

For communications professionals in north, west, east & central Africa

# NORTHERN AFRICAN WIRELESS COMMUNICATIONS

JUNE / JULY 2024

Volume 23 Number 1

- Is neutral hosting key to bridging the divide?
- Data sovereignty and the MNO
- Will mega-constellations connect Africa?

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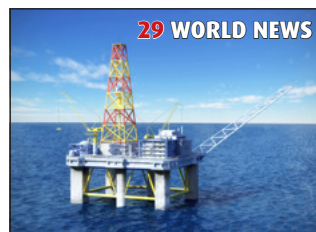


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# GSMA: Mobile operators are key to unlocking AI's economic potential

The GSMA reports that artificial intelligence (AI) apps have the potential to boost the African continent's economic growth by close to US\$3 trillion over the next six years – and mobile operators will be key to unlocking that.

The GSMA released a new report that identifies over 90 AI use case applications in Kenya, Nigeria, and South Africa that it says can 'drive socio-economic and climate impact.'

According to the 'AI for Africa: Use Cases Delivering Impact' report, which combines existing research with interviews with experts across civil society, NGOs, academia and the private sector – the vast majority of potential AI use cases in Africa are related to agriculture (49%), climate action (26%) and energy (24%).

The GSMA says these use cases could be part of a wave of emerging AI apps that, according to a March 2024 study from AI4D Africa, could boost the African continent's economic growth by \$2.9 trillion by 2030, the equivalent of increasing annual GDP growth by 3%.

For example, in sub-Saharan Africa – where up to 80% of food is produced by traditional smallholder farmers who lack access to information that would help improve yields – "the majority of AI use cases in agriculture involve machine learning (ML) enabled digital advisory services, which equip farmers with data-driven advice to adopt climate-smart farming practices and optimise productivity."

Meanwhile, AI can also enable more affordable and reliable energy services with use cases such as predictive maintenance, smart energy management, energy access assessment and productive use financing to monitor and extend services in energy-scarce areas.

With African countries being disproportionately impacted by climate change, AI could also support

use cases to mitigate that impact, such as biodiversity monitoring, wildlife protection and early warning systems for climate emergencies and other natural disasters.

Most (98%) of these kinds of use cases are essentially predictive AI applications that leverage ML approaches, due to the availability of historical datasets, ease of application and lower computation requirements compared with generative AI models. This is key because major barriers to AI adoption for African countries include limited availability of data centres and the rising cost of hardware and software. AI requires GPU-level compute power, and in countries like South Africa and Kenya, for example, the cost of a GPU representing 22% and 75% of GDP per capita, respectively. Even when data centres get built, the energy demand is an extra expense that also taxes the power grid.

The report recommends taking advantage of the fact that mobile networks are the primary modes of internet access to ease the availability of smartphones and use mobile-based AI solutions as 'a practical way to circumvent current limitations and tap into AI's full potential across the continent.'

The idea is to reduce reliance on high-powered data centres by using mobile networks to develop distributed or hyperlocal edge computing, where tasks occur on devices including phones and laptops. After foundational models are trained on large datasets, AI models can be transferred to smartphones for fine tuning.

"With smartphone penetration at 51% and expected to reach 88% by 2030, mobile-based edge computing will be central to expanding the proliferation and capabilities of AI in Africa," said the report.

The GSMA also lists other barriers

and challenges that need to be addressed. Key among these is the lack of availability of local-language data, which is needed to train AI models so that they "reflect the complexities and nuances of African markets rather than mimic data from the Global North."

According to Max Cuvelier Giacomelli, GSMA's head of mobile for development, said that there also "needs to be a strong focus on increasing skills for both AI builders and users, especially among underserved populations. Better training programmes are essential, particularly in the face of a global brain drain on AI talent."

AI development in Africa will further require strong partnerships across a broad ecosystem of partners including 'big tech,' NGOs, governments, and mobile operators. Policies must also evolve to address inequality, ethics, and human rights concerns in AI deployment.



## Niger calls for action to cut digital divide

The government wants Niger's telecom operators to do more to reduce the country's digital divide.

"It is not just about extending network coverage, but also

about making information and communication technologies (ICT) accessible and usable by all. This naturally includes improving infrastructure, reducing access costs

and promoting digital education," said Colonel-Major Idrissa Chaibou, director general of ARCEP.

This initiative is part of the Nigerien government's ambition to develop

ICT to make digital technology one of the levers of the country's socio-economic development. The country is also seeking to assert the country's digital sovereignty.



# NIGCOMSAT seeks collaborators for 2 satellites

NIGCOMSAT is seeking international collaborators and investors for its project to deploy two new telecommunications satellites: NigComSat-2a and NigComSat-2b.

Jane Nkechi Egerton-Idehen, the company's chief executive officer, said that a call for expressions of interest has been launched for the purpose.

The two new satellites will replace the NIGCOMSAT-1R, the only

communications satellite operated by Nigeria in more than a decade. It will reach the end of its 15-year life in 2026.

As early as 2016, the Nigerian government had expressed its desire to equip the country with two new telecom satellites. Adebayo Shittu, then minister of communications, had said that the initiative required about \$500 million. He added that the government was negotiating a loan

with the Export-Import Bank of China (China Eximbank) for the project.

According to NIGCOMSAT, these two new satellites will provide broader global coverage of high-speed Internet, particularly in remote and poorly served areas. It is with this in mind that the company has multiplied partnership agreements with companies such as Infratel, Hotspot and Dimension Data in recent weeks.



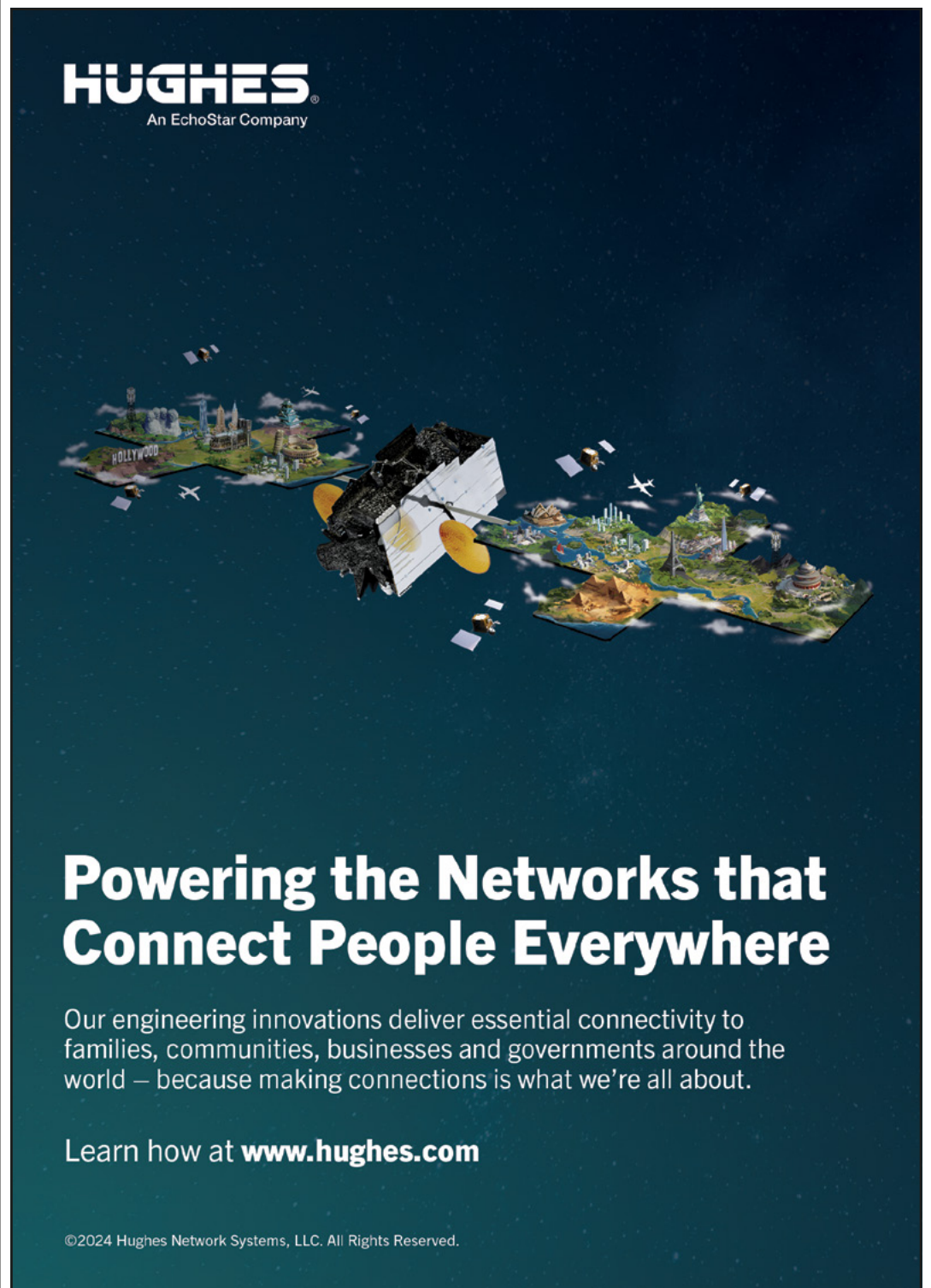
## Algeria prepares for digital transformation

According to Meriem Benmouloud, high commissioner for digitalisation, this strategy aims to transform traditional paper-based management into digital management, to establish transparency, to fight against bureaucracy, to guarantee equitable access to information and to improve the performance of economic enterprises while ensuring the quality of services.

The strategy responds to current socioeconomic and cultural requirements and is based on two essential pillars: a law on digitalisation currently being developed and information and cyber security. The law on digitalisation will provide a framework and regulation for the digital domain, removing administrative obstacles and remedying technological gaps. Information and cybersecurity will be strengthened through collaboration with the Ministry of National Defense.

The first results were felt in the latest report of the International Telecommunication Union (ITU) published in December 2023. Algeria recorded a significant advance in the ICT Development Index (IDI), moving from 102nd to 88th position among the 169 ITU member countries, a jump of 14 places.

The final version of this new strategy was submitted to the presidency in June for approval, and should go a long way in bringing Algeria in line with world-leading countries.



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# Somalia: Mastercard and Premier Bank tackle digital financial services

Mastercard has collaborated with Premier Bank to launch Premier Payment Gateway, a digital payments platform that enables Somali businesses to accept international card payments for online purchases.

This groundbreaking initiative is expected to significantly expand market reach, increase revenue for local businesses, and contribute to the growth of Somalia's digital economy.

Powered by the Mastercard Payment Gateway Services (MPGS), the Premier Payment Gateway provides a secure, seamless, and efficient way for Somali businesses and merchants to accept Mastercard and other branded payment cards from customers worldwide. This capability ensures that merchants receive payments in foreign currency without lengthy settlement processes, thereby attracting foreign currency into Somalia and boosting the local economy.

"Through this collaboration, businesses will have access to a safe online payment gateway that will enable them to accept payments, expand their customer base, and boost their revenues," said Shehryar Ali, country manager for East Africa and Indian Ocean Islands, Mastercard. "This supports Mastercard's efforts to bring 50 million micro and small businesses into the digital economy by 2025, underscoring our commitment to fostering financial inclusion and supporting businesses globally. We are proud to collaborate with Premier Bank to enhance the e-commerce landscape in Somalia and grow access to the digital economy."

"As part of our aspiration to be a market leader through impactful transformation, innovation, and digitisation, Premier Bank has collaborated with Mastercard to launch an innovative e-commerce solution designed to help local

businesses grow internationally. This partnership will provide secure, around-the-clock payment services to our customers, allowing the bank to expand our customer base both locally and globally by meeting diverse requirements," said Mohamed Ghedi Jumale, CEO, Premier Bank.

The collaboration aligns with Premier Bank's 2030 strategy to create a mutually beneficial payment ecosystem for international cardholders and merchants. It comes at a time when the appetite for e-commerce is rising, providing an opportunity for the advancement of a digital economy in Somalia.

E-commerce has increased significantly since the onset of the COVID-19 pandemic, and this new gateway will provide Somali businesses with the tools to capitalise on the growing demand for online shopping. With 7.99 million cellular mobile connections in Somalia at

the start of 2023, equivalent to about 44.7% of the total population and increasing internet accessibility in Somalia, the digital payment gateway is well-positioned to tap into the evolving consumer who wants a safe and seamless online shopping experience.

The Premier Payment Gateway represents a first-of-its-kind initiative in Somalia, empowering local businesses to accept international payments and compete on a global scale while also enabling consumers worldwide to gain access to a broad range of Somali products online. By simplifying the process for Somali merchants to receive payments in foreign currencies, this platform attracts and retains foreign currency into the country and supports broader economic growth and financial inclusion goals. It is a centralised gateway to streamline tax and fee collections, improving efficiency and reducing leakage.

## Bayobab Cote d'Ivoire scores key infrastructure licence

Bayobab Group has announced the acquisition of a key infrastructure license for Bayobab Cote d'Ivoire, marking a significant leap forward in their mission to drive digital transformation.

This license encompasses terrestrial and subsea connectivity, empowering Bayobab Cote d'Ivoire to establish a robust data transmission network with fibre, satellite, and radio technologies.

The impact of this license extends beyond technology, aligning with the government's strategic digital pillars to enhance public services and economic growth. By eliminating barriers for MNOs and ISPs, Bayobab fosters

an environment for innovation and growth in Cote d'Ivoire's digital ecosystem.

"Bayobab is committed to connecting Africa through next-gen digital solutions. With our expanding fibre network, we serve a substantial African subscriber base and global customers alike," said Mohammed Aliyu, chief FibreCo officer, Bayobab Group.

"This pivotal license marks a milestone in our digital transformation journey, positioning us to revolutionise connectivity and foster innovation nationwide," said Florent Guede, managing director, Bayobab Cote d'Ivoire.



## Cofinity Group, Inc. teams up with Africa's DC operators

Cofinity Group, Inc. (CGI) has announced strategic Channel Partnership Agreements with leading data centre providers in Africa including PAIX Data Centres, Rack Centre, Raxio, and Digital Realty which includes Digital Realty's African entities; iColo, Teraco and Digital Realty Nigeria. Collectively, these providers operate in markets that represent over 75% of sub-Saharan Africa's GDP across 11 countries.

"CGI is in a unique position to help enterprises secure and optimise their mission-critical applications in key African markets with experienced, trusted data centre operators. We have had the privilege of working with the leading data centre providers in Africa and we are confident that enterprises will benefit from our deep knowledge and streamlined commercial processes," said Ray Lawless, president, CGI.

"Cofinity Group's initiative is further evidence of the surging demand in Africa for the services of



data centre companies. We welcome CGI's role in bringing together key sectors, such as fintech, with data centre providers in Africa, continuing the transformation of Africa's digital infrastructure and accelerating economic growth," said Ayotunde Coker, chairman, Africa Data Centres Association.

CGI's vast experience in various markets and close relationships with these data centre operators provides a unique opportunity to assist enterprises looking to migrate to a quality colocation data centre solution in Africa.



# TECNO and UNICEF to support Nigerian education advancement with new learning platform

TECNO has announced a partnership with the United Nations Children's Fund (UNICEF) in Nigeria to support the implementation of the Nigeria Learning Passport, a digital learning platform.

Globally, too many children remain out of school, and many more are not learning. In Nigeria, the challenges are particularly acute. To improve the quality of education for children and adolescents, the Federal Ministry of Education and UNICEF launched the innovative Nigeria Learning Passport programme in 2022. This initiative forms part of UNICEF's broader global educational strategy, the Learning Passport, which was first established in 2018.

The platform provides curriculum-aligned materials in local languages through a combination of online and offline delivery, allowing children to access digital learning resources at any time, wherever they are. This ensures

that quality education is available and accessible to all. The platform covers a full range of educational content, from foundational learning to skills development, and also provides professional training for educators.

