For communications professionals in southern Africa

SOUTHERN AFRICAN WIRELESS COMMUNICATIONS

NOVEMBER/DECEMBER 2025 Volume 30 Number 1

- Satellite: rewriting Africa's future
- Proactive threat hunting
- Secure device financing

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Airtel Tanzania to boost rural connectivity

Airtel Tanzania has announced the continuation of its collaboration with the Universal Communication Service Access Fund (UCSAF), marking the signing of Phase 10 of their ongoing partnership.

The agreement aims to further expand communication services in underserved rural areas. The signing ceremony was graced by the Minister of Communications and Information Technology, Hon. Angellah Jasmine Mbelwa Kairuki, serving as the Guest of Honor.

As part of this new phase, Airtel Tanzania will be responsible for constructing 132 out of the 201 towers planned for deployment across various wards. This effort is part of a broader national initiative encouraging all service providers to improve connectivity in rural regions and narrow the digital divide. The company reaffirmed its dedication to providing high-quality, reliable, and modern communication services to all Tanzanians, ensuring that both urban and rural communities benefit from expanded network coverage.

This milestone not only bolsters Tanzania's digital infrastructure but also underscores Airtel Tanzania's leadership role in promoting inclusive connectivity and driving the country's digital transformation.

Smart Africa to empower youth innovation

Africa's emerging generation of young innovators and entrepreneurs is set to play a vital role in shaping the continent's digital future, and a new partnership aims to unlock that potential.

Smart Africa and YouthConnekt Africa have formalised their collaboration through a Memorandum of Understanding signed at the Transform Africa Summit 2025. This alliance seeks to strengthen cooperation, mentorship, and innovation among Africa's youth by leveraging platforms such as the Smart Africa Youth Chapters and YouthConnekt Country Chapters.

The partnership will facilitate joint organisation of programs during major events, including the Transform Africa Summit and the YouthConnekt Africa Summit, creating opportunities for young talents to showcase their ideas and connect with key stakeholders.

The collaboration emphasises boosting youth entrepreneurship, developing skills relevant to the digital economy, and promoting inclusive participation across Africa. It highlights the strategic importance of empowering young people as a fundamental driver of technological growth and economic development across the entire African continent.

Fast Networks Malawi completes rural connectivity project for underserved

Fast Networks Malawi has successfully completed a comprehensive rural connectivity initiative, providing internet access to some of the most underserved regions in the country.

Leveraging Starlink as a high-speed backhaul, the project has connected 67 schools, numerous clinics, and community spaces that previously lacked reliable internet.

Rural Malawi has long faced challenges with limited connectivity due to difficult terrain and fragile infrastructure, leaving many schools and health facilities completely offline. Over six months, Fast Networks Malawi, in collaboration with partners such as the Internet Society, Unconnected.org, World Mobile, 48.org, the Ministry of Education, Xulendo, and Inethi South Africa, built a mesh network that extended internet coverage far beyond the reach of individual Starlink terminals.

In addition to the connected schools, the project established 20 rural community WiFi hotspots, extending connectivity to nearby clinics, trading centres, and unconnected schools, thereby creating a broader digital ecosystem in regions that had been offline for years.

To make access affordable, the organisation introduced low-cost community WiFi vouchers. Revenue from these vouchers subsidises each school's Starlink subscription, significantly lowering operational costs and supporting the project's sustainability.

The improved connectivity has already transformed the educational landscape in rural areas. Students now access digital learning materials, teachers can retrieve updated syllabi and online resources, and many schools have introduced digital literacy lessons for the first time. Health clinics benefit from digital medical resources, and trading centres report increased activity driven by mobile banking and improved business communication.

Despite its success, the rollout faced challenges such as limited availability of affordable devices, low digital literacy levels, inflation-driven maintenance costs, and difficulties in managing remote networks. Fast Networks Malawi credits strong community involvement for helping to overcome these obstacles.

Project leaders believe the long-term impact will be substantial, strengthening rural education, supporting local businesses, and expanding access to essential services. With its voucher-funded subsidy model, the network aims to remain financially sustainable for years to come.

"Rural communities that were once offline are now digitally active. This model shows that sustainable, community-driven connectivity is achievable even in the most remote areas," said Barros Atupele Mweso, Co-Founder of Fast Networks Malawi.

