to streamline its operational workflows. The operator is already using Netcracker Digital BSS for Configure, Price, Quote (CPQ) and Order Management. In the transformation project, this will be expanded to Product Management (Product Catalogue and Product Lifecycle Management), which will result in several business benefits, including faster time to market for new services; a more robust, scalable and unified platform; and an overall reduction in operational expenses due to the consolidation.

Netcracker will lead the BSS platform consolidation project, which will positively impact Odido's B2C customers through a reduction of complexity and legacy systems, modernization of the entire technology stack, cloudification of its BSS platform and enhancement of the end user experience.

"As an established customer of Netcracker's that has experienced a lot of success through our multi-year partnership, we are thrilled to continue our engagement as we launch a new brand and create the best experience for our customers," said Lotta Gunnarsson, CIO at Odido. "While we make the journey towards becoming a techco, having a trusted partner at our side will make all the difference to our future success."

"We are extremely proud to continue our long-standing relationship with Odido during such a pivotal time that includes rebranding, BSS consolidation and digital transformation," said Benedetto Spaziani, GM, Netcracker. "Our accomplishments in the past will lead to more achievements going forward as Odido reinvents itself as a techco and enjoys the results of this hard work."

Q&A

Mark Joseph,
CEO for Africa,
Amdocs

Who was your hero when you were growing up?

Growing up, my hero was my father. He wasn't a superhero in the classic sense, but his dedication to family and his unwavering presence throughout my childhood instilled in me values that continue to guide me today. He never missed a key moment, prioritising quality time with us even during the demanding phases of his career.

What did you want to be when you were growing up?

While my ten-year-old self dreamt of being a fireman, drawn to the excitement and nobility of saving lives, my career path took a more natural progression.

What was your big career break?

My first job as a consultant laid the foundation, and my success stemmed from the skills and relationships I nurtured during the 18 years I spent there. It wasn't a single 'big break,' but rather a continuous journey of learning and growth.

If you could dine with any famous person, past or present, who would you choose?

Jesus, as his impact on myself, my life and my values is undeniable, and I'd relish the opportunity to hear his firsthand perspective on the untold stories that shaped his history.

What's the best piece of advice you've been given?

The best advice I've received is simple yet profound: "Treat people how you want to be treated." This philosophy underpins my approach to everything, from professional interactions to personal relationships. It's a constant reminder that respect and kindness have to extend to everyone, regardless of their position. Over the years, I've witnessed firsthand how underestimating someone can have surprising consequences. The person you might overlook today could be the one who holds the key to your future success.

If you had to work in a different industry, which would you choose?

Whilst I'm deeply passionate about my current industry, if I had to choose another, it would be tourism. The allure of exploring different cultures and experiencing new things resonates with my adventurous spirit. However, I'm incredibly fortunate to be in a field I genuinely enjoy. Working in the tech sector feels like a constant vacation, with constant learning and innovation keeping things exciting.

The Rolling Stones or the Beatles?

Music isn't my go-to choice as I'd always rather be listening to a podcast. I'm currently listening to "The Bible in a Year," and I

"Growing up, my hero was my father. He wasn't a superhero in the classic sense, but his dedication to family and his unwavering presence throughout my childhood instilled in me values that continue to guide me today."

also enjoy Amdocs' podcasts, where industry experts delve into specific use cases and explore how technology is shaping the future. However, if my wife or children are in the car with me then I'm completely overruled and no longer have control of what's being played, they love music!

What would you do with £1 million?

If I won a million pounds, I wouldn't embark on a lavish lifestyle. Instead, I'd focus on investments and philanthropy. The true test of character, I believe, lies in your actions when money is presented as an option. Would you remain generous, or would greed take hold? I'll let you know when I win!

Where would you live if money was no object?

Money aside, I wouldn't trade my life in South Africa for anything. It's my home, and I cherish its unique culture, beauty, and people. South Africa has so much to offer, and I'm proud to be a part of its vibrant tapestry. My love for South Africa is unwavering, so even with no financial constraints, I wouldn't choose to live elsewhere. This country holds a special place in my heart, and I'm proud to call it home.