The programme has expanded to 19 states across the country, ranking second among all participating countries with approximately 888,000 registered users.

TECNO is working with UNICEF to support the expansion and deepening of the Nigeria Learning Passport. The partnership will further strengthen content development, purchase and maintenance of technical equipment, and professional training for educators. In 2024, UNICEF plans to expand the Nigeria Learning Passport to include offline content for 50,000 children in remote and low-income areas, further reducing the education gap and improving the quality of education.

"We are pleased to partner with TECNO to enhance the reach and impact of the Nigeria Learning Passport. This collaboration will allow us to provide more children, especially those in remote and underserved areas, with the quality education they deserve. Digital learning is a powerful tool in bridging educational gaps and ensuring that every child has the opportunity to learn and thrive. With TECNO's support, we are one step closer to our goal of making education accessible to all children in Nigeria, empowering them to build a brighter future," said Cristian Munduate, country representative in Nigeria, UNICEF.

"As part of its Corporate Social Responsibility endeavours, TECNO keeps giving back to the communities where our business is present. Investing in education is an effective strategy for breaking the inter-generational transmission of poverty and contributing

to social and economic development. Africa has the world's youngest population structure, and the progress for African children is the progress of the world. Through the Learning Passport programme, we hope to help young people in Nigeria access sufficient education and development opportunities, becoming a strong engine for economic growth and social progress in Africa and even the world," said Jack Guo, general manager, TECNO.

By the end of 2023, the Learning Passport programme had expanded to 38 countries worldwide, with a total of 6.02 million registered users and more than 13,000 courses on offer. In 2020, the Learning Passport was recognised as one of the 50 Most Influential Projects by The Project Management Institute, and in 2021 TIME named the programme one of the best 100 inventions of the year.

## Burkina Faso inspires Mali's future telco services

For Mali to draw inspiration from Burkina Faso's experience in managing its universal access fund for telecom services, a delegation from the Universal Access Fund Management Agency (AGEFAU) paid a working visit to the Electronic Communications and Postal Regulatory Authority (ARCEP).

"This benchmark visit aimed to share Burkina Faso's experiences in terms of regulation in the process used and the results obtained in the implementation of the rural network coverage solution," said ARCEP Burkina Faso in a statement.

Through this visit, AGEFAU wants to strengthen its capacities to better fulfil its mission of facilitating access to ICT for the entire Malian population. The initiative is also part of the Strategy for reducing the digital divide in Mali, where disparities in terms of access to telecommunications and information and communication technologies are quite pronounced. The Malian telecoms regulator announced a study on the penetration of ICT and postal services last May.

## NCA establishes connection termination conditions for Ghana's operators

The National Communications Authority of Ghana (NCA) has set out the procedures and conditions under which it will grant telecommunications operators permission to terminate any connection contract signed between them.

In the event of a dispute, the aggrieved party must now apply to the NCA for authorisation to disconnect. The NCA will assess the application considering criteria such as outstanding

debts and payment history. Notification must then be given to the affected parties and the public before disconnection. The framework also includes measures to ensure that service providers meet their financial obligations and the conditions under which reconnection will be granted.

The collaboration framework comes as the government has begun implementing the National Roaming Policy to improve people's access to telecom services.

"These guidelines aim, among other things, to ensure fair competition between its licensees, authorisation holders, telecommunications network operators and providers of public communications services, while protecting the interests of consumers or users of communications networks or services, and in particular their freedom of choice and their right to quality of service and good value for money," said the NCA.

## Orange Sierra Leone targets nationwide network updates for voice and data

Orange Sierra Leone has embarked on a nationwide campaign to modernise its telecom network to improve the quality of service provided to subscribers for voice and data.

"The upgrade of the Freetown sites has been completed and is being optimised. We are currently upgrading our sites in the provinces," said Orange Liberia

in a statement.

The company is taking all necessary measures to limit the impact of the works on the quality and availability of the service. Ultimately, this initiative should enable Orange Sierra Leone to better meet the needs of its customers and strengthen its position in the national telecoms market.



# WATRA calls for infrastructure sharing

The West Africa Telecommunications Regulators Assembly (WATRA) is hoping to encourage infrastructure sharing to lower the cost of internet access in West Africa.

The executive secretary of the body, Aliyu Aboki, suggested that infrastructure like gateways and data centres are facilities that could be shared by countries in the region. However, lack of interconnectivity is another issue driving up the cost of telecom services in the sub-region. For content hosted in one African

country to be accessed in another African country, it must first go through Europe via submarine cables because of the lack of direct connectivity among data centres.

Increasing internet penetration, mobile connectivity, and a tech-savvy youth population have led to rapid growth in West Africa's digital economy. WATRA figures suggest that the digital economy currently contributes around US\$30 billion annually to the region's GDP. However, the cost of internet access across West African countries is still high.



## Liberia to clean up telco competition

The Liberia Telecommunications Authority (LTA) wants to clean up competition in the local telecom market and is preparing the development of two new regulations on numbering resources and the provision of value-added services (VAS).

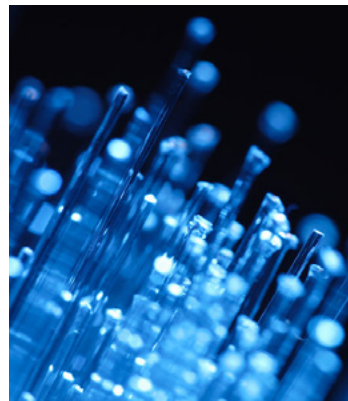
The regulator organised public consultations to garner the opinions of stakeholders from the various telecom segments. The first regulation prevents telecom operators from monopolising access to numbering resources, including short numbers, USSD codes, machine-to-machine numbers and toll-free numbers. The second aims to facilitate access to operators' platforms for the provision of VAS by establishing fair prices for all.

The move is in line with the LTA's commitment to promote fair competition in the market, while ensuring innovation and consumer welfare. The regulator introduced new regulations on the quality of services that telecom operators must guarantee to consumers.

"These regulations are a game changer for Liberia. They address the fundamental issues that have held back our telecommunications sector. By ensuring equitable access and control, the LTA sets the stage for meaningful growth and development," said Arthur Gbanyan, representing the National Telecommunications Consumer Organization.

## NCC to cut rates of unconnected Nigerians

The Nigerian Communications Commission (NCC) plans to reduce the rate of unconnected Nigerians in rural areas to 20% by 2027 from the current 61%, according to executive



vice chairman Aminu Maida.

"We will create an enabling environment for innovation, ensure strong infrastructure, unlock investment in critical sectors and boost economic growth," said Maida.

This initiative is part of the actions undertaken by the Nigerian government to generalise access to telecommunications services for the population. It plans to deploy 95,000km of optical fibre to cover the entire territory, in partnership with the World Bank and the European Union. The executive is also exploring the satellite solution to cover the entire country, through the national operator (NIGCOMSAT) or private operators.

## Djezzy's network disrupted following fire

Djezzy's mobile network has been experiencing disruptions in several regions of the country for several days due to an incident that occurred at its technical installations in Blida following a fire.

According to Djezzy, the disruptions affected 14 wilayas in Algeria to varying degrees. The company claims to be working closely with local authorities, civil protection and its various partners to control the situation.

These disruptions affect thousands of customers who are having difficulty making calls and connecting to the Internet, according to Mustapha Zebdi, president of the Association for the Protection of Consumers and their Environment (APOCE).

The company had invested 8.3 billion dinars in the first quarter of 2024 to enhance its technological infrastructure, increasing 4G coverage to 91.5% of the population, marking an 11-point improvement compared to the same period in 2023. Djezzy also reported surpassing the 16 million customer mark, with an annual increase of 5.5% and over 800,000 new subscribers. Revenue reached 26.5 billion dinars in the first quarter of 2024, marking an 11% increase compared to the same period last year. This double-digit growth, achieved for the fourth consecutive quarter, reflects its strong market position and the increasing trust of its customers in its services.

## Starlink welcomed to South Sudan by NCA

Starlink has officially launched services in South Sudan with the approval of the National Communications Authority (NCA).

Customers must register with the service and make payments in South Sudanese pounds, equivalent to the US dollar prices set by Starlink, which the NCA says will ensure transparency and affordability of the service.

Starlink will soon select local distributors to manage the distribution of its services and equipment within the country. In the meantime, the regulator urged

people not to import Starlink kits through unauthorised distributors, which is illegal under the National Communication Act of 2012.





# Algérie Télécom to connect nationwide primary schools with high speed internet connectivity

The Algerian ministry of interior, local authorities and regional planning has signed a partnership agreement with Algérie Télécom to connect all primary schools in Algeria.

Algérie Télécom will provide the schools with high-speed internet connectivity and fixed-line telephone services. Priority will be given to

schools located in low-income municipalities.

This initiative can be part of the efforts undertaken by the Algerian government to develop the information society through infrastructure, telecommunications means and the widespread use of ICT in all sectors of the economy.

The partnership is expected to create a more efficient educational environment across the entire national territory. The initiative will enable Algerian primary school students and teachers to access online educational resources, conduct research, learn and communicate more effectively.



## Moov Africa Togo and Ecobank-Togo partner on fintech

Moov Africa Togo and EcobankTogo have announced the launch of 'Move Money GAB,' a new financial service that allows subscribers to Flooz, Moov's mobile money service, to withdraw cash directly from Ecobank's automated teller machines (ATMs), without using a bank card.

"This partnership between Moov Africa and Ecobank-Togo allows all Togolese to withdraw money, whether they are Moov customers or Flooz users," said El Bedraoui Younes, managing director of Moov Africa.

"With this solution, our customers no longer need to go to Ecobank branches or Xpress points. They can now make their withdrawals directly at Ecobank counters, which facilitates access to financial services for a large part of the population," said Souleymane Touré, CEO of Ecobank Togo.

In the competitive landscape of Togolese mobile money, this partnership opens new avenues for both entities.

Move Money GAB intends to meet the growing demand for digital financial services in a market where the mobile money penetration rate, estimated at 42.4% by Arcep in the first quarter of 2024, reveals significant growth potential for operators.

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## Telecom Egypt to launch 5G with Nokia

Nokia has announced a new partnership with Telecom Egypt to bring 5G technology to Egypt for the first time.

The collaboration aims to revolutionise the country's telecom landscape by introducing 5G to cities including Alexandria, Aswan, Cairo, Giza, and Luxor. Nokia will provide its comprehensive AirScale portfolio to deliver an exceptional network experience to Telecom Egypt's customers including faster data speeds, enhanced performance, and capacity. Deployment will take place later in 2024.

Nokia will deploy 5G radio access network (RAN) equipment from its AirScale portfolio, comprising baseband units and its latest generation of Massive MIMO radios. These solutions utilise Nokia's energy-efficient ReefShark System-on-Chip technology, delivering extensive 5G capacity and coverage as well as enabling easy deployments. Nokia will also offer various professional services, encompassing deployment, integration, and network optimisation.

Earlier in 2024, Telecom Egypt secured the country's first 5G license, which is valid for 15 years.

"This new agreement with Nokia further strengthens our strong partnership, reaffirms our commitment to providing cutting-edge digital services, and positions us at the forefront of the 5G revolution. Both our consumer and enterprise customers can look forward to enhanced mobile broadband and exciting new applications that leverage the speed and low latency of 5G technology," said Mohamed Al Fowey, vice president, and chief technology officer at Telecom Egypt.

"This important 5G contract with Telecom Egypt extends our longstanding partnership. The introduction of 5G services enabled by our extensive portfolio will open exciting new opportunities for people and businesses in Egypt to experience enhanced mobile connectivity. Our collaboration establishes a strong foundation for driving the nation's digital transformation," said Tommi Uitto, president of mobile networks at Nokia.



### Talking critical

Stuart Will, TCCA TETRA Industry Group



## TETRA's rising influence across vertical sectors

TCCA's Critical Communications World (CCW) 2024 conference and exhibition took place in Dubai in May and was one of the largest ever editions of the event. More than 4,700 visitors from 97 countries joined CCW over the three days, creating a true sense of international collaboration. More than 200 expert speakers took part in presentations, panel discussions, debates and Focus Forums that covered this year's core theme of Securing society and industry - Connection is the lifeline.

With a wide range of topics covered, from AI and antennas to satellites and smart energy, one topic truly underpinned the event core theme - TETRA technology. TETRA is the most widely used critical grade professional radio technology in the world. The technology provides organisations with critical communication network solutions that are essential for reliable, efficient and safe operations.

Key markets for TETRA are obviously public safety, as it is used by governments around the world to secure citizens and society, but other verticals include transportation, energy, mining, military, and commercial applications, and many more - let's take a look at a few of them.

For more than two decades, TETRA has experienced widespread adoption into the transportation sector including rail networks. TETRA is being regularly deployed, upgraded, and expanded, from metro systems to highspeed nationwide levels. Through ongoing investment, including enhanced security and resilience, and the introduction of new air interface encryption algorithms within the ETSI standard, TETRA is even more relevant and necessary for the rail sector. This helps to ensure that TETRA continues to meet needs for the rail sector today and well into the foreseeable future.

Across the world, the rail sector is expected to experience an upward trend, driven by several key factors such as infrastructure development and urbanisation, with the high degree of government emphasis on creating sustainable transport systems another major driver.

The mining sector is characterised by harsh user equipment and deployed base station environments, where networks must be always 'live' or operations stop - and that is costly. Long shifts need long battery life in communications equipment (typically >14Hrs). Noisy environments demand powerful audio and clear voice. It's an environment where users wear gloves, so TETRA manufacturers offer equipment with reduced keypad and programmable keys; and the safety of workers is key - TETRA offers lone worker, GPS, man-down, localisation of users and GPS geofencing. For mines that are constantly expanding, TETRA offers both repeater/gateway radios and easily deployable outdoor base stations fit for use in these environments. In 2023, the global mining market experienced a 6.1% growth, reaching over US\$2,145Bn, and is projected to increase to more US\$2,775 billion by 2027, with a 6.7% CAGR.

In the utilities sector, typically workers will need system radio coverage, the ability to have contact with a dispatcher, PBX connectivity and Direct Mode operation where users can switch to device-to-device ('walkie talkie' style communication), separate from the network - this gives users the ability to not be interrupted by hearing system 'chitter-chatter' while carrying out critical tasks.

Climate change bringing extreme weather means resulting damage needs to be rectified quickly. TETRA has a suite of applications usable by this industry such as workflow management for lineman maintenance teams, using a combination of location-based assignment and SDS instructions.

Oil and gas industries have a wide range of needs. TETRA meets these for each operational area beyond voice, such as solutions requiring telemetry - and like cellular, there is significant growth in the uptake of TETRA data services. For oil and gas organisations, wireless data has shown it can improve efficiency in several areas. For remote monitoring solutions - e.g. for corrosion monitoring (SCADA), faster decision making based on near real-time data enables more rapid identification of potential problems, and more efficient maintenance inspections and operator rounds. The collection of

status data and records, alerts of emergency situations, and location solutions means more efficient management of the workforce.