Malawi to connect 2,000 rural schools

The Malawian government has announced a major plan to link 2,000 rural secondary schools to the internet through the "Connect A School" project, spearheaded by the Malawi Communications Regulatory Authority (MACRA).

The initiative was unveiled by the Minister of Information and Communication Technology, Shadric Namalomba, during a visit to the ICT laboratory at the Community Day Secondary School in Phalula, Balaka. Minister Namalomba highlighted the government's dedication to embedding the project within Malawi's broader national development strategy, Malawi 2063, which prioritises information technology skills as a vital component for progress. Participating schools will receive computer labs and internet connectivity, marking a significant step toward digital inclusion in the country.

Mphatso Phiri, acting director general of MACRA, explained that the program aims not only to provide essential digital infrastructure but also to equip young Malawians with digital skills necessary for securing employment in an increasingly connected world. The initiative has already shown promising results; Francis Chimwaza, director of the Community Day Secondary School in Phalula, noted that since the installation of their computer lab in 2023, the school's performance in national examinations has improved, with students achieving scores ranging from 17 to 19 points in the Malawi School Certificate of Education.

This effort comes amid ongoing challenges in digital access across Malawi. A study conducted by MACRA and reported by the Malawi Broadcasting Corporation revealed that nearly six million students in rural areas lack access to computers. Furthermore, a 2024 report by Paradigm Initiative found that 46% of Malawians do not use the internet because they are unaware of what it is, despite recent political and structural reforms. The government's five-year digital economy strategy, launched in 2021 and set to run until 2026, aims to increase internet access from 14.6% to 80% of the population and expand broadband coverage to 95%, reflecting Malawi's commitment to bridging the digital divide.

Madagascar announces cuts to internet tariffs

Madagascar's Ministry of Development, Posts and Telecommunications has revealed plans to slash internet tariffs across the country, starting in the first week of December.

The move follows discussions between the government and telecom operators aimed at enhancing digital accessibility for Madagascar's population.

Minister Mahefa Andriamampiadana explained that the extent of the reductions will vary depending on each operator's technical and financial capacity. He emphasised that fixed internet pricing should shift away from per-gigabyte charges, which tend to unfairly burden small and low-income users.

In response to operators' requests to eliminate excise duties, the Ministry said it is open to supporting such measures, provided they do not negatively impact government revenues. The Minister added that any financial relief granted to operators should be reinvested into improving services — offering more affordable plans, higher speeds, and ongoing infrastructure upgrades.

Reaffirming its commitment to creating an inclusive and competitive digital environment, the Ministry stated that the new pricing strategy aims to extend reliable internet access to more citizens and support Madagascar's broader development goals.

The government has taken a firm stance on the issue of internet costs, insisting that price reductions must be "real, simple, and visible" in everyday data plans that most citizens rely on. Officials criticised current offerings — such as 1.1 GB for 3,000 ariary, 2.5 GB for 5,000 ariary, and 5.5 GB for 10,000 ariary — as "small, conditional, and temporary," arguing that poorer households are effectively paying more per gigabyte than wealthier users.

While operators claimed that tax adjustments would not affect state revenue, authorities rejected this, stating that fiscal policy should not be driven by private interests. Ultimately, the government's goal remains to build an inclusive, competitive digital ecosystem that provides reliable internet access to all Madagascar citizens.

Mozambique's INCM reports progress in 2025 Activity Plan

The Communications Regulatory Authority of Mozambique (INCM) has reported impressive progress in implementing its 2025 Activity Plan, with approximately 87% of objectives achieved by November — significantly up from a 61% completion rate last year.

This progress reflects notable advancements across multiple areas, including regulation, enforcement, consumer protection, service quality, network expansion, digital inclusion, international engagement, internal management modernisation, and institutional capacity building.

In terms of technological development, INCM successfully carried out experimental 5G deployments in all provincial capitals, setting the stage for broader connectivity and positioning Mozambique for future digital demands. Looking ahead, the 2026 Activity Plan, which is awaiting Board approval and ministerial submission, sets out ambitious goals aimed at fostering a more dynamic, innovative, and consumer-focused communications sector. These include strengthening regulatory clarity and independence, improving consumer services, expanding accessibility and connectivity, enhancing the security and resilience of telecom infrastructure, promoting innovation and technological progress, and streamlining institutional management.