What's the greatest technological advancement in your lifetime?
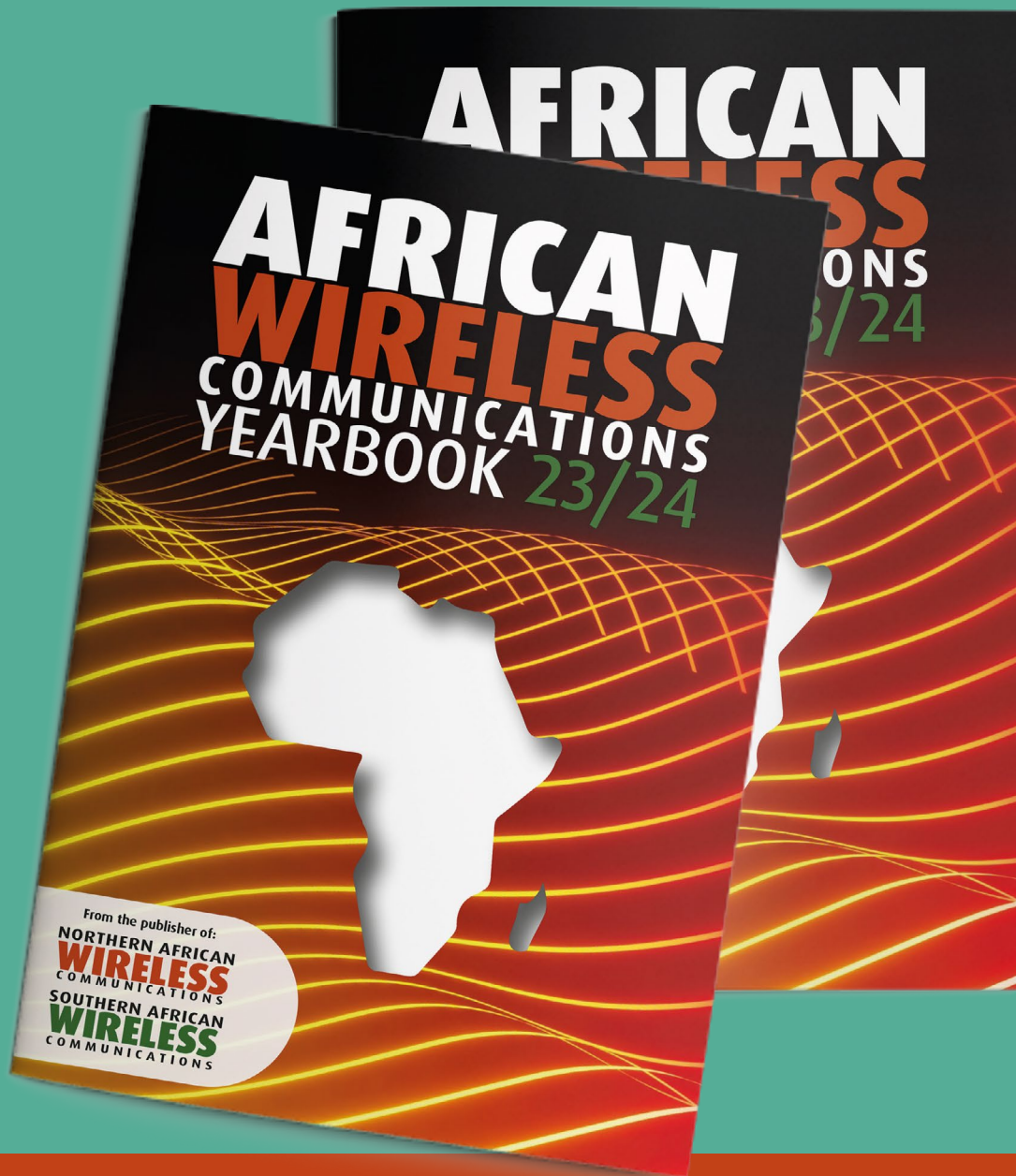
Technology has undoubtedly had a profound impact on society during my lifetime, and the mobile phone stands out as the most significant and transformative advancement. It's not just a communication device; it's a gateway to information, connection, and countless possibilities. The impact of IT on society has been immense, and the mobile phone remains a symbol of this revolution.

More recently, Generative AI has proven itself as an amazing development. The telecoms industry is abuzz with its potential, and as telco specialists, we have a unique perspective on its specific use cases for real-world challenges like network automation and personalised customer support. Recent discussions with our team and customers, many of whom have been experimenting with GenAI for months, highlight their excitement and desire for guidance when using this new tool. I aim to deepen our understanding of the industry's data, processes, and pain points, ensuring Amdocs is well-positioned to translate GenAI's potential into concrete solutions. We're actively collaborating with experts and early adopters to refine our approach, ensuring our solutions are not just effective but also grounded in the realities of the telco world. As the birthplace of its founder, I'm filled with excitement as Amdocs ventures deeper into Africa. We have a unique opportunity to bring the best telco-related technologies to the continent, not simply as an external force, but by empowering local teams and fostering collaboration. ∎

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