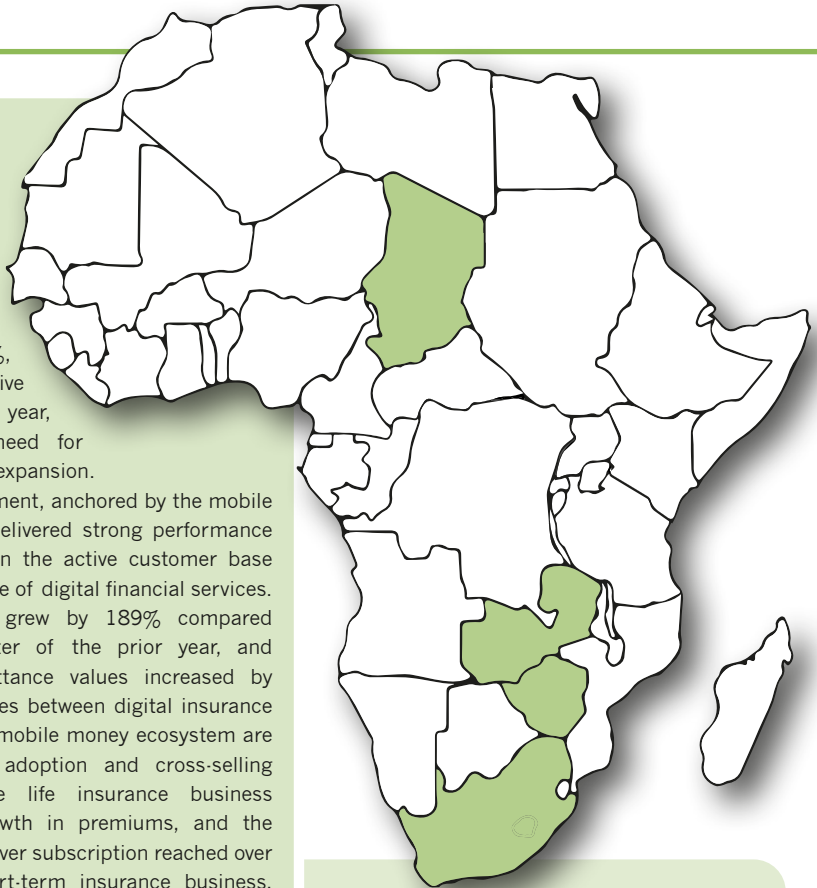
Normally, in a military context, we associate TETRA use for 'must-have' communications, encrypted radios and clear audio speech, typically with rapid deployable base stations being used in Tactical Operations. However, there is an increasing use of TETRA for other uses, with armies around the world employing TETRA for use in training exercises. TETRA radios are used with biometric sensors to monitor soldier performance (heart-rate, blood-pressure, temperature etc.) all sending data back to a central command monitor centre tracking troops in action and how the exercises affect their performance.

One of the most distinctive aspects of TETRA is the extremely high level of interoperability among products (e.g. network infrastructure, radio terminals) from different manufacturers. This is achieved thanks to TCCA's comprehensive Interoperability Certification (IOP) process which enables a truly open multi-vendor market for TETRA equipment and systems. This multi-vendor market gives concrete benefits both to the users in terms of a wide portfolio of compatible equipment, competitive pricing and rapid development of new product models; and to the industry in terms of a wider accessible market, faster market take-up and better possibilities for investment in new development.

TCCA recognises TETRA as a continuously evolving narrowband standard that delivers mission critical service globally every day. The work on updating TETRA encryption is designed to make TETRA secure for at least the next 20 years. For mission critical users requiring organisation-centric group voice communication and messaging services using narrowband technologies on dedicated frequencies, TETRA remains the optimal multi-vendor interoperable choice for the foreseeable future.

The TETRA story will continue to be told at Critical Communications World 2025, taking place 17-19 June at Brussels Expo in Belgium, with host operator ASTRID supporting the event.





## Econet Wireless Zimbabwe acquires fintech arm

Econet Wireless Zimbabwe Limited has acquired the financial technology (FinTech) businesses from EcoCash Holdings Zimbabwe Limited. The administrative integration process of these businesses is expected to be completed by the second quarter and will result in significant synergies, streamlining processes and propelling the business forward.

Post-integration, Econet's primary focus areas will be mobile money, digital platforms, InsurTech, HealthTech, and mobile communications. The acquisition excludes Steward Bank, and the financial results of these FinTech businesses are now consolidated as subsidiaries of Econet Wireless Zimbabwe Limited Group, reported under the financial technology segment.

Zimbabwe introduced a new currency, Zimbabwe Gold (ZWG), on 5 April 2024, replacing the Zimbabwean dollar. Backed by precious metals and foreign currency reserves, this new currency aims to stabilise the economy.

Econet Wireless is prioritising network modernisation to stay ahead in the rapidly evolving industry, focusing on 5G and IoT technologies. Over 30 new sites were commissioned across the country, enhancing network performance and quality of service. The modernisation program will continue, covering urban, peri-urban, and rural areas, with plans to commission additional 5G sites by the end of the financial year.

The company is also investing in renewable energy sources like solar power to mitigate the impact of load shedding on the national power

grid. For the quarter, data and voice usage grew by 74% and 46%, respectively, relative to the previous year, highlighting the need for sustained network expansion.

The FinTech segment, anchored by the mobile money business, delivered strong performance driven by growth in the active customer base and increased usage of digital financial services. Active customers grew by 189% compared to the first quarter of the prior year, and international remittance values increased by 265%. The synergies between digital insurance platforms and the mobile money ecosystem are driving increased adoption and cross-selling opportunities. The life insurance business saw a 14.2% growth in premiums, and the EcoSure Airtime Cover subscription reached over 400,000. The short-term insurance business, Moovah, introduced mobile phone insurance, reinforcing Econet's commitment to innovation.

Econet declared and paid an interim dividend of US\$0.26 per share for the quarter ended 31 May 2024. Looking ahead, the increasing demand for data and digital services will continue to reshape mobile network operations and capital investments. The reintegration of the FinTech businesses is expected to drive innovation, enabling Econet to meet the evolving needs of its customers.

## Airtel Networks Zambia and ZICB team up to connect SMEs

Airtel Networks Zambia plc has entered a strategic partnership with Zambia Industrial Commercial Bank (ZICB) to transform the business landscape for Small and Medium Enterprises (SMEs) in Zambia.

This collaboration will provide ZICB's SME customers with advanced digital connectivity through 4G and 5G internet devices.

The initiative highlights the commitment of both Airtel Zambia and ZICB to support the growth and development of SMEs by ensuring they have access to reliable and high-speed internet services. By leveraging Airtel's robust 4G and 5G infrastructure, SMEs will be better equipped to operate efficiently, access new markets, and enhance their overall business performance.

## Cell C to rebrand to increase competitiveness and gain traction

Cell C is considering a rebranding to become more competitive in the country's telecoms market, as per Jorge Mendes, chief executive.

The rebranding project is part of the turnaround strategy initiated in 2017 and which led to the recapitalisation of Cell C completed in September 2022. In June 2023, the company finalised its migration to a virtual access network provided by MTN, abandoning its own network infrastructures.

The deal also comes as Blue Label, Cell C's largest shareholder, seeks to acquire a majority stake in the operator. The company is targeting an additional 4.04% stake to reach 53.5%. The Competition Commission of South Africa (CCSA) gave the green light for the deal in April.

Cell C's rebranding is expected to come with innovative services that will help Cell C gain traction with South African telecom consumers.

## Airtel Chad renews operating licence with ARCEP

Airtel Chad has renewed its operating license in the country by signing new specifications with the Electronic Communications and Postal Regulatory Authority (ARCEP).

According to Boukar Michel, minister of posts and digital economy, Airtel Chad's new specifications open up new revenue opportunities such as the possibility of deploying optical fibre in urban and peri-urban

areas. The operator will now be able to strengthen its offering in the home and business data segments.

Beyond the opportunities, the new specifications also contain obligations to be respected by Airtel Chad. These include technological neutrality and the contract conditions of SIM cards.

The regulator's emphasis on quality of service reflects the need to adequately meet the growing

needs of consumers. In August 2023, the regulator fined Airtel 5 billion CFA francs for failing to meet investment commitments set out in its specifications. More recently, President Mahamat Idriss Déby Itno created an interministerial commission dedicated to improving the quality of mobile phone service, according to Dina Mahamat Amadou, CEO of Airtel Chad.

## Cerillion to implement BSS/OSS suite for southern African operator

Cerillion has announced further details of a new five-year contract with a leading provider of connectivity solutions in southern Africa, first announced in May.

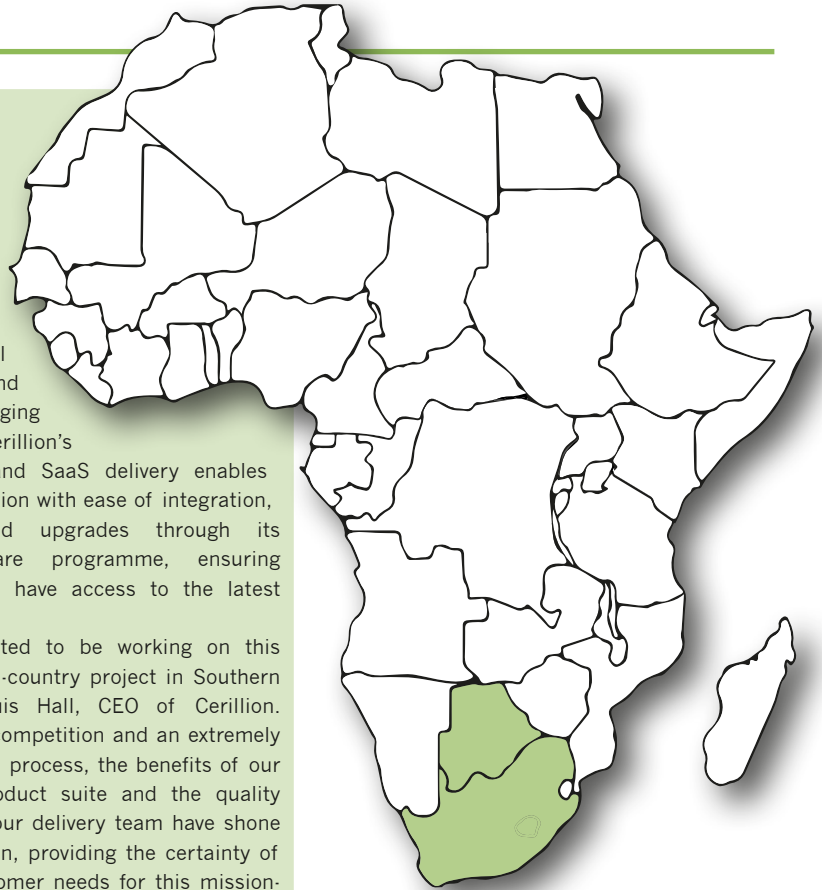
Cerillion will implement its pre-integrated BSS/OSS suite to support a wide range of B2B and B2C services including 5G Standalone, fibre and satellite, in one convergent solution.

With a network spanning seven countries across the region, the multi-service operator is growing rapidly and now needs to consolidate its operations on a unified BSS/OSS platform with a strong digital engagement layer and end-to-end order-to-cash integration. Key to choosing Cerillion was the company's proven track record of supporting multi-country operators with a fully convergent solution, with all customer types and service types managed on one unified platform.

Built around a common technology framework using industry standards including

TM Forum Open APIs, Open Digital Architecture and the 3GPP charging specifications, Cerillion's BSS/OSS suite and SaaS delivery enables rapid implementation with ease of integration, maintenance, and upgrades through its evergreen software programme, ensuring customers always have access to the latest product features.

"We are delighted to be working on this exciting new multi-country project in Southern Africa," said Louis Hall, CEO of Cerillion. "Faced with stiff competition and an extremely thorough selection process, the benefits of our pre-integrated product suite and the quality and flexibility of our delivery team have shone through once again, providing the certainty of outcome the customer needs for this mission-critical transformation project."



## Peraso reports new mmWave volume production order from South Africa

Peraso Inc. has announced preliminary revenue results for the second quarter ended 30 June 2024. Total net revenue for the second quarter is anticipated to be approximately \$4.2 million, exceeding the company's previous guidance.

"Our stronger than expected preliminary revenue results for the second quarter represent strong growth of over 50% sequentially and over 70% year-over-year," said Ron Glibbery, CEO of Peraso. "The higher revenue for the quarter was primarily driven by increased shipments of our end-of-life (EOL) memory IC products, combined with a new volume production order for our mmWave antenna modules in support of the initial deployment of our DUNE platform by a South African service provider. We expect additional incremental orders from this customer in the coming quarters, together with a growing number of mmWave customer engagements targeting gigabit-speed fixed wireless access applications in dense urban environments. The further ramping of our mmWave shipments, as well as continued fulfilment of our sizable backlog orders of EOL memory products, gives us increased confidence in the Company's outlook for continued growth in the second half of 2024."

## EnduroSat to help build Botswana's first satellite for mining and farming sectors

EnduroSat is partnering with the Botswana International University of Science and Technology (BIUST) to build the nation's first satellite.

BOTSAT-1 will be built on EnduroSat's 3U microsatellite platform and equipped with a hyperspectral camera to support the country's mining and agricultural industries. In addition, BOTSAT-1, equipped with an advanced hyperspectral camera on board, will significantly aid local agriculture and mining industries by delivering crucial insights into soil and ground composition. This new space-derived data will enable BIUST to provide decision-makers with essential information for strategic long-term planning and investments.

The satellite set to launch aboard SpaceX's Transporter-13 mission no earlier than February 2025, will be crucial in tackling Botswana's developmental challenges, fostering technological innovation, and promoting sustainable development. In line with EnduroSat's dedication to making space accessible to all, this mission aims to provide practical technical and mission operations experience in Botswana. BIUST engineers will collaborate with the EnduroSat team in Sofia to finalise the satellite's assembly and payload integration. Additionally, BIUST will fully leverage the satellite's software-flexible architecture using the SpaceOps software.

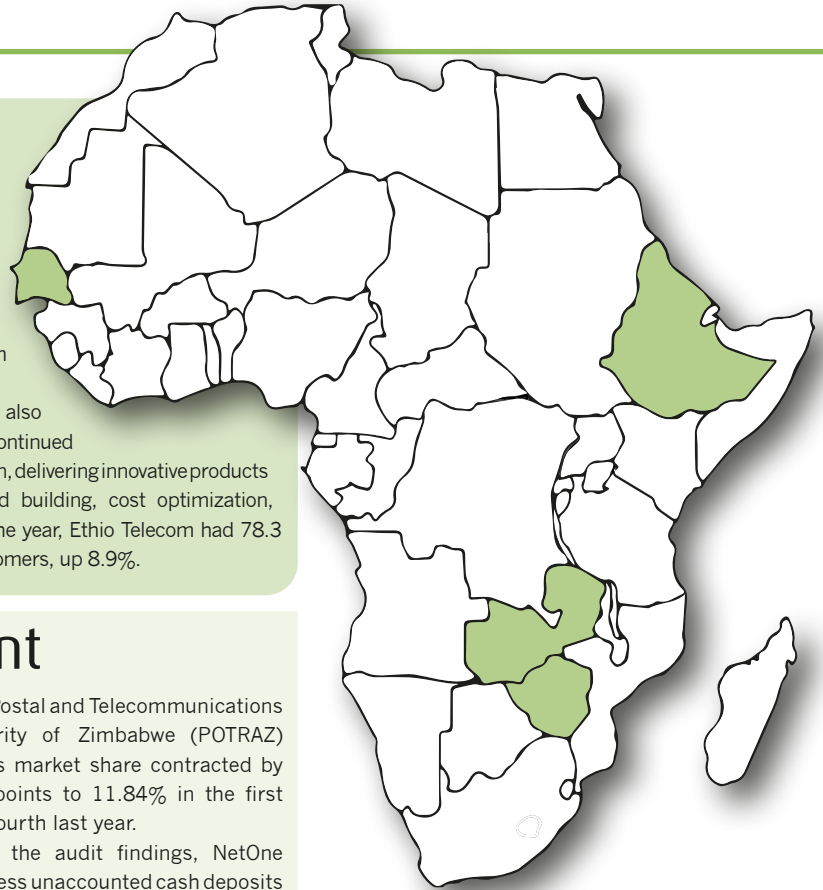
"EnduroSat has been an exceptional partner in

our journey to launch Botswana's first satellite. Their expertise and support have been invaluable, and we are excited about the progress we have made together. This partnership brings us closer to realising our shared vision and underscores the strength of our mutual commitment to advancing space technology in Botswana," said Otlogetswe Totolo, vice chancellor of the Botswana International University of Science & Technology (BIUST).