Government officials have emphasised the importance of these efforts in advancing the country's digital transformation. The Secretary of State in Inhambane highlighted that INCM's strategic planning and execution support Mozambique's broader agenda of expanding coverage, enhancing service quality, and reducing digital disparities between urban and rural areas. The provincial Governor praised INCM's achievements in expanding connectivity and digitalisation across Inhambane, noting that nearly all localities now have access to communication services.

INCM leadership called on all stakeholders to demonstrate collective commitment, efficiency, and focus to successfully realise the objectives outlined in the Activity Plan. As part of its corporate social responsibility initiatives, INCM is also supporting digital inclusion by providing Muela Secondary School in Inhambane with 33 computers, accessories, internet extension devices, and a fully equipped installation room through the Internet in Schools Project, further fostering equitable access to digital opportunities.

Starlink internet edges closer for Namibia

Namibia has initiated the licensing process for Starlink to provide satellite internet services across the country.

The Communications Regulatory Authority (CRAN) published the American company's license applications in the Official Gazette on 28 November, inviting public comments within 14 days.

Starlink has applied for a nationwide telecommunications services license to offer high-speed satellite internet via low Earth orbit (LEO) satellites, targeting both individual consumers and businesses with comprehensive coverage. The application also seeks a spectrum license for the frequency bands between 10.7 GHz and 14.7 GHz. CRAN clarified that the system is designed not only to serve proprietary terminals but also to provide additional capacity for mobile network operators. No financial details related to the application have been disclosed.

This move follows a previous CRAN order directing Starlink to cease all operations in Namibia due to operating without a valid license, despite having submitted an application. The regulator had issued a cease-and-desist notice after finding Starlink was conducting activities contrary to licensing requirements.

The development aligns with Namibia's ongoing efforts to explore satellite technology as a means to improve connectivity in remote and hard-to-reach areas. In June, CRAN CEO Emilia Nghikembua highlighted the limitations of terrestrial networks in covering vast regions such as agricultural perimeters, farmland, and isolated lodges, which cover over a million hectares. While approximately 91% of the population has some form of 2G, 3G, or 4G coverage, the country's large geographic size and low population density leave the remaining 9% underserved.

Starlink's entry is occurring amid rising competition in Namibia's internet market, which has traditionally been dominated by operators like MTC and Telecom Namibia. Recently, Paratus launched a 4G mobile network after primarily offering fixed internet services. As of early 2025, Namibia had roughly 1.97 million internet subscribers, representing a penetration rate of 64.4%, according to DataReportal.

Mukuru and WIFE to empower female farmers in Zimbabwe

Mukuru has joined forces with Women in Farming and Entrepreneurship (WIFE) to promote financial inclusion and support agri-preneurship among Zimbabwe's rural women.

The partnership is centred on advancing agroecological sunflower farming as a means to empower smallholder farmers, providing them with access to finance, agricultural training, and market linkages to strengthen their livelihoods.

Serving over 17 million customers globally, Mukuru's collaboration with WIFE underscores its commitment to fostering inclusive growth where financial tools can make the greatest impact. WIFE, founded in 2020, focuses on increasing women's economic participation through agripreneurship initiatives, supporting farmers across Zimbabwe's rural districts. Despite smallholder farmers constituting a significant portion of Zimbabwe's agricultural sector — estimated at 1.5 million by the UN's Food and Agriculture Organization — many women remain excluded from vital financial services, markets, and training opportunities.

WIFE's founder, Amanda Munyoro, emphasized that this partnership aims to bridge these gaps and marks a major step forward for rural women who depend on farming for their livelihoods. The pilot project has already begun with 30 farmers in Guruve, with plans to expand to 200 women over the next five years. Munyoro explained that through Mukuru's services, especially the Mukuru Wallet, members will gain tools that enhance their participation in the economy and improve their quality of life. Although the initiative primarily targets women, 20% of the beneficiaries will be men to promote community-wide inclusion and shared growth.

A notable participant, 52-year-old widow Precious Hofisi, shared that the programme offers a tangible chance to stabilize her income and support her family: "access to inputs, knowledge, and a secure market will finally allow me to fully support my family."

Mukuru's Corporate Social Investment Manager, Awonke Mbanga, highlighted that the programme combines financial inclusion with grassroots agricultural empowerment, helping rural women build resilient livelihoods and actively participate in their local economies.

The agroecological sunflower model at the heart of the project not only enhances food security but also provides a viable commercial crop, fostering community self-sufficiency. Over the next five years, WIFE aims to expand its circular sunflower value-chain groups into other rural areas in Zimbabwe, such as Guruve, and increase capital access for 500 women in Chikomba and Zvimba. Munyoro believes that sustained investment from Mukuru, a major player in the Southern African fintech space, will be instrumental in achieving these ambitions and strengthening rural agripreneurship across the region.

Namibia leads Africa's digital transformation with UPI

Namibia has established itself as one of Africa's most progressive economies, spearheading the continent's shift toward seamless, real-time online payments.

According to the latest RMB Continent at a Crossroads White Paper, Namibia is the only African nation to have formally adopted India's Unified Payments Interface (UPI) through a government-to-government agreement, positioning Windhoek at the forefront of Africa's digital revolution.

The white paper highlights that the agreement between the Bank of Namibia and India's National Payments Coordinator paves the way for instant, low-cost, and borderless digital payments. The Bank of Namibia's move to integrate its Universal Payments Interface (UPI) for real-time digital transactions is noted as a unique achievement at the government level in Africa, underscoring Namibia's commitment to modern financial infrastructure.

RMB emphasises that Namibia's proactive leap reflects the kind of scalable innovation Africa needs to accelerate regional integration under the African Continental Free Trade Area (AfCFTA), cut transaction costs, and unlock new economic opportunities for small enterprises and consumers alike. RMB's chief economist, Isaah Mhlanga, praised Namibia's progress as a clear example of the importance for African countries to invest in digital public infrastructure. He pointed out that Africa's vast natural resources and land often do not translate into shared prosperity, but practical reforms like Namibia's demonstrate what is achievable when countries prioritise technology, governance, and regional cooperation.

The report also places Namibia's digital advancements alongside its ambitious climate-oriented industrial projects, particularly its integrated green hydrogen initiative. This project, which combines renewable energy generation, port expansion, desalination, and rail upgrades, is among the continent's most advanced green industrial efforts. It illustrates Africa's potential to develop large-scale, investment-ready climate solutions that could serve as models for sustainable growth.

However, the report notes that financing remains a significant obstacle for many African nations. While the continent needs approximately US$250 billion annually to meet its commitments under the Paris Agreement, it currently attracts only about US$29.5 billion, mostly in the form of debt. Without bold structural reforms and digital-led economic growth, Africa risks falling further behind its development goals.

Despite these challenges, RMB argues that Namibia's integrated approach — combining digital payments modernisation with green industrialisation — offers a replicable blueprint for other nations. Mhlanga stressed that technology and innovation are central to Africa's integration into the global economy, and the key challenge now is transforming renewed international interest into lasting African agency and leadership.

As the AfCFTA's Digital Trade Protocol gains momentum, Namibia's early leadership exemplifies how African states can seize opportunities to shape the continent's digital and green economic future, demonstrating a path forward driven by innovation and sustainable development.

Angola Cables launches new cloud node

Angola Cables has announced the launch of its third cloud node in Angola, expanding its pan-African Clouds2Africa platform, alongside a new initiative to offer free cloud services to startups and local entrepreneurs.

The platform also includes nodes in South Africa, Namibia, Nigeria, Ghana, and Tanzania.

Angola Cables states that Luanda-02 is part of its broader strategy to enhance data sovereignty in Angola by offering a competitive alternative to global giants like Google Cloud and Amazon Web Services.

Júlio Chilela, Angola Cables' Director of Innovation, emphasised that "we ensure that Angolan data generated within the country stays in Angola."

Angola Cables CEO Ângelo Gama told Forbes Africa Lusofona that Clouds2Africa provides more cost-effective solutions, with payment options in kwanzas, along with storage services, virtual machines, and licenses designed to support sustained business growth. This approach aims to reduce the impact of international payments and ensure data backups remain within Angola.

In addition to the new cloud node, Angola Cables introduced a voucher program called Acelera Clouds, which allows startups and entrepreneurs to access Clouds2Africa's services free of charge for a limited period. Gama highlighted that this initiative aims to lower the barriers to accessing digital infrastructure — a key challenge for Angola's burgeoning startup ecosystem and a vital component of the country's digital transformation efforts.