"The fact that BIUST has a long-term strategic growth vision and that they are following it strictly will enable them to build a formidable space programme. BIUST has an enormous potential for growth, and I am proud that they have chosen to partner with EnduroSat in this journey. Their team is incredibly dedicated and focused on making a positive impact," said EnduroSat chief executive officer (CEO) Raycho Raychev.







## Ethio Telecom grows net profit 21% year-on-year

Ethio Telecom has posted a net profit of 21.79 billion birr in the 2023/2024 financial year. This represents a 20.9% increase from the previous year.

At the end of the year, Ethio Telecom saw its revenue increase by 21.7% year-on-year to Birr 93.7 billion. Earnings before interest, taxes, depreciation and amortization (EBITDA) reached Birr 42.44 billion, an increase of 47%.

“We focused on several key initiatives to continue our growth. These included expanding and improving our digital and telecommunications infrastructure to

meet the growing demand for high-quality services,” said Ethio Telecom in a statement.

The company also focused on continued network optimisation, delivering innovative products and services, brand building, cost optimization, etc. At the end of the year, Ethio Telecom had 78.3 million mobile customers, up 8.9%.

## NetOne technically insolvent

NetOne is reportedly technically insolvent - the country’s acting auditor-general Rheah Kujinga reported that the firm’s total liabilities exceeded its total assets by ZWL\$32 billion in 2022. The company posted a loss of ZWL\$40 billion for the financial year ended 31 December 2022.

Local news reports that in the first quarter of 2024 NetOne recorded a 5.52% dip in active subscribers to 4,017,167 from the previous

quarter, while the Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ) said that NetOne’s market share contracted by 6.66 percentage points to 11.84% in the first quarter from the fourth last year.

In response to the audit findings, NetOne committed to address unaccounted cash deposits into its accounts and upgrade its software to better capture performance as well as data.

## World Bank may provide Zambia with \$100 million to improve digital access

The World Bank is considering providing \$100 million to the Zambian government to improve people’s access to the internet and digital services.

According to Wencai Zhang, managing director of the Bretton Woods institution, the \$100 million will be used to implement the Digitalization of Zambia Acceleration Project (DZAP). The project is expected to be approved by the World Bank Board of Directors in March 2025. Meanwhile, \$6 million will be released in advance for project preparation activities. In addition, an implementation unit will

be established and operationalized within the Smart Zambia Institute.

The World Bank funding will bolster the country’s digital transformation efforts. In November 2023, the government unveiled a project for community digital transformation centres to provide people with internet access and build digital skills. Lusaka is also stepping up initiatives to strengthen the country’s digital infrastructure. The government has set a goal of connecting every Zambian to a reliable communications network by 2030.

## Africa Data Centres doubles size of CPT1 Cape Town site in expansion

This expansion will add three new state-of-the-art halls in new areas on the campus with another 6MW of IT load, doubling its current capacity. The expansion was implemented with an up to \$300 million loan from the US International Development Finance Corporation (DFC) to Africa Data Centres.

The company is seeing tremendous growth in the data centre market in South Africa generally, as both national and international cloud and IT service providers seek to expand their footprints

in the region. It is made up of two more colocation data halls and one hyperscale hall. The expansion adds 1,000 racks of white space or the space available for customers to lease.

The data centre boasts hybrid cooling technology capable of handling both air cooling and liquid cooling and is one of the most efficient and sustainable data centres ever built in South Africa. It is powered by renewable energy and boasts a Water Usage Effectiveness of 0 due to no water consumption for the IT infrastructure.

## Senegal cuts service rates to MVNO and VAS companies

The Senegalese Telecommunications and Postal Regulatory Authority (ARTP) has cut the rates for services provided by telecom operators to virtual mobile operators (MVNOs) and value-added service aggregators (VAS).

The tariff adjustment aims to facilitate the entry and development of MVNOs, VAS providers and aggregators in the Senegalese electronic communications market by offering them advantageous conditions adapted to their specific needs.

According to the regulator, this initiative comes after consultation with stakeholders. It is part of the efforts undertaken by the telecoms regulator to promote a dynamic and competitive economic environment in the electronic communications sector, for the benefit of consumers.

“We are confident that these measures will help strengthen our country’s digital landscape and open up new opportunities for emerging players, enabling them to explore new business models, offer innovative services with affordable rates and respond more effectively to the changing needs of users,” said ARTP.

## Vodacom Group saw \$400 billion in mobile money transactions in 12 months

Vodacom Group has transacted \$400.2 billion through its mobile money platforms, including Safaricom, in the previous 12 months.

Shameel Joosub, CEO of Vodacom Group, informed shareholders and the market that financial services are “a clear strategic priority” for the Group and remain the largest component of beyond mobile services.

“We now process US\$400 billion in mobile wallet transaction value annually, highlighting the scale of this business. I was particularly pleased with the growth of M-PESA services that aim to deepen financial inclusion, such as loans, savings, international money transfer and merchant services,” said Joosub.

M-PESA and Vodacom Group’s other super-apps, VodaPay and Vodafone Cash, are critical to pursuing Vodacom Group’s financial services objectives because they combine its own products and services with the best offerings from its partners, said Joosub.

In the quarter that ended 30 June, group financial services revenue of R3.3 billion was also underpinned by rapid local currency growth of 87.0% in Egypt, and significant growth in South Africa within Vodacom’s insurance and Airtime Advance categories.

“Across our geographic segments, Egypt remains a star performer having grown service revenue at 43.7% in local currency, well above the rate of inflation,” said Joosub. “South Africa delivered a resilient 1.8% increase in service revenue, while Tanzania and DRC were the significant contributors to the 5.7% growth in our international business.”



### Talking satellite

Helen Weedon, managing director, Satcoms Innovation Group



#### Can LEO help connect Africa?

South Africa’s Liquid Intelligent Technologies recently signed a deal with Eutelsat Group that will see enterprise-grade Low Earth Orbit (LEO) satellite services being made available in Africa. The companies claim it will lead to enhanced performance for services across the continent. Will this help make Africa more connected and ultimately bridge the digital divide?

#### The state of connectivity in Africa

Africa is widely reported as lagging behind in internet connectivity. A report by SES in 2022 cited just 33% internet penetration. While it seems it has risen quite considerably since then, we are still looking at around 43%, much lower than elsewhere in the world. And there are bigger problems when you look at the regional differences. According to the SES report, while as many as 50% of people in urban areas are connected, this drops to 15% in rural areas. And of course those rural areas are also less connected in terms of other infrastructure, access to medical support and education, making the internet connectivity all the more important.

There is also a massive difference in different areas. For example, Gabon has reportedly the highest rate of internet access, with an estimated access rate of 64.9% of the population, while Zambia has the lowest rate of internet access, with only an estimated 6.9% share of the population having access. At the same time, access to computers and tablets is very low across Africa. In fact, according to a report by World Bank Group, only around 11% of individuals live in a household with access to a computer. Interestingly 43.9% have access to radio and 38.6% to a television, while as many as 76% have access to a mobile phone.

While Africa still lags behind, there has been recent movement to further connectivity in the region. Last

year, SES introduced an additional satellite, SES-26, to provide much needed connectivity to the Middle East and Africa. We have also seen some satellite launches from countries across Africa, including Uganda and Kenya, and others are reportedly working on their own projects. However that comes with a high price tag, which is not feasible for many African countries. The East African Community (EAC) is trying to address that by collectively investing in a satellite to improve regional internet connectivity.

And, of course, the recent announcement by Liquid Intelligent Technologies and Eutelsat is set to see further connectivity brought to the region, perhaps most notably as it will use LEO satellites to deliver that.

#### The impact of better connectivity

It is clear that better connectivity would improve the lives of people across Africa. Findings from World Bank Group would suggest the enhancements would be staggeringly significant in fact, helping to dramatically increase economic growth. According to its report, a 10% increase in broadband penetration in Africa could increase GDP per capita by around 2.5%.

Internet connectivity is something we take for granted in other regions of the world. While we would likely all agree we would be lost without it, it can be hard to imagine what that actually means but the impact is wide-reaching. For one thing, delivering better connectivity enables better education and provision of information, which leads to better job prospects. The World Bank Group findings suggest that high-speed internet boosts employment, with individuals nearly 14% more likely to be employed.

Better connectivity can also improve healthcare provision, offering online healthcare services to treat patients better; improve agricultural production, by providing access to information to improve productivity; enhance governance, making governments more accountable

with data more readily available and making it easier for citizens to contribute; as well as helping to improve social wellbeing with better connections. Improving connectivity also enables small businesses to succeed and grow.

#### Can LEO help?

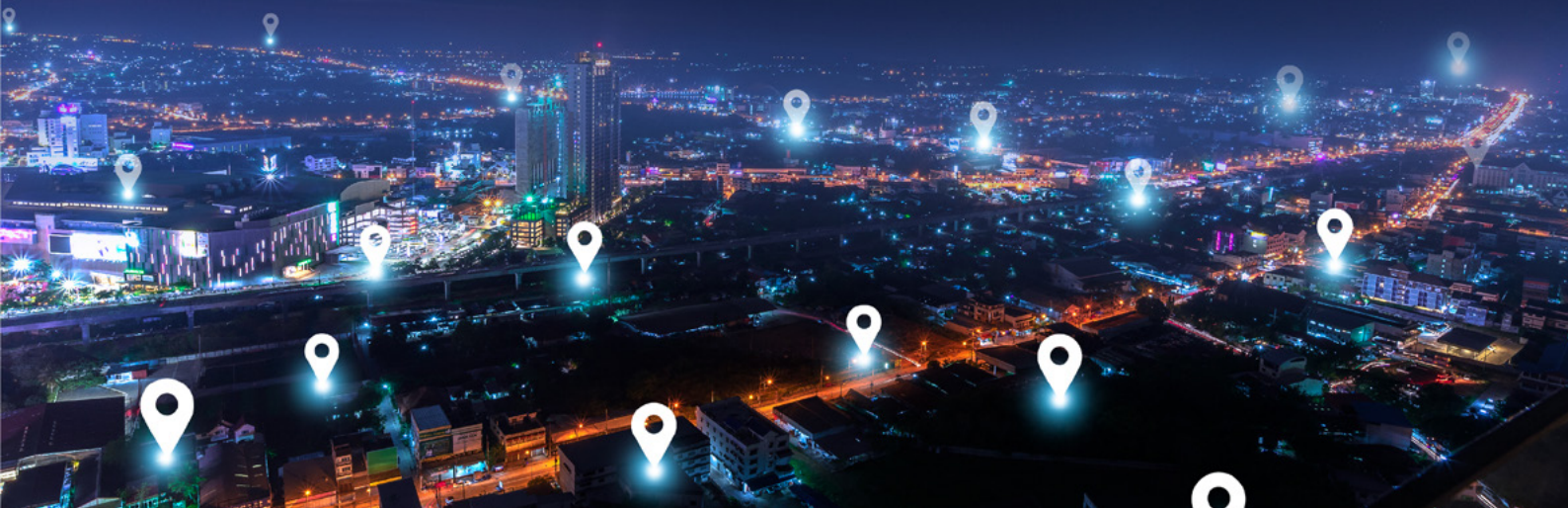
Despite a flurry of activity aimed at getting Africa online, it is clear that we still have a long way to go to bridge the digital divide. The announcement by Liquid Intelligent Technologies and Eutelsat is significant as it will see LEO satellites being used to enable that connectivity. Why does this matter? The main advantage of LEO for a region such as Africa is the huge cost savings compared to more traditional satellites. While it is true that you need more satellites to cover a specific geographical area, the cost to launch much smaller satellites into an orbit that is considerably closer to earth, is a lot lower, making the overall costs lower. The relative proximity also makes the operational costs lower meaning that service provision can be more affordable.

There has been a great deal of discussion over recent years about the need for the ground segment to keep pace with LEO. Maximising the potential of LEO requires simpler, more integrated ground solutions to be provided at a lower cost than ever before. The growth of LEO and the upcoming mega constellation launches has therefore led to innovation in the ground segment, with solutions launching to get us there.

There is already an abundance of lightweight antennas built for LEO, that are easy to install and at a much lower price point than previously possible. This could make rollout across Africa much more attainable. However, when it truly gets interesting is when we see the widespread introduction of satellite-to-cellphone connectivity. Given that 76% of people across Africa already have access to a mobile phone, this will certainly be a game-changer.



# Transforming Network Performance with Switchcom and Huawei



In today's fast-paced digital landscape, organizations require reliable and high-performance networking solutions to stay competitive. As a proud Gold Partner Distributor of Huawei's SME range and e-Kit, Switchcom Distribution is at the forefront of delivering cutting-edge ICT solutions that foster creativity and efficiency. Our partnership with Huawei enables us to offer a comprehensive array of networking solutions tailored to the evolving needs of modern businesses.

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- **Secure Network Switches:** Our secure network switches are designed to protect your network infrastructure while

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**Innovative Technology:** Through our partnership with Huawei, we ensure our clients have access to the latest advancements in networking technology. Huawei's

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Switchcom Distribution is focused on understanding and meeting the needs of its clients. We work closely with businesses to tailor our solutions to their specific requirements, ensuring optimal performance and satisfaction. Our customer-centric approach extends to every aspect of our service, from initial consultation to ongoing support.

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foundation for your business's digital infrastructure.

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# Bridging the digital divide in Africa – could neutral hosting be the key?



Daniel Mausooof, market head, technology and solutions for mobile networks, Middle East and Africa, Nokia

Digital connectivity is synonymous with progress, therefore bridging the digital divide remains a crucial focus for telecommunications companies worldwide. Neutral hosting will play a significant role in narrowing the digital gap in southern and northern Africa and aligns with Nokia's mobile network strategy in connecting the unconnected.

As the United Nations highlights, it is for many people a basic service that connects them to health, welfare, education, financial services and more. It is the neural network behind the digital click of the button that opens the door to economic growth,

**“Closing the digital gap isn't just a technological challenge, it is a social and economic imperative that can launch the region into the future and allow it to fully realise its potential.”**

citizen engagement and social equality. However, in developing countries, only 70% of households have internet compared with 92% in developed countries. There is a need for increased connectivity to ensure that countries lagging on digital within the region are pulled forward into the digital age, benefitting from the social and economic advantages it has to offer.

In South Africa, the State IT Agency (SITA), has committed to the development of a national broadband project estimated at around R6 billion. The goal is to increase connectivity while reducing the costs across government, municipalities, and state agencies. As communications minister, Mondli Gungubele, stated in April 2024, SITA has committed

to 98% core network availability across more than 7,500 connected government sites.

The initiative was set to establish 9,900 WiFi hotspots across 16 districts in 2023 using its SA Connect programme and is running behind the commitment, highlighting the need for increased collaboration with key stakeholders alongside the use of neutral hosting and network sharing to drive momentum. This is already a key role played by Nokia in the Middle East and Africa with its strategic approach to neutral hosting as it narrows the digital gap and is aligned with the company's mobile network strategy of connecting

the unconnected.

It is an approach that can have immense impact across the African region, especially when in collaboration with leading organisations and government entities. Neutral hosting isn't a new concept as multi-tenant solutions and network sharing have been prevalent worldwide. Today, however, the value of this approach lies in collaboration between agencies like SITA, communication service providers, data centre providers, and other stakeholders as everyone can pool resources and allow for the shared use of assets to impact coverage across rural and urban areas.

It is an intelligent move that benefits all stakeholders while simultaneously addressing the digital divide.

Organisations already playing a lead role in this space, particularly with 4G and 5G technologies, can extend their solutions to address digital inequalities and ensure broader and more diverse connectivity. Using neutral hosting, companies can enhance their 5G densification, collaborate with enterprises for industry-specific coverage, and provide connectivity to underserved communities.