Namibia strengthens ICT and cybersecurity capacity

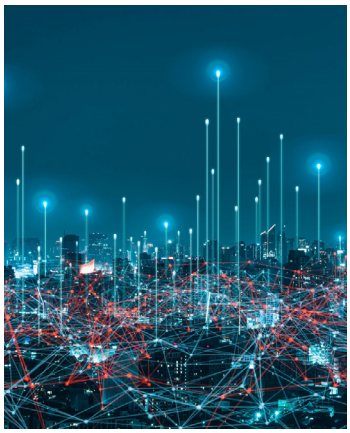
The Communications Regulatory Authority of Namibia (CRAN) and the University of Namibia (UNAM) have formally signed a Memorandum of Understanding (MoU) to enhance collaboration in ICT, cybersecurity, research, and capacity-building efforts.

This partnership aims to promote academic excellence and technological progress while equipping Namibian students and professionals with the skills necessary to support the country's expanding digital economy.

Both institutions expressed their dedication to empowering Namibia's digital future through joint initiatives, collaborative research projects, and specialised training programs designed to strengthen the nation's ICT and cybersecurity expertise. The MoU represents a strategic move to foster innovation, develop local talent, and position Namibia as a regional leader in technological advancement.

Q-KON, Guodian Gaoke and StarWin to launch satellite-enabled IoT services in South Africa

Q-KON Pty Ltd has entered into a tripartite strategic alliance with Beijing Guodian High-Tech Technology Co., Ltd. (Guodian Gaoke) and China StarWin Science & Technology Co., Ltd. (StarWin) to deliver Internet of Things (IoT) services supported by the Tianqi low Earth orbit (LEO) satellite constellation in South Africa.



Under this partnership, Q-KON will serve as the authorised provider for Tianqi satellite-based IoT services in South Africa, utilising its extensive market expertise and distribution channels to begin commercial operations next year. Guodian Gaoke will supply the Tianqi LEO satellite system and related infrastructure, ensuring seamless integration with local businesses. StarWin will provide and deploy certified ground terminals that meet South Africa's technical and regulatory standards, supporting a variety of end-user applications.

This alliance exemplifies a pioneering transnational effort, blending Chinese high-tech satellite systems with local African market insights and service networks. It aligns with South Africa's national digital strategy, aiming to boost industrial upgrades through space-based infrastructure, and sets a high standard for international cooperation in satellite IoT development. The collaboration emphasises principles of consultation, co-creation, sharing, and mutual benefit—aimed at fostering inclusive growth and sustainable development across key sectors.

"This alliance marks a key milestone in our vision to serve Africa's digital needs through advanced satellite solutions, expanding our Twoobii portfolio with IoT offerings. By combining Guodian Gaoke's constellation, StarWin's ground technology, and our market presence, we can provide critical infrastructure to boost productivity and global competitiveness in South Africa's vital industries," said Q-KON Group CEO Dr. Dawie de Wet.

"This is the first Tianqi Constellation project in Africa, bringing high-reliability, low-power satellite communication services to key sectors like forestry, power management, logistics, vessel monitoring, and disaster response. We aim to accelerate South Africa's digital industry development and lay the groundwork for future collaborations," said Guodian Gaoke VP Zheng.

Amelia, COO and Co-Founder of StarWin, emphasised the importance of closing the digital divide, noting South Africa's focus on digital transformation during its G20 presidency. She explained that IoT is a critical driver for modernising industries such as agriculture, manufacturing, energy, and transportation, contributing to economic diversification, job creation, and innovation.

ADB approves $1.78 billion strategy for Namibia

The African Development Bank Group has announced the approval of a comprehensive Country Strategy Paper for Namibia, committing $1.78 billion to support the country's efforts toward economic transformation and inclusive growth from 2025 to 2030.

The substantial investment aims to promote job creation, diversify the economy, and tackle critical challenges faced by one of Africa's most unequal nations, where youth unemployment exceeds 40 percent and per capita income has declined from $5,942 in 2012 to $4,240 in 2024.

Moono Mupotola, the Bank Group's Deputy Director General for Southern Africa and Namibia's Country Manager, described the strategy as a pivotal development milestone. She emphasised that the focus on strategic infrastructure and human capital development is intended to lay a solid foundation for inclusive growth that benefits all Namibians, especially the youth.

The strategy centres on two main priorities. The first involves investing in transport, energy, and water infrastructure to reduce business costs, improve productivity, and position Namibia as a regional logistics hub. These investments aim to boost trade facilitated under the African Continental Free Trade Area, strengthen energy security through renewable sources, and expand rural access to clean water and sanitation. The second priority is to enhance human capital by supporting market-relevant technical and vocational training, creating pathways from education to employment, fostering micro, small, and medium enterprises (MSMEs), and promoting women's economic empowerment.

Implementation of these initiatives is expected to diversify Namibia's economy beyond mining and agriculture, better integrate MSMEs into regional value chains, and upgrade manufacturing capabilities, thereby creating thousands of direct and indirect jobs. Infrastructure improvements will increase electricity access from the current 59.5 percent toward universal coverage, improve trade connectivity with neighbouring Angola and Zambia, and reduce logistics costs. The strategy also aligns with Namibia's climate commitments and aims to position the country as a leader in green hydrogen.

Mupotola noted that recent challenges, such as U.S. tariff impositions and reductions in official development assistance, have added economic pressures on Namibia. The new strategy seeks to strengthen resilience by diversifying export markets, bolstering regional integration, and developing domestic productive capacities.

Building on a decade of prior investments totalling over $658 million, including port expansion, railway upgrades, and educational infrastructure across all regions, the strategy aligns with the Bank Group's Four Cardinal Points, Namibia's Vision 2030, and Africa's Agenda 2063. Implementation will commence immediately, with initial projects expected to launch in early 2026.

Zimbabwe launches nationwide digital learning initiative

Zimbabwe has unveiled an ambitious plan to provide equitable access to technology, educational content, and online learning resources for all students, regardless of their geographic location.

The Ministry of Primary and Secondary Education announced that the "One Pupil, One Tablet – One Student, One Laptop" programme will be rolled out across the country in 2026.

Minister of Primary and Secondary Education, Torerayi Moyo, described the initiative as a bold and transformative step aimed at modernising the education system by equipping learners with personal digital devices. He emphasised that the program is vital for bridging the digital divide between urban and rural schools and aligns with the broader goal of creating a resilient, inclusive, and future-ready education system.

Moyo added that the Ministry is actively collaborating with various stakeholders, development partners, and the private sector to ensure the successful implementation of the initiative. He expressed confidence that the future of Zimbabwe's education landscape is digital and reaffirmed the government's commitment to making this future accessible to every learner.

"Education is the foundation of national development. Let us build it with innovation, equity, and purpose," said Moyo.

Talking critical

Michel Duits, Norwegian Directorate for Civil Protection (DSB) and Co-chair of TCCA's IWF Working Group; and Sylvain Allard, Senior Director, Connectivity, Capgemini, and lead author of the IWF white paper

The IWF - a major advancement in mission-critical communications

As the critical communications sector increasingly adopts broadband networks to deliver critical services, the Interworking Function (IWF) emerges as a necessary driver for a smooth transition from narrowband to broadband systems.

The IWF is a key component of the 3GPP Mission Critical Services (MCX) architecture that enables interoperability between Land Mobile Radio (LMR) systems and MCX services. It provides a standardised approach for facilitating seamless communication across both domains, ensuring compatibility in voice, data, and signalling services. To achieve interoperability, an IWF is required, either as an embedded software component or as a standalone function/entity. This integration may be implemented by the LMR equipment manufacturer, a third-party developer, or the network operator.

It is not a straightforward process - successfully integrating LMR and MCX networks involves overcoming several critical challenges. To ensure a smooth and effective deployment, the following areas must be proactively addressed:

- Service mapping – LMR systems are frequently customised with specific features and integrations tailored to user requirements. To maintain continuity, these customised services may need to be replicated within the MCX environment.
- Performance and scalability – The IWF must be designed to avoid becoming a bottleneck between the LMR and MCX networks. This requires careful planning of the supporting network infrastructure, computing environment, and IWF software architecture to eliminate single points of failure and performance limitations. Furthermore, the solution should be scalable to support future expansion and the incorporation of new services. It should also be noted that the IWF must fulfil equivalent LMR requirements to ensure that the interworking of both technologies delivers a user experience comparable to that of mission-critical LMR networks.
- User training and change management – Transitioning to a new communication system can often face resistance. It is vital to ensure that MCX solutions offer the same reliability for essential LMR functions. Clear communication of the advantages of MCX, coupled with comprehensive user training and dedicated support during the transition, will be crucial for driving adoption and user confidence.
- Maintaining operational continuity – To minimise disruption during the migration process, a phased rollout strategy should be developed. Gradual implementation of MCX services ensures that mission-critical communications remain uninterrupted while users adjust to the new system.
- Security considerations – Ensuring robust security is paramount in any push-to-talk environment, especially when interworking between LMR and MCX networks. Trust and protection must be established through a combination of standards-based security protocols, operational safeguards, and cyber defence measures. The IWF interfaces provide mechanisms for secure user and group authentication, as well as protection of signalling and media traffic. Additionally, physical and procedural safeguards must be in place to protect the IWF from becoming a vulnerability or attack vector.
- Redundancy & resilience – Redundancy and resilience are proven, intrinsic features of LMR that have been built and tested over time, which need to be taken into account when adding the IWF solution.
- Control – Public safety agencies often require a high level of authority over their systems – not only in terms of coverage and capacity, but also in determining who can access the system and who receives priority.