However, delivering impact and creating value aren't guaranteed with this approach. There must be shared commitment across organisations, such as SITA, to develop new business models that unite the ecosystem, foster dialogue and create a shared vision. Within this open framework it is far easier for stakeholders to discuss regulatory frameworks, avoid waste and infrastructure duplication, and adapt network sharing policies where relevant and possible.

One of the core benefits of a neutral hosting model is that it can recover network build costs through the hosting of multiple tenants – it frees up resources that can be redirected towards core business activities while empowering organisations to deliver

exceptional services. It also helps to alleviate the challenge of capital scarcity – a challenge in the region – through the more economically viable option of sharing infrastructure, and when accompanied by the surging demand for data, it allows for intelligent network upgrading within economic boundaries.

Closing the digital gap isn't just a technological challenge, it is a social and economic imperative that can launch the region into the future and allow it to fully realise its potential. As the global telecommunications landscape continues to evolve, the neutral host model emerges as a pivotal player, fostering collaboration and efficiency. For communication service providers and other stakeholders, the neutral host model represents an opportunity to navigate the challenges of high deployment costs and environmental impact. As this model gains momentum, it is poised to play a crucial role in shaping the future of telecommunications by providing a cost-effective, environmentally sustainable, and technologically advanced solution for connectivity. ■







# Mega-constellations - the answer to connecting Africa?

As Africa begins to see the first services rolled out from mega-constellations of LEO satellites, what are the impacts for users, the economy, and the connectivity ecosystem?

In the not-so-distant past, satellite connectivity was seen as a solution primarily for governments, military, and enterprises due to its high cost and specialised infrastructure requirements. However, recent advancements in satellite technology are changing this view, bringing it within reach of a wider audience for the first time.

With more satellites being launched and more users signing up, operators are beginning to benefit from economies of scale, enabling them to reduce cost per user. Similarly, as constellation projects advance, innovations in ground stations and user terminals abound, cutting costs while driving up quality. Supportive government policies and regulatory frameworks, too, can facilitate the deployment of satellite services and reduce

operational costs.

Despite falling costs, however, affordability remains a significant source of contention.

“At this point, the services on offer in Africa by the likes of Starlink are far too expensive for the average African – and getting even more expensive across many countries in the region, like Rwanda and Zambia,” asserts Tim Kravchunovsky, founder and CEO, Chirp. “This is because Starlink is a centralised telecom structure, which is a model that simply cannot support affordable services for the average African person (unlike decentralised solutions).”

Kravchunovsky says that Zambian users, for example, will see their monthly fees for the ‘Mobile – Regional’ service more than double to ZMW2,500 – but the average monthly salary in Zambia is

around ZMW6,000, so this price is unrealistic for all but the upper classes and enterprise users.

Dawie de Wet (Pr. Eng. M.Sc. Eng.), group CEO, Q-KON, however, disagrees: “satellite is certainly an option for the general African market – both the business market and the consumer market, even at the current rates of \$1-2/GB, which will improve further as the next generation GEO services and the emerging LEO services start rolling out at a large scale.”

## Mobile first?

Despite Africa’s identity as a mobile-first continent, there is genuine demand for satellite communications among consumers, especially in areas where mobile coverage falls short.



Highlighting the shortage, de Wet comments that “mobile data connectivity is predominantly the current choice; not that it’s the preferred option, it’s more like the only option. For example, in 2018, fixed broadband subscribers in South Africa were close to 3.9 million according to ICASA; then fixed ADSL service was discontinued; and as of 30 September 2023, the fixed broadband subscriber-base is only about 1.8 million. At the same time LTE grew from 59 million to 65 million. This means that about 2 million fixed subscribers are not being serviced, probably due to the limitations of fibre rollouts, while the LTE growth supports the affordability of the market. It also means that, should more effective fixed broadband services be available, then there is a demand of 2 million subscribers, and that refers to South Africa alone.”

It’s certainly true that, while mobile networks, and particularly high-speed 4G and 5G technologies, continue to spread across Africa, there remains a significant coverage gap,

especially for mobile generations beyond 3G. And it’s not just availability – network reliability and resilience leave a lot to be desired in some regions, being vulnerable to natural disasters, political instability, and disruptions like the widespread cable outages of March 2024. Additionally, even in areas with mobile network coverage, satellite can serve as a backup to ensure uninterrupted service.

“Africa has consistently remained the least connected continent across the globe. In fact, internet usage dropped from 40% in 2022 to just over one-third in 2023, according to the International Telecommunication Union (ITU),” says Kravchunovsky. “Satellite-based telecommunications can be a game-changer to bridge this connectivity gap. The demand we’ve seen for Starlink’s services – often despite regulatory constraints, such as in South Africa – shows that there is interest from the general population. But if the introduction of satcoms to Africa is botched, users will lose faith in

this alternative.”

As satellite technology continues to evolve and become more affordable, it is likely to play an increasingly important role in connecting the unconnected and enhancing overall connectivity across the continent, particularly as consumers become more aware of the possibilities. This will be helped in no small part by the distinct advantages LEO constellations have to offer when compared with the existing fibre, terrestrial, and other competing technologies.

“The main advantage of satellite mega-constellations, like those being developed by SpaceX, OneWeb or Amazon, is the increased connectivity they can provide in rural and remote areas, where the cost of installing fibre optic cables or terrestrial infrastructure can be prohibitively expensive,” states Kravchunovsky.

Connectivity can also be delivered much more rapidly than terrestrial infrastructure thanks to quick plug-and-play VSATs and ‘satcoms in a box’ products, which hold immense value in times of disaster or turmoil where existing infrastructure may have been damaged.

“LEO satellites are also immune to natural disasters on Earth, like floods, earthquakes, and storms, making them an increasingly preferable choice as the effects of climate change intensify,” adds Kravchunovsky. “They offer many advantages, from advancements in agricultural monitoring and emergency healthcare provision in remote areas, to the expansion of internet coverage to underprivileged populations. However, the cost of these services must be affordable to make mass expansion possible. Otherwise, they will remain a technology only available to governments, mass corporations, and the elite.”

The advantages of satellite for mobility, disaster recovery, emergency services, IoT/M2M, and critical infrastructure redundancy applications, are well-known and often touted, and indeed, the coming mega-constellations are poised to complement and, in some cases, outperform existing technologies.

As these constellations become operational, they will likely play a critical role in expanding global internet access and improving connectivity on the continent in places where traditional methods fall short.

de Wet reminds us that “it is not about being better: the hierarchy of choice will still be fibre as a first choice, then wireless, and finally satellite. The issue is that each of these technologies has specific constraints and positioning for rollout and can’t service the full spectrum of demand alone. It is more a question of being a market ready option to service the subscribers beyond the feasible fibre rollout areas.”

### The connectivity ecosystem

With the launch of the first sets of mega-constellations to the African marketplace underway, the connectivity ecosystem is expected to undergo significant transformation.

Consumers stand to gain from competitive

## Eutelsat OneWeb comes to South Africa

In November 2022, OneWeb announced a distribution agreement with Q-KON Africa to offer broadband connectivity services in Africa. The OneWeb LEO satellite network would provide Q-KON Africa’s Twoobii customers access to high-speed, low-latency broadband to connect even the most rural or remote communities across several African countries, including South Africa, Lesotho, Swaziland, Namibia, Botswana, Zimbabwe, Zambia, Malawi, and Mozambique.

The five-year deal will enable Q-KON Africa to utilise OneWeb’s network to provide vital internet service and WiFi backhaul to connect schools, hospitals, civil government and other fixed enterprise and fintech services throughout the continent including banking, mining, and backhaul solutions.

“At OneWeb, we believe that connection everywhere changes everything and that’s why we are thrilled to be partnering with the engineering experts at Q-KON Africa to further our mission to connect those hardest to reach to the internet. Q-KON Africa’s strong industry understanding, flexibility, agility and local support will help us see OneWeb’s LEO satellite network create opportunities to benefit unconnected and underconnected areas across Africa for today’s digital environment. This agreement is another example of OneWeb’s continued momentum, as we remain on track to activate coverage solutions in Africa and globally in 2023,” said Ben Griffin, VP mobility and AMEA at OneWeb.

In February 2024, the first operational Eutelsat OneWeb Low Earth Orbit (LEO) satellite service was launched on the continent. The solution provides a reliable backup internet connection for a leading digital bank in South Africa, ensuring uninterrupted service even in case of terrestrial network disruptions.

The undisclosed bank has been provided with consistent internet speeds of 50Mbps with minimal latency, guaranteeing seamless operations regardless of ground-based infrastructure challenges.

This collaboration between Eutelsat, Q-KON, and the South African digital bank paves the way for broader adoption of LEO-based solutions within the African banking sector.



pricing and lower connectivity costs, with some finding satellite communications affordable for the first time. Additionally, this enhanced connectivity will support the growth of IoT and M2M applications, enabling smart agriculture, environmental monitoring, and logistics tracking – a very real benefit for all Africans, and in line with the digitalisation policies many of the continent’s governments have announced in recent years.

However, Starlink and Kuiper, which have adopted direct-to-consumer models, will drastically reduce opportunities for resellers and others in the value chain, and the resulting limited number of resellers could lead to market saturation in certain regions, impacting profit margins and business sustainability. Traditional internet service providers (ISPs) will need to adapt by either integrating satellite services into their offerings or focusing on areas where they have a competitive advantage, such as local customer support and bundling services.

“The go-to-market model for the mega-providers remains a concern and the final market success will be determined by how these mega-providers find a balanced model between the on-the-ground Africa market requirements, versus the global business case demands,” cautions de Wet.

Kravchunovsky additionally highlights that the concern with this direct-to-consumer model is that end users are forced to buy hardware and sign up for contracts, with no guarantee that services will remain affordable.

“When prices see sudden exponential increases, these people are left with hardware they cannot afford to use and cannot resell,” warns Kravchunovsky. “If this trend continues, the likes of Starlink and Kuiper may struggle to achieve the mass adoption they are hoping for in underprivileged communities and low-income areas, which often tend to be the remote areas they are trying to service. After all the hype around this innovative technology, we may be in for an anticlimax in the near future.”

However, not all the mega-constellations are targeting the B2C model. Eutelsat OneWeb, for instance, supplies low Earth orbit (LEO) connectivity through a trusted network of distribution partners in carrier and enterprise markets. This will prove a boon for local economies, with money continuing to circle through local hands, rather than being offshored to the large multinational conglomerates. ■

## An indigenous constellation

TRL Space Rwanda announced in April 2024 that it is spearheading an ambitious initiative to establish Africa’s first satellite and equatorial constellation hub.

TRL Space’s plan in Rwanda is to cultivate indigenous capabilities for developing nanosatellites and equatorial constellations, laying the foundation for a thriving space ecosystem on the African continent. TRL Space plans to invest over US\$2 million in this endeavour.

The first milestone will be the development of a 6U Cubesat at the Rwandan branch – the launch is scheduled for the second quarter of 2025.

TRL Space has already initiated identifying and nurturing local talent through the recent CubeSat Makerthon, which enabled the company to recruit a diverse pool of skilled individuals across Africa. This initiative aims to build a robust space community that contributes to establishing Africa’s Satellite and Equatorial Constellation Hub in Rwanda.

“Our intention is not just to deliver these technologies to Rwanda. We bring added value to the region. Our goal is to introduce new space technologies that increase the economic and living standards of the entire region,” said TRL Space’s CEO, Petr Kapoun.

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# Data sovereignty and the MNO

Africa's hunger for new data centres is well established; but what does the influx of new facilities, players and capacity mean for the continent's MNOs?

It's a simple, inarguable statement of truth: "Africa most definitely needs more data centres," asserts Wojtek Piorko, managing director, Africa at Vertiv. "If you apply simple mathematics to the question, the answer is clear: we have around 300MW of whitespace in Africa, similar to that of Italy, but for an entire continent. Comparatively, while Africa's population is around 1.4 billion, Italy's is just 60 million. In addition, Africa has a young, data-hungry population – with more than 60% below 25 years old. The continent is also going through a wave of digitalisation, with dynamic investments from abroad and a lot of government-drive local ones."

The entire continent is home to unprecedented digital transformation as mobile networks advance in both coverage and sophistication; internet user numbers continue to climb; and data consumption skyrockets.

"Africa has a growing demand for stronger networks and secured internet storage, especially with the rise of e-commerce, tech startups, e-banking, and e-governance essential services," opines Nsikak Ekere, communication associate, Bridgia. "However, the few data centres cannot efficiently withstand the high energy usage. In a report by Dai Magister, Africa had about 645 million online users in 2023. Seeing the surge in the volume of data, more construction of data centres that are fast and can sustainably connect users with the green economic future of the continent is imperative."

Data centres have a key role to play in supporting this transformation and growth, from improving connectivity and latency; supporting emerging technologies like AI, cloud, 5G, IoT, etc.; enabling data sovereignty; supporting local content and applications, which in turn helps boost job creation and the local economy; creating resilient digital infrastructure with built-in redundancy; and bridging the digital divide to enable broader inclusion to essential services.

However, "for 2024–2025, data centres need increased funding from investors in building, maintaining, and upgrading new data centres to efficiently deliver services to Africa's over 1.4 billion population," shares Ekere. "And to effectively leverage the advantages of the AI era and the estimated \$7 billion market Dai Margin projection in revenue by 2028, South Africa, Egypt, Nigeria, Kenya, Côte d'Ivoire, Morocco, and Senegal must incorporate powerful cloud and computer edge systems embedded in their data centres to withstand the traffic of data generated, stored, and transmitted."

### The impact on MNOs

Expanding data centre capacity has a significant positive impact on the continent's mobile network operators (MNOs), offering improved network performance, cost efficiency, scalability, enhanced customer experience, compliance with regulatory requirements, new revenue opportunities, and a competitive edge in the market.

For the mobile network, more local data centre capacity means reduced latency for data serves, granting faster and more responsive mobile internet experiences for users. Local data centres also provide redundancy and backup solutions, ensuring more reliable network operations and reducing downtime. Moreover, hosting data and applications locally can reduce the costs associated with data transfer and storage compared to relying on international data centres; and, as data centres scale up, MNOs can benefit from shared infrastructure, reducing their capital expenditure and operational costs. With more local data centres, operators can scale their operations more efficiently to meet increasing demand, as well as deploy new services and applications, responding more effectively to market needs.

"Expanding the capacity of data centres in Africa through enterprise cloud-based data will help MNOs store volumes of data in African data centres, thereby retaining financial value for Africa's economic ecosystem," agrees Ekere. "The impact will localise data centres in Africa closer to MNOs to enable effective performance and reduce costs. To achieve this, Africa will need a stable power supply and a good cooling system to test-run and create new data centres."

The rollout of 5G remains in its infancy across the continent with a little over 5% of the populace covered by the latest generation of mobile technologies. Data centres are an essential component of 5G networks,



providing the necessary computational power and low-latency infrastructure. As such, the expansion of local data centre facilities promises not only to support the rollout of 5G, but with it, a better customer experience with improved performance; and the opportunity to launch new digital services like mobile banking, streaming, e-commerce, etc., enhancing competitiveness for MNOs amidst a landscape of stalling core service revenues.

Piorko highlights that while traditionally MNOs have driven data centre capacity, with global colocation players entering Africa, the MNOs must up their game: "MNOs must decide whether they want to be part of the data centre market, and if so, in order to be competitive, they need to consider either upgrades of existing outdated infrastructure or new investments. Some have already decided to invest, even establishing separate companies to achieve this."

The build or buy debate rages on - with ownership comes full control of the data infrastructure; tighter integration with existing infrastructure; and the option to deploy proprietary technologies without restriction. However, the high costs, slower build-out times and the need for skilled personnel to manage the facility can be off putting. Outsourcing, on the other hand, is more cost efficient, scalable, and flexible, and allows the operator to focus on its core business while still gaining access to the latest technologies - at the cost of loss of control, security and sovereignty.

"Many MNOs find it expensive to operate their own data centres because of infrastructure, power, and ethical data privacy laws in collection, transmission, and storage, particularly in countries like Nigeria," says Ekere. "But, the procedure also allows MNOs to operate their own data centres at different levels of user data protection for a given time frame, ensuring they are categorised under a tier: collection, transmission, or storage. It also provides a market for carrier-neutral data centres to independently offer connectivity to telcos and other users through its outsourcing services to hard-to-reach areas."

## Data sovereignty

As of December 2023, 36 out of the 54 African nations have data protection laws and/or regulations. 16 countries have signed the African Union Convention on Cyber Security and Personal Data Protection adopted on 27 June 2014 (the Malabo Convention) and 13 have ratified it.

"Sovereignty is becoming increasingly important to Africa's data flow. Data privacy laws have been implemented in around 65% of African countries thus

## Airtel joins the hyperscalers

Airtel launched its Nxtra data centre business in Africa in 2023, with plans to develop five hyperscale data centres in major cities across Airtel Africa's footprint that will complement its existing edge sites.

"A rapid increase in data centre capacity is needed to support the growth potential of Africa's digital economy," asserted Airtel Africa's group CEO, Segun Ogunsanya.

The first site will be a 38MW data centre in Lagos, Nigeria, which will be designed to host high-density racks and to operate with a PUE of 1.3. Ground was officially broken on the site at Eko Atlantic City on Victoria Island; Airtel expects the facility to be live by the first quarter of 2026.

The second Nxtra data centre will be constructed in Nairobi, Kenya. All combined, Nxtra's facilities will offer 180MW of capacity, distributed across 13 major data centres and more than 48 edge data centres. Ogunsanya said that the establishment of Nxtra data centres will enhance data sovereignty, security, and preservation within the continent.

"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 Nigeria minister of communications, innovation and digital economy Bosun Tijani.

far, with draft laws under consideration for three more, and the hope is that the rest will certainly follow," says Piorko. "This will create a lot of growth opportunities for the data centre market."

In line with other countries across the globe, stringent new laws on data sovereignty stand to offer adopting African nations a boost to their national security. Storing data within national borders helps protect against cyber threats and espionage from foreign entities and allows governments to monitor and regulate data flows more effectively, ensuring that critical data is not misused or accessed by unauthorised parties. Ensuring that data is stored and processed within a country allows for better control over data privacy and protection and means that countries can enforce stricter data protection measures.

"It is important that Africa has data control and security at all times to prevent third-party breaches," explains Ekere. "Now is the time to have data centres with sustainable regulations and legal policies for every country in Africa."

Tough new data sovereignty laws come with economic benefits, too. Keeping data local encourages investment in national data infrastructure, such as data centres and related services, boosting the local economy and creating new jobs in the tech sector, including data management, cybersecurity, and IT support.

Looking ahead, as digital economies grow and cyber threats increase, it is likely that more African countries will adopt data sovereignty laws to protect their citizens and national interests. This will be heavily influenced by global trends, pressures and trade

agreements, which may push African nations towards adopting stricter data sovereignty laws to align with international partners. However, implementation will take time as the data centre boom is only just taking hold; and some countries may decide that enforcing data localisation could increase costs for businesses.

"There must be collaboration and strategic knowledge sharing to assess, monitor, and visualise the economic and industrial value of data flows throughout the 54 African countries and beyond. This is crucial in mapping the continent's data flow and cloud security architecture to become independent and sovereign," adds Ekere.

## The future is digital

The future of data in Africa is poised to be dynamic and transformative - with more than a little help from data centres.

We can expect to see a proliferation of local data centres come online to meet the increasing demand for data processing and storage, and potentially hybrid models being increasingly adopted by MNOs, combining own-operated data centres with carrier-neutral facilities to balance control, cost, and scalability. Industry experts believe this expansion will go hand-in-hand with cloud adoption, with MNOs increasingly offering cloud services to both businesses and consumers.

The next five years will likely see more African nations implement stringent data protection and sovereignty laws, requiring MNOs to store and process data locally. As such, MNOs will be investing heavily in compliance frameworks to meet these regulatory requirements, ensuring data security and privacy. Amidst booming data volumes and increasing global cyber threats, these new stringent data regulations will help protect government, business and consumer data.

"Africa will record great successes in the near future because of the upward trends in subscriptions and digitalisation," shares Ekere. "Operators and relevant stakeholders must strive to scale up data centres using new models and reliable power while underscoring the drastic potential of their subscribers and innovations to drive solutions into the global market. The market value of African data is worth billions, but when compared to America, Asia, and Europe, it lags." ■

## Meta fined \$220 million for data mishandling

July saw Nigeria fine Meta \$220 million following the Federal Competition and Consumer Protection Commission accusing Meta platform Whatsapp of collecting and using users' personal data without their consent.

"The final order imposes a monetary penalty of \$220,000,000.00 (at the prevailing exchange rate where applicable), which is consistent with federal competition and consumer protection regulations," said the FCCPC in a statement.

Nigerian authorities have been investigating since 2021 whether local users were given a choice about whether WhatsApp would collect their personal data. The investigation also found that Meta treated Nigerians differently than other jurisdictions.

According to a Meta spokesperson, the group will appeal the decision by Nigerian authorities.

# The continuing importance of digital two-way radio technology

Sandra Wendelken, market insights manager, Tait Communications



While 5G technology grabs headlines around the globe and in Africa for its many extraordinary wireless advancements, two-way radio technology deployments continue to grow at a steady rate and provide mission-critical voice communications for enterprises and public sector agencies. Even with the continued growth of two-way radio, the importance of broadband technology for critical communications solutions cannot be overstated. Both broadband and radio technologies have their place in our industry.

The transition from analog to digital two-way radio technologies is underway in many African markets. Globally, digital subscribers accounted for 72% of the total installed base in 2022. While shipments of analog two-way radio terminals are declining in Africa, digital two-way radio shipments are increasing and serve most of the market, according to Omdia.

## Advantages of two-way radio

There are many benefits of radio technology for public safety agencies, utilities, oil and gas firms, transportation agencies, and many other organisations that require secure, reliable communications within a defined footprint. While private 5G networks are topping the list of potential future revenue drivers for mobile network operators, two-way radio networks were the first private networks originating decades ago and bringing many advantages.

**Reliability.** Two-way radio networks are one of the most reliable forms of communications networks. Mobile radio sites are generally built to 99.999% reliability with backup generators

for power during extreme weather events. Major cellular system failures have happened already in 2024 to several mobile operators around the globe. During emergencies, two-way radio networks continue to work when other networks are out of service.

**Security.** Digital radio standards have built-in security protocols to ensure secure communications. No network or technology is foolproof and bad actors continue to evolve their strategies, but two-way radio networks provide one of the most secure communications options for organisations.

**Coverage.** Two-way radio networks are built to an organisation's specific coverage requirements. With strong network design, two-way radio sites are placed to maximise coverage where needed. Repeaters and other in-building systems enhance coverage in difficult places such as tunnels, mines, basements, and stairwells.

**Diverse Communications.** Field workers often need to communicate within teams of colleagues. First responders talk with dispatch centers and with their fellow police officers, firefighters, and emergency management service (EMS) technicians. Radio technology provides the benefits of quickly relaying information to a group or speaking directly with a colleague. In addition, two-way radios provide for direct mode communications, allowing radio-to-radio connectivity. This is an important feature for

field staff at energy firms, and many other employees in mission-critical industries. The number of options for broadband services is increasing, the technology is evolving, and new use cases will continue to help workers be prepared to do their jobs more safely and efficiently. Two-way radio networks are evolving to include broadband technology or to be used seamlessly and effectively alongside broadband networks.

## Digital technology options

When an organisation's communications network reaches the end of life, there are several digital radio technology standards that can be deployed depending on the organisation's requirements. Digital standards are important because they ensure an open, flexible technology environment that contributes to a multi-vendor market with competitive pricing.

**Project 25 (P25).** P25 is one standard for the design and manufacture of interoperable digital two-way wireless communications products. Developed in North America with state, local and federal government representatives and Telecommunications Industry Association (TIA) governance, P25 has gained worldwide acceptance for public safety, security, public service, and commercial applications. Radio equipment that demonstrates compliance with P25 can meet a set of minimum requirements to

**“While shipments of analog two-way radio terminals are declining in Africa, digital two-way radio shipments are increasing and serve most of the market, according to Omdia.”**

fireground communications and other emergency scenarios and one that has been difficult to replicate in cellular network services.

**Control.** Organisations that deploy two-way radio networks control the system and can make adjustments to best fit their requirements. If the organisation does not have the technical staff to maintain the network, two-way radio equipment providers and services firms can offer ongoing managed services of the network and devices so the company or agency can focus on their mission.

**Broadband options.** Having access to reliable data is essential for police officers, firefighters, utility workers, transportation agency employees,

fit the needs of users. While the P25 standard was originally created for public safety professionals, the technology is also used globally by utilities, transportation agencies, and other mission-critical infrastructure entities. P25 systems can operate in conventional or trunked modes, with two phases of the technology.

The P25 Compliance Assessment Program (CAP), overseen by the U.S. Department of Homeland Security (DHS), ensures interoperability between the equipment from the various P25 manufacturers. The TIA TR-8 Working Group that oversees P25 standards continually updates the standard, with recent enhancements to security for example.





**Digital Mobile Radio (DMR).** DMR is a digital radio standard specified for business mobile radio users developed by the European Telecommunications Standards Institute (ETSI) and first ratified in 2005. The primary goal is to specify affordable digital systems with low complexity. DMR provides voice, data, and other supplementary services. Products designed to the standard's specifications are sold in all regions of the world. Most mission critical DMR deployments are comprised of Tier 2 conventional technology and Tier 3 trunked systems. The Applications Interface (AIS) was developed by members of the DMR Association with the goal of enabling applications to benefit from interoperability between an application and DMR infrastructure from different vendors.

The DMR Association also developed the DMR Interoperability Process (IOP) so that users and equipment suppliers benefit from a truly open multi-vendor market for DMR equipment. The interoperability process is a formal and consistent test mechanism allowing manufacturers to test that their products are compatible. The association lists more than 200 members on its website.

**TETRA.** The TETRA standard, also developed by ETSI, is a suite of standards covering different technology aspects, including air interfaces, network interfaces and its services and facilities. TETRA has been developed in releases (phases) known as TETRA Release 1 and TETRA Release 2. While the standard originated in Europe, with the

first use cases in public safety, the technology is currently deployed in networks around the world across multiple vertical markets.

TETRA association TCCA also developed an Interoperability Certification process (IOP) to enable an open multi-vendor market for TETRA equipment and systems. The Interoperability Certification Process is managed by TCCA's Technical Forum (TF) with targets and priorities set jointly between users, operators, and manufacturers. TCCA has various working groups and releases white papers around topics related to the standard.

### Eskom gains reliability and safety gains with DMR

Eskom is a state-owned electricity generation, transmission and distribution business in South Africa. It is the largest producer of electricity in Africa and one of the world's largest utilities in terms of generation capacity and sales. In fact, the utility produces 95% of South Africa's electricity and exports energy to neighboring countries.

For many years, Eskom considered its options to upgrade from its existing conventional analogue network. In 2017, the company released a tender for a DMR Tier 3 network. Tait Communications supplied initial equipment to enable the company to undertake deployment and system testing. A subsequent order for the remaining network components was shipped in February 2024.

Eskom's final system includes seven regional

DMR Tier 3 sub-networks, node controllers, a gateway, numerous base stations, and network monitoring software. The utility will also deploy 3,000 portable radios from three different manufacturers, demonstrating the value of selecting open standards. Eskom is not locked into one vendor's portable radio products or pricing.

The network has provided Eskom with efficiency, reliability and safety gains. The move to DMR has enabled the company to reduce the number of sites it operates by about 50%. Further efficiencies are expected with monitoring and control of the new network in a single site at Eskom's central control management centre in Johannesburg, with the back-up centre in East London.

Of course, Eskom and all organisations must assess their requirements and user needs before moving forward with any technology upgrade or deployment. Many factors will determine which digital two-way radio technology best fits an agency's requirements. Once a technology has been selected and deployed, the digital communications network can enhance the safety, productivity, and security of the organisation for years to come.

Digital mobile radio is growing steadily in South Africa and most African countries. With the many advantages that two-way radio networks offer and the interoperable and cost-effective digital standards that can address many mission-critical requirements, that upswing is expected to continue through at least the end of the decade. ■





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# AMN and Intelsat connect rural Madagascar amidst deluge

According to GSMA data, Madagascar has a Global Connectivity Index rating of 32.5, defining it as an emerging digital market where the adoption of technology is just taking shape. The government is committed to increasing access to digital services, with the Digital and Energy Connectivity for Inclusion in Madagascar (DECIM) project launched in 2023, focusing on deploying infrastructure in under-served areas.

## Deploying to the near impossible

Connecting Madagascar is a real challenge; 60% of the population reside in rural areas, most of which are difficult to access and some beyond the reach of the country's power grid.

Nevertheless, Africa Mobile Network (AMN) and Intelsat are working to connect 500 sites in Madagascar in hopes of providing first-time phone broadband services to folks who live and work across the country. The partners have, since 2018, deployed more than 3,000 rural base satellite antennas across Africa, providing telecommunications services to more than 8 million people. Combining Intelsat's multi-satellite African coverage with AMN's solar-powered tower solution means that citizens and businesses in virtually any community can gain access to the education, social and economic benefits of telecommunication services.

As well as the topology, additional challenges faced during the project included the fact that it was Madagascar's rainy season – however, AMN specialises in rural deployments, and while the conditions were difficult, techs have significant experience in deployments that would otherwise be impossible.

## Ferries and dirt roads

Vilanandro, on the Northwest coast, is a city of 1,800 inhabitants connected by Route Nationale 4 (RN4), a primary highway to the city of Majunga, and then only by ferry and the RN19 to Soalala. The rainy seasons do not make travel any easier, as roads become impassable.

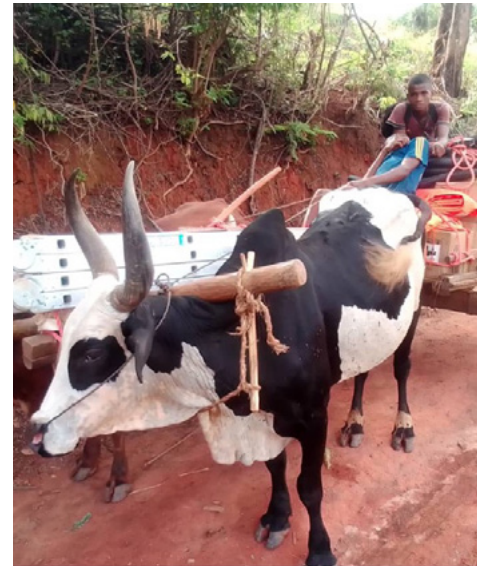
The AMN team embarked on the 700km-trip from Antananarivo, the country's capital, to Vilanandro. From the route Nationale and ferries to dirt roads, it took crews over 15 days to make the trip. Techs deployed equipment by carts pulled by livestock and sometimes canoes to carry terminals and equipment to the final destination. All this would not have been possible without the village volunteers, who helped carry equipment on foot to reach the final site location.

A combination of Intelsat's satellite backhaul and AMN's unique site design is used to connect the rural communities like those in Vilanandro to telephone services. The ubiquity of satellite and solar solutions means that no location is too remote.

Since the connectivity has been set up, a local farmer who previously had to wait for postal orders can now check everything online, while the school now has access to a broader range of courses available online.

## First-time connectivity

Jules Degila, AMN's CCO, reported to Southern African Wireless Communications that "in Madagascar, we built 118 sites from December to May, which is the most difficult time of the year to travel and deploy sites in rural and



Livestock and carts are used to pull equipment during the arduous journey. (courtesy: AMN)



Remote locations and rough terrain are the main reasons why satellite is needed in parts of the world. (courtesy: AMN)



isolated areas. In other countries, AMN builds one site on average per day, but in Madagascar, reaching each village, working with the villagers, building and commissioning a site is an adventure filled with unique challenges. We are proud of how our teams were able to adapt and meet these challenges."