The IWF adheres to internationally recognised 3GPP and ETSI standards, providing a secure, scalable, and vendor-neutral interoperability framework, allowing the selection and deployment of best-of-class solutions, and therefore avoiding dependence on proprietary interworking solutions from the incumbent LMR vendor. Designed to support large-scale deployments, the IWF is suitable for nationwide public safety networks and expansive industrial operations. A growing number of LMR system vendors are adopting the 3GPP-defined IWF standards, promoting multivendor interoperability.

The adoption of MCX is steadily increasing among LMR equipment manufacturers, mobile network providers, and software developers. To support this evolution, ETSI organises a series of MCX Plugtests™ events to evaluate interoperability across multi-vendor environments. These testing campaigns focus on verifying MCX server-client compatibility, integration of MCX Application Servers with 4G/5GCore networks for prioritised and multicast communications, and interworking with LMR systems via the IWF interface.

The 2025 edition of ETSI's MCX Plugtests confirmed that at least eight MCX vendors have successfully implemented the IWF interface, enabling essential interworking features such as group affiliation, group calls, and private calls. Future ETSI MCX Plugtests are expected to expand these evaluations to include emergency calling and Short Data Services (SDS). In parallel, the Global Certification Forum (GCF) in partnership with TCCA has launched a certification programme for 3GPP-compliant MCX solutions. Plans are underway to extend this initiative to cover certification of server-side MCX components, including IWF functionality, to ensure robust end-to-end interoperability across the ecosystem.

The integration of LMR networks with broadband MCX services via the IWF standard marks a major advancement in mission-critical communications. This convergence harnesses the reliability of LMR with the expanded capabilities of 4G and 5G — enabling seamless voice, real-time data transfer, high-resolution video, and enhanced coverage.

The IWF is explored in detail in a white paper from TCCA's IWF Working Group – the white paper can be found here https://tcca.info/about-tcca/tcca-resources/whitepapers/

Satellite power, African potential: How SES plans to shape the continent's connectivity

Africa's digital momentum is accelerating, and satellite technology is emerging as one of the continent's most powerful equalisers. SES lays out how its multi-orbit strategy, new scale, and sharpened focus aim to transform connectivity across Africa over the next five years.

Africa is moving into a new phase of satellite-driven connectivity, and within this rapidly evolving landscape, the strongest near-term growth opportunities lie in a few very clear areas: expanding broadband access to underserved and remote regions; supporting enterprise and government digitalisation; and enabling mobile backhaul for telecom operators who are racing to extend coverage to communities still waiting for reliable service.

SES sees these opportunities as particularly promising, and it is positioning itself to lead by drawing on the unique capabilities of its multi-orbit satellite fleet. By combining the strengths of both GEO and MEO satellites, SES is able to deliver high-throughput, low-latency connectivity into places where terrestrial infrastructure is limited, unreliable, or simply does not exist.

The company goes a step further by embedding itself into the fabric of the continent — its partnerships with top mobile network operators and local governments, along with its established on-the-ground teams across Africa, give SES a strategic foothold that allows it to address these high-potential markets with a blend of local insight and global scale.

The next generation of African connectivity

This momentum aligns with SES's long-standing ambition to help bridge digital divides, a goal that is now evolving into a vision of what the next generation of African connectivity could look like. From SES's perspective, this future will be defined by the seamless integration of satellite and terrestrial networks, delivering ubiquitous, dependable, and affordable internet access to users of every type. In this emerging landscape, the enterprise and government segments are poised for the biggest leap forward. Their drive toward cloud adoption, fintech expansion, and broader digital transformation initiatives means they require highly reliable, flexible, and secure connectivity.