As of May, hundreds of thousands of end users have finally been connected via satellite – people who previously were entirely unserved by any network coverage. The delivery of first-time connectivity is set to drastically transform lives for the better, ushering the country's populace into the digital economy. ■

# 'Meshmerizing' Cosmo City with low-cost connectivity

A suburban area of Johannesburg, South Africa was constructed as a housing solution for the low-income population. However, despite its residential structures, Cosmo City significantly lacked essential infrastructure – primarily, stable internet connectivity.

To achieve dependable and affordable last mile internet delivery in the neighbourhood, a novel system was planned without traditional extensive infrastructure like cables, and without high costs for the users.

## Last mile mesh

Meshmerize was selected to tap into fibre connectivity available at local hubs like sports bars or schools, which, in combination with directed antennas, enabled the establishment of long-range connections in a very narrow, directed manner between specific points, spanning up to 20km. To cover the local area, Meshmerize stepped in with the mesh network.

The solution was specifically designed as a last-mile wireless broadband design tailored for high-density low-to-middle income communities. By leveraging a novel and patented radio antenna wireless system, it can provide high-speed internet to both fixed and mobile users living in densely populated residential areas.

The antennas are meticulously optimised for both outdoor and indoor router connectivity without necessitating an externally mounted CPE. They possess a flexible mechanical tilt feature, allowing



adjustments between 0° and ±15°. Additionally, users can rotate the antennas anywhere from 0° to 360°, offering extensive coverage customisation.

Powering the network is a low-profile WiFi access node that operates on solar energy, backed by a robust lithium-ion phosphate battery. This battery stands out for its quick recharge capability, ensuring that the system remains operational for over four days even in the absence of direct sunlight. Complementing this is a dedicated power unit embedded with a control board, engineered specifically for autonomous remote solar management, ensuring consistent performance and minimal manual intervention.

Once the directed antenna brings the internet connection to a central location, the actual distribution within the community is handled by mesh access points. Each sector of the neighbourhood (comprising 40-50 houses) is covered by around 10 of these mesh access points. A total of 180 access points were installed to cover the sectors.

## Self-healing architecture

The solution's self-healing and decentralised nature today brings the internet to each of the neighbourhood users.

Unlike traditional methods that require extensive planning and infrastructure, mesh networks can be deployed rapidly, adapting to unforeseen challenges on the go. Planning is super flexible, as the devices can be placed without relying on a single, unique location. This solves potential problems that would occur with building infrastructure changes or lack of approval from homeowners to have the devices placed on their homes.

Moreover, even if an access point faces disruptions, the mesh design ensures that data finds an alternate path, guaranteeing uninterrupted service. This resilience comes especially useful in cases of environmental issues such as strong winds or other circumstances that might damage the hardware.

The Cosmo City deployment has proven to be about 40-50% cheaper than fibre-based solutions; since cables don't have to lead to every doorstep and not every house has to have networking hardware, internet access for the provider and the end user is more affordable.

The mesh network management tool Hive plays a pivotal role in overseeing the vast mesh network, ensuring consistent configuration across hundreds of nodes. This centralised management system is instrumental in allocating different channels to various parts of the network, significantly reducing interference and ensuring smooth data transmission. With Hive's oversight, potential



issues can be proactively identified and addressed, guaranteeing that the network maintains its high-performance standards.

Power outages and irregular electricity supply are common woes in areas like Cosmo City, however, Meshmerize's system is designed to be independent of the power grid, ensuring constant connectivity regardless of external power fluctuations. Solar panels found on each of the access points, equipped with a lithium battery, ensures this self-sustenance. Additionally, utilising solar power eliminates the need for any cables in its network infrastructure, which means that the common concerns of cable damage due to construction or other activities are entirely bypassed. A cable-free network ensures a consistent and unbroken connection, reducing vulnerabilities and maintenance needs, and further exemplifying the robustness and adaptability of the network.

The system is designed so that local residents - with minimal training - can perform basic maintenance tasks, ensuring the network's upkeep without the need for specialised personnel. Empowering locals to partake in the maintenance fosters community involvement and creates a win-win situation where local maintainers receive benefits like free internet for their contributions.

## The big picture

Beyond residential areas like this one, the potential of mesh in last mile delivery projects is vast. It can be a game-changer in rural regions, disaster-struck zones where infrastructure is compromised, temporary setups like events or festivals, and even in dense urban settings where laying additional infrastructure is either costly or impractical. ■



# Qualcomm QCC730 micro-power WiFi system

Qualcomm Technologies, Inc. has launched the Qualcomm® QCC730, a micro-power WiFi system for IoT connectivity.

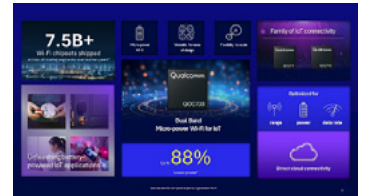
This technological breakthrough provides up to 88% lower power than previous generations and can revolutionize products in battery powered industrial, commercial and consumer applications. QCC730 will be complemented with an open-source IDE and SDK that supports cloud connectivity offloading

for ease of development. Its versatility empowers developers to implement QCC730 as a high-performance alternative to Bluetooth® IoT applications for flexible design and direct cloud connectivity.

“Complementing high-performance, low-latency wireless connectivity solutions, Qualcomm QCC730 SoC is an industry-leading micro-powered Wi-Fi solution enabling WiFi for the world of battery powered

IoT platforms. QCC730 enables devices to support TCP/IP networking capabilities while remaining form-factor and complete wireless constrained, whilst remaining connected to the Cloud platforms,” said Rahul Patel, group general manager, connectivity, broadband and networking (CBN), Qualcomm Technologies, Inc. “Along with the rest of the our IoT connectivity portfolio, this new offering places Qualcomm Technologies at the

centre of next generation battery-powered smart-home, healthcare, gaming and other consumer electronic devices, and reflects on our commitment to utilize our decades of R&D to pioneer new user consumer experiences.”



# HPE Aruba Networking Enterprise Private 5G simplifies deployment

Hewlett Packard Enterprise has introduced HPE Aruba Networking Enterprise Private 5G to help customers accelerate and simplify the deployment and management of private 5G networks, providing high levels of reliable wireless coverage across large campus and industrial environments and opening new, untapped use cases for private cellular.

With this expansion of its secure edge-to-cloud portfolio, HPE Aruba Networking becomes the only global enterprise infrastructure vendor to provide comprehensive WiFi and private 5G solutions, helping customers in industries such as manufacturing, healthcare, public venues, and education solve complex connectivity challenges across large and remote sites. HPE Aruba Networking Enterprise Private 5G also helps customers make productivity and innovation

gains as a complement to the cost-effective, high-capacity connectivity provided by WiFi, in addition to expanding AI data capture and delivery capabilities for building AI data lakes and activating inference solutions.

HPE Aruba Networking Enterprise Private 5G also enables communications service providers (CSPs) to quickly deploy private 5G networks for their customers. This integrated private 5G solution complements existing WiFi-based managed services and will help telco customers service the growing private cellular market and generate new revenue from their existing enterprise customers.

With the debut of HPE Aruba Networking Enterprise Private 5G, enterprises can increase reliable, secure, high-performance connectivity with a fully integrated private 5G network.



# Radio-over-fibre for affordable mm-wave networks for Beyond 5G/6G

NEC Corporation has successfully developed and demonstrated a radio-over-fibre system with a 1-bit fibre transmission method making it possible to affordably build stable millimetre-wave communication networks for Beyond 5G/6G.

With this method, high-frequency analogue signals can be transmitted using an inexpensive electrical-to-optical converter for general-purpose digital communications, enabling the realisation of a compact distributed antenna unit at low cost.

As a result, a stable millimetre-wave communication environment can be inexpensively achieved in high-rise buildings, underground malls, factories, railways, indoor facilities, and other obstacle-laden environments.

High-speed wireless communications leveraging millimetre-wave technology are expected to be a key technology for Beyond 5G/6G. Moreover, since 80% of mobile communication traffic occurs indoors, millimetre-wave is being considered as an indoor solution.

However, since there is significant propagation loss and high linearity in the millimeter-wave frequency band, it is imperative to ensure line of sight between base stations and terminals to achieve sufficient quality of service (QoS). While dense installation of distributed antenna units (DA) for direct transmission and reception of

data with terminals and avoiding obstacles is known to be effective in resolving these issues, the size, power consumption, and cost of installing the required number of DA have proven to be major issues.

To overcome these issues, NEC developed a radio-over-fiber system (RoF) and a related transmission method which enables inexpensively building stable millimetre-wave communication networks in high-rise buildings, underground malls, factories, railways, indoor facilities, and other obstacle-laden environments. It will therefore promote the uptake of high-speed and large-capacity communications using millimetre waves for Beyond 5G/6G.



# Reliable and robust NB-IoT with resilient geolocation from STMicroelectronics

STMicroelectronics has licensed and deployed the Ceva-Waves Dragonfly NB-IoT platform in its recently introduced ST87M01 ultra-compact and low-power modules.

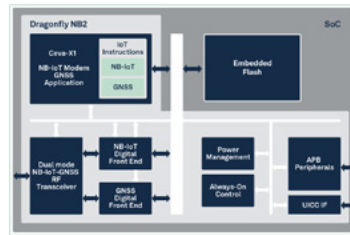
The combination provides highly reliable and robust NB-IoT data communication with accurate and resilient GNSS geo-location capability for IoT devices and assets.

Ceva's Cellular IoT IP platform powers STMicroelectronics' ST87M01 cellular IoT modules that are intended for a wide range of IoT applications including smart meters, smart grid, smart buildings, smart cities and smart infrastructure applications, as well as industrial condition monitoring and factory automation, smart agriculture and environmental monitoring. It is also suited to tracking applications with

its accurate and resilient GNSS geolocation capability.

The Ceva-Waves Dragonfly platform integrates a Ceva-BX1 processor, an optimised RF Transceiver, baseband, and a protocol stack to offer a complete Release 15 Cat-NB2 modem IP solution that lowers entry barriers.

"We are proud to collaborate closely with STMicroelectronics and empower them to push the boundaries of cellular IoT performance and power efficiency with our complete Release 15 Cat-NB2 modem IP solution. The very impressive ST87M01 NB-IoT/GNSS module is tailored to the demanding requirements of the industrial market and we look forward to seeing the module successfully deployed in the field," said Tal Shalev, vice president and general manager, wireless IoT



business unit at Ceva.

The Ceva-Waves Dragonfly is a complete eNB-IoT IP platform that can serve a wide range of applications. It is a fully software-configurable solution that can be extended with multi-constellation GNSS and sensor fusion functionality and includes a reference silicon of the complete modem design, including an embedded CMOS RF transceiver, an advanced digital front-end, physical layer firmware, and a protocol stack (MAC, RLC, PDCP, RRC, and NAS).

# altGNSSSM GEO SecureTimeSM offer nanoseconds-accurate UTC timing via L and Ku-bands

Viavi Solutions Inc. has launched altGNSSSM GEO SecureTimeSM services that deliver nanoseconds-accurate UTC timing via L-band and Ku-band satellite signals for critical infrastructure including 5G networks, transportation, data centres, smart grid, high-frequency trading, military and first responder communications, and satellite terminals.

Operating completely independently of traditional GPS and GNSS, VIAVI's altGNSS GEO service is extremely difficult to jam or spoof and leads the industry with the broadest global coverage, further improving resistance to attacks on the rise.

SecureTime adds to its portfolio of solutions for resilient PNT, and features Navigation Message Authentication (NMA) which uses encryption to detect spoofing in

any of the signals received from all sources – including GPS that does not support NMA. It builds on VIAVI's existing multisource assurance, combining signals from government and commercial constellations across geosynchronous orbit (GEO), low Earth orbit (LEO) and medium Earth orbit (MEO).

These services have been tested and proven in live-sky battlefield scenarios including successfully providing assured PNT in a simulated warzone with complete denial of GPS and GNSS services.

VIAVI will integrate these services in its own products while also providing receivers for third-party solution providers desiring to leverage the altGNSS services in their own systems.

"Critical infrastructure around the globe is increasingly susceptible to PNT disruption, but that is even more apparent in theaters of war," said Doug Russell, senior vice president, AvComm, VIAVI. "Our SecureTime services have steadily built up an unsurpassed capability to protect timing in critical networks, independent of any one source or frequency band."



# Sea Tel 370s TV antenna brings TV to the sea

Designed primarily for use on cruise ships and mega yachts, Cobham Satcom's Sea Tel 370s TV 3.7m antenna is a groundbreaking solution designed to expand onboard access to the highest quality programming anywhere in the world, while significantly reducing lifetime technical costs.

Leveraging the newest generation Sea Tel Integrated Marine Electronics (IMA) platform, which is already proven in the world's most flexible and powerful marine VSAT antenna systems, Sea Tel 370s TV helps unlock several advantages for cruise and yacht charter companies by automating the manual processes that have until now been needed to make some of the most popular television channels available globally at sea.

Cobham Satcom's new TVRO antenna features automatic C-band switching between circular and linear polarisation, ensuring uninterrupted viewing and continuous availability of live television such as ESPN, one of the most popular cruise ship channels.

## Look out for...

### Securing quantum communications

The Paris Region Quantum Communication Infrastructure (QCI) consortium has implemented its first quantum communication network in existing fibre infrastructure.

Equipment related to quantum communications is expensive. To secure a link of less than 100km on a dedicated fibre, it takes approximately €180,000-250,000 just for a quantum key distribution (QKD) system. Accordingly, as part of the project, the consortium started with fibres already deployed by Orange France, some active and others dark.

The partners carried out measurements of optical losses by sending packets of photons into the fibre and characterising their round trips. Then they deployed a quantum communication system, developed by ID Quantique (IDQ), defined a 'seamless' network architecture, added a service layer, and implemented an encryption system that Thales adapted.

Quantum Key Distribution (QKD) was implemented on the infrastructure backbone with relays secured by post-quantum cryptography (PQC) to cover an extended distance range in Orange's fibre network. The solution combines IDQ's commercial Cerberis XG QKD system with embedded Clarion KX software suite (Key Management System), CryptoNext's Quantum Safe Library (C-QSL) and classical symmetric cryptography.


PQC is the next generation of public key cryptography designed to be resistant to quantum computer attacks. In this setup, QKD provides unbreakable key exchange between remote encryption systems, while PQC guarantees relays security in large scale QKD network deployment.

The quantum fibre network has a range of around 80km. It interconnects several quantum nodes which are represented by the project partners, from the Saclay plateau (Thales, Institut d'Optique, Télécom Paris) to the LIP6 Sorbonne Université laboratory in the center of Paris, via the Orange Gardens site in Châtillon.

The consortium has demonstrated that for the application of a QKD technology, using or reusing already deployed commercial fibre infrastructures is possible. This represents a huge step forward in the realisation of secure quantum communications – for both wired and wireless applications.



# MTS Belarus expands LTE-800 network to 1,434 villages with 515 new base stations

 MTS Belarus has significantly expanded its LTE-800 network, extending high-speed internet and voice services to 1,434 additional villages for the first time.

This expansion, enabled by 515 new base stations, has made LTE services available in over 23,000 small settlements across six regions of the country, significantly improving rural coverage.

In the Minsk region alone, 167 settlements, including Vileysky, Logoysky, and Molodechno, now enjoy 4G connectivity in the 800MHz

band. Similarly, over 520 settlements in Vitebsk, 214 in Mogilev, 77 in Brest, 450 in Grodno, and the Chechersk district in Gomel have also been included in this network enhancement initiative.

“Expanding access to 4G services is part of the company’s strategy to ensure equal access to modern technologies for all residents of the country, regardless of their region of residence. We not only make internet services more accessible, but also open up new opportunities for business development, large enterprises, tourism, as well as

provide access to educational and medical services,” said MTS Belarus in a statement. “We will continue to strengthen our position in the telecommunications services market, creating a full-fledged digital infrastructure that will contribute to the socio-economic development of our country.”

4G in the 800MHz band improves signal coverage and stability, especially in rural and remote areas. The company claimed that it was the first in Belarus to provide users with a 4G network and to date, its LTE network covers a total population of 99.23%.



# IDB to loan US\$100 million to enhance Brazil’s broadband connectivity

 The Inter-American Development Bank (IDB), a source of long-term financing for economic, social and institutional development in Latin America and the Caribbean, has approved a US\$100 million loan to Brazil’s federal government to improve digital connectivity and expand fixed broadband coverage in the country.

The Credit Expansion Programme for Investments in Telecommunications Networks will be executed by Brazil’s Ministry of Communications (MCOM). The programme will benefit some 2.5 million people by enabling the expansion of digital connectivity coverage in small municipalities and advancing Brazil’s digital transformation.

The financing will leverage Brazil’s Fund for the Universalisation of Telecommunications Services (FUST) resources through the fund’s financial agents, contracted by the MCOM-led FUST Management Council. FUST was established by law with the aim of allocating public resources to the fixed telephony service.


The programme is structured around two components. The first component will facilitate access to credit for small internet service providers (ISPs)



that invest in fixed broadband infrastructure in municipalities under 30,000 inhabitants, including the deployment of fibre optic cables and the installation of telecommunications equipment with energy-saving functions along existing infrastructure and rights-of-way, among others.

The second component will help reduce information asymmetries between small internet service providers and financial credit institutions through the implementation of an information technology system. This system will complement the credit rating mechanisms currently employed by financial institutions.

# Shelf Drilling adopts LEO satellite and SD-WAN for network optimisation

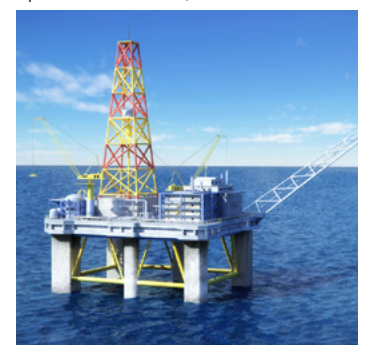
 Shelf Drilling has reported two major system upgrades. The first involves implementing a software-defined network management (SD-WAN) solution across its fleet of 36 jack-up rigs. The second includes installing the high bandwidth, low latency Starlink solution on selected rigs currently operating in the Mediterranean and the North Sea.

Over the past decade, Shelf Drilling has progressively enhanced its satellite network solutions. This latest initiative will see the addition of low Earth orbit (LEO) services, including Starlink, where regional regulations permit. The rigs selected for the Starlink upgrade will benefit from improved crew welfare and enhanced communications.

The SD-WAN solution provided by Marlink will be deployed across the entire Shelf Drilling fleet, optimising and managing network traffic to ensure high throughput and low latency. This hybrid network will combine guaranteed bandwidth services with cutting-edge technology to bolster digitalisation efforts and seamless offshore connectivity. The Starlink solution, serving as a secondary communications channel, will support client usage onboard and further improve welfare

services for the crew. “Marlink’s upgraded technology enhances communication between our offshore and onshore teams, boosting crew welfare and operational efficiency,” said Bryan Teo, IT director, Shelf Drilling. “Our global operations rely on stable, predictable connectivity and this collaboration empowers us with advanced solutions, ensuring seamless interaction and robust networks.”

“Marlink is dedicated to creating and delivering the best possible communications for Shelf Drilling through an optimised and secure solution,” said Alexandre de Luca, president, energy, enterprise & government, Marlink. “Our hybrid solutions provide the certainty and predictability that drilling operators need to meet the needs of their operational teams, clients and crew.”



## IOH brings Indosat Smart Internet to Indonesia with Cisco

 Indosat Ooredoo Hutchison (IOH), through Indosat Business in partnership with Cisco, has introduced Indosat Smart Internet to enhance business connectivity in Indonesia.

The solution offers faster, more flexible, and secure internet for multiple devices, aiming to keep businesses connected, productive, and efficient.

The Smart Internet ensures consistent upload and download


speeds across its coverage zone and features an intelligent dashboard that integrates all business devices. This dashboard analyses data to accelerate problem-solving, including network control and service management.

“The internet has altered the foundations of business in this age of digital acceleration. In addition to being a tool of communication and information access, the internet is now a crucial resource

for expanding businesses,” said Muhammad Buldanyah, director and chief business officer of Indosat Ooredoo Hutchison.

According to IOH, the solution is user-friendly, requiring no additional configurations, and comes with an affordable monthly payment scheme. Indosat Smart Internet will provide effectiveness and efficiency to companies, which can produce a multiplier effect on customer business growth going forward.


## Odido activates new 5G frequencies

 Odido has activated its recently acquired 5G frequencies which will allow customers with a 5G device to benefit immediately from increased speeds and a more stable connection. Starting in August, Odido will increase the speeds of several subscriptions free of charge.

The majority of masts will be switched on with the new 3.5GHz frequencies, and all customers with a 5G device and subscription will benefit from this upgrade. This will enable users in busy areas, such as cities or at events, to experience higher speeds. The rest of the masts will be activated during the course of the year, and the entire country will be provided with the latest 5G speeds.



## Umniah opts for AI/ML to cut network energy consumption

 Umniah will deploy Ericsson’s Artificial Intelligence and Machine Learning (AI/ML) solutions to reduce energy consumption across its network operations in Jordan.

Umniah has partnered with Ericsson to implement Customer Support Service Continuity offering, which uses AI and ML to reduce energy consumption in network operations through advanced Power Saving AI applications.

This deployment follows a successful proof-of-concept (PoC) that demonstrated approximately


a 20% reduction in daily 5G power usage. The companies expect that full-scale implementation will set a new standard for sustainable telecom practices.

The solution leverages a machine learning prediction model that continuously analyses real-time network data. With intelligent decision-making capabilities, it determines whether to deactivate, activate, or maintain network components based on the data and activity in neighbouring cells. This enables precise energy management and operational efficiency, resulting

in reductions in carbon dioxide emissions and operating costs, the statement said.

“The positive outcomes of the initial proof-of-concept were clear, and we are eager to see the benefits of this AI-enhanced power-saving technology on a larger scale. The implementation of Ericsson’s Service Continuity Power Saving solution is not just about cost savings - it is about taking meaningful action towards reducing our environmental footprint and building a greener future,” said Umniah Jordan in a statement.

## Digicel Samoa launches country’s first 5G

 Digicel Samoa has officially kicked off its rollout of 5G services with five 5G sites going live in the Apia CBD.

The sites cover the Levili Data Centre, FMFMII, NFP building, Tatte building and Frankie mall. Digicel customers with 5G-compatible devices will be able to use 5G

in those areas. Initial test results at the new 5G sites demonstrated average speeds of 550-600Mbps, albeit with the caveat that actual speeds will depend on the usual factors (location, distance from the mobile tower, local conditions, concurrent users, hardware and software

configuration and download/upload destination, etc).

The live 5G launch – the first in Samoa – comes four months after Digicel Samoa was granted conditional approval by the Government of Samoa to launch 5G technology. At the time, Digicel said it was upgrading its cell tower sites using Nokia’s AirScale non-standalone (NSA) 5G, starting with sites in Apia’s CBD.

“We’re building on the strong foundation of our 4G network to usher in a new era of connectivity with 5G,” said Digicel Samoa CEO Anthony Seuseu. “This launch isn’t just about faster speeds, it’s about delivering an exceptional experience for our customers in Samoa.”

Digicel Samoa has not given a timeline for when 5G will expand to the rest of Apia and Samoa in general.





# Handset Affordability Coalition to support lower cost smartphones for LMICs

The GSMA has announced a new global coalition that will deliver innovative solutions to make mobile phones more affordable for some of the world's poorest populations.

Members include mobile operators, vendors, device ecosystem players, international organizations and financial institutions, including the World Bank Group, ITU and the WEF's Edison Alliance. The coalition will work together to improve access to affordable internet devices to close the 'digital divide,' which prevents an estimated three billion people worldwide from maximizing their potential in the global digital economy.

Mobile phones remain the primary – and often the only – way people in low- and middle-income countries (LMICs) access the internet, accounting for 84% of broadband connections by 2023. Yet three billion people – 38% of the world's population – live in areas with mobile internet coverage but are not using it due to barriers including digital literacy and skills, lack of relevant content, online safety and access. Device accessibility is often identified as the most significant barrier to people getting online.

The new coalition will explore multiple 'levers' to reduce the price at which low-income populations access the digital economy, with a particular focus on low-income

countries and regions where the price of phones is the main barrier to accessing the internet, such as in sub-Saharan Africa and South Asia. By exploring new solutions, including 'risk-free' financing mechanisms, with support from the World Bank Group, the coalition will strengthen and complement current efforts to expand digital access and make it more affordable.

Going forward, the GSMA will continue to facilitate close collaboration among coalition members to share experiences, evaluate and deploy suitable innovative models that can effectively reduce the usage gap.

"Mobile has enabled billions of people around the world to play an active role in our increasingly digital world, but the price to access it is still too high for many people on low incomes. Together with the world's mobile operators and with the support of the World Bank Group and other key members of the coalition, we are determined to take action on this issue," said Mats Granryd, director general of the GSMA. "By developing creative solutions to bring mobile internet to those who need it most, we believe we can make real progress in closing the usage gap and helping millions of people maximize their potential by getting connected."

"Making internet-connected devices more affordable is essential

to accelerating digitalization in developing countries and ensuring that no one is left behind. We have seen the power of digital technologies to unlock growth and job creation and to facilitate access to education and health services, but people must first be connected for this to become a reality. This coalition brings together key players from the sector and the development community to help make this aspiration a reality," said Guangzhe Chen, World Bank group vice president for infrastructure.

In this age of unimaginable digital opportunity, smartphones are still out of reach for too many people. With the Broadband Commission's 2025 accessibility goal in mind, this new global coalition is an excellent complement to the work of the Commission's Working Group on Smartphone Access. It has the power to accelerate affordable access and bring us one step closer to meaningful universal connectivity, a cornerstone of ITU's mission and our digital future," said Doreen Bogdan-Martin, ITU secretary-general.

Today's launch of the Handset Affordability Coalition represents a tangible commitment from the industry to tackle the most significant barrier to mobile adoption worldwide, and is supported by the GSMA's Breaking Barriers campaign.

# Starlink wins temporary Tonga permit

Starlink has received a temporary permit to operate in Tonga following the government's previous outright ban on the service, as residents sought to cope with last month's subsea cable outage.

The temporary permit – which is valid for six months – allows Starlink to sell services directly to consumers, as well as via a reseller arrangement with existing local operators. The permit also comes with several conditions – Starlink must comply with all tax regulations, provide details of its terminals, and facilitate local payment methods for businesses in Tonga.

The Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change (MEIDECC) said that the permit is a stopgap to address immediate connectivity problems in the outer islands while Starlink's formal application is being processed.

Telephone and internet services on the islands of Vava'u and Ha'apai have been disrupted since 29 June following an early morning earthquake that damaged the Tonga Domestic Cable Extension (TDCE). Local telcos Tonga Communication Corporation (TCC) and Digicel Tonga activated backup satellite connectivity for both islands, but the capacity is a fraction of what the TDCE provides.

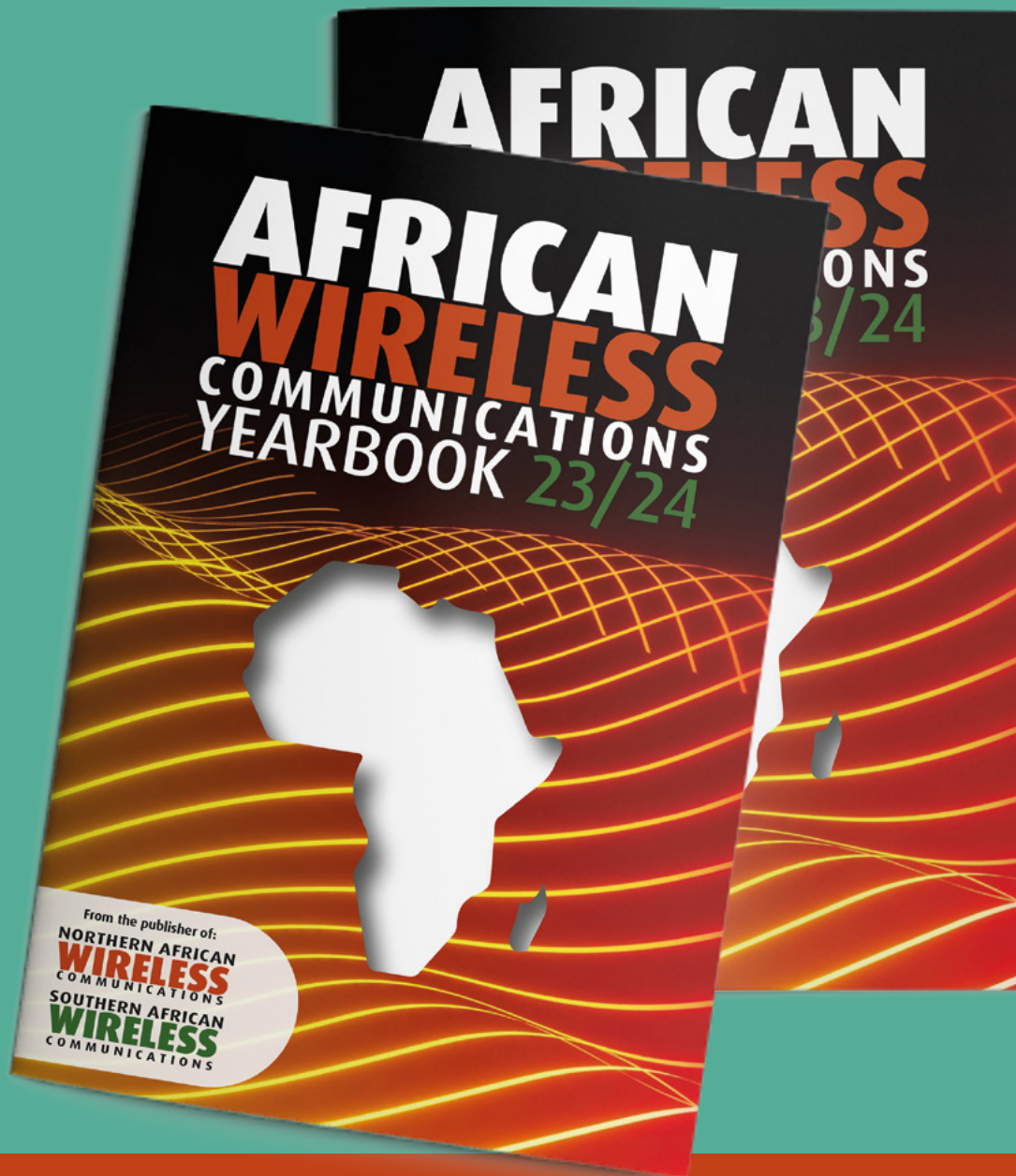
Before the TDCE outage, some Tonga residents with poor or non-existent internet service had been purchasing Starlink subscriptions overseas and using its roaming feature to access the service in Tonga. The government declared in May that importation of Starlink gear is illegal until its licence is approved. When Vava'u and Ha'apai residents resorted to Starlink after 29 June, the MEIDECC ordered the satellite operator on 9 July to disable its services in Tonga.

The Tonga government has been deliberating on Starlink's licence application since it was submitted in May, with one point of contention being the impact of Starlink on existing network operators.



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