Mobility services — particularly mobile backhaul — are also expected to see substantial growth as mobile operators push deeper into rural and remote areas. With its advanced MEO and GEO satellites working in tandem, SES can support each of these segments with tailored solutions, powered by technologies like SD-WAN and network automation. These combined capabilities give SES the ability to deliver everything from secure government communications to scalable enterprise networks and consumer broadband services.

The strategic impact of SES's integration with Intelsat

The company's reshaped trajectory is further strengthened by SES's acquisition of Intelsat and the accompanying rebranding and restructuring. This integration has created a combined fleet of more than 50 satellites serving Africa, bringing an unmatched level of coverage, redundancy, and service diversity to customers across the continent.

The benefits are tangible: expanded video and data services, enhanced cellular backhaul, and greater flexibility in the way networks can be designed and deployed. Thanks to the pooled expertise and local presence of both organisations, SES is now able to roll out more robust, scalable, and innovative solutions that include hybrid network models and advanced managed services. The consolidation also gives SES the muscle to better support large-scale government and enterprise projects, accelerate digital inclusion, and respond more quickly to evolving market needs.

This merger comes at a time when many stakeholders argue that consolidation is reshaping the global satellite landscape. In Africa specifically, the SES–Intelsat integration is expected to influence both competition and innovation in meaningful ways. With a broader portfolio of services and technologies now available from a single provider, the combined entity is positioned to push forward with hybrid network models and enable new use cases such as cloud services and fintech applications. Its scale and resources will accelerate the rollout of next-generation connectivity solutions while helping to lower costs through operational efficiencies — a handy combination that tends to make competitors sit up and innovate faster. African customers ultimately stand to gain from this shift, as they will have more choice, better performance, and earlier access

Pablo Catapodis, Vice President, Africa Sales

to cutting-edge technologies. By raising the bar, the consolidation encourages other players in the market to elevate their offerings as well, contributing to an overall improvement in the quality and availability of connectivity across the continent.

Why hybrid satellite networks are gaining momentum

Among the biggest drivers behind this innovation boom is the rise of hybrid network models, which are gaining strong traction across Africa.

SES is at the forefront of this movement, combining GEO and MEO capabilities to support emerging use cases such as cloud services, fintech expansion, and rural mobile coverage. The hybrid approach works because it aligns the strengths of each orbit with the applications that need them. GEO satellites provide broad coverage and strong broadcasting capabilities, while MEO satellites deliver low-latency, high-throughput performance that is ideal for real-time and cloud-based services.

SES's O3b mPOWER MEO constellation sits at the centre of this effort, working alongside GEO assets to deliver seamless and resilient connectivity across these critical use cases. Technologies like SD-WAN and network orchestration help optimise traffic routing and ensure consistent service performance, whether the task at hand is supporting edge computing, enabling secure financial transactions, or powering rural mobile towers.

Connecting Africa's hardest-to-reach

This hybrid strength positions SES well for some of Africa's most challenging environments — and the continent certainly has its fair share of them, from remote mining belts to rapidly expanding coastal cities. SES's ability to deliver differentiated, high-performance connectivity will stand out most clearly in verticals such as mining, energy, government, education, and media.

In remote mining regions, satellite connectivity enables everything from operational efficiency and safety monitoring to real-time data exchange that supports automated systems. Along the bustling coastlines, SES facilitates smart city initiatives, widespread enterprise cloud adoption, and high-capacity video distribution.

Meanwhile, government bodies and educational institutions benefit from secure, scalable networks that power public services and digital learning programmes, helping to bring communities into the digital era.

Sustaining leadership in a competitive landscape

With global players racing to capture the next wave of demand, SES recognises that staying ahead will require continued innovation and strategic focus.

The company believes it must keep pushing the boundaries of multi-orbit satellite technology, deepen its partnerships across local ecosystems, and expand its suite of managed services to maintain leadership and help shape the satellite industry's future direction in Africa. This means prioritising customer-centric solutions, accelerating the rollout of next-generation networks such as meoSphere, and supporting regulatory harmonisation that enables smoother, faster deployments.

SES also sees sustainability, digital inclusion, and workforce development as essential elements of its long-term strategy. By fostering collaboration with governments, enterprises, and rising space-sector innovators, the company aims to drive transformative change across the continent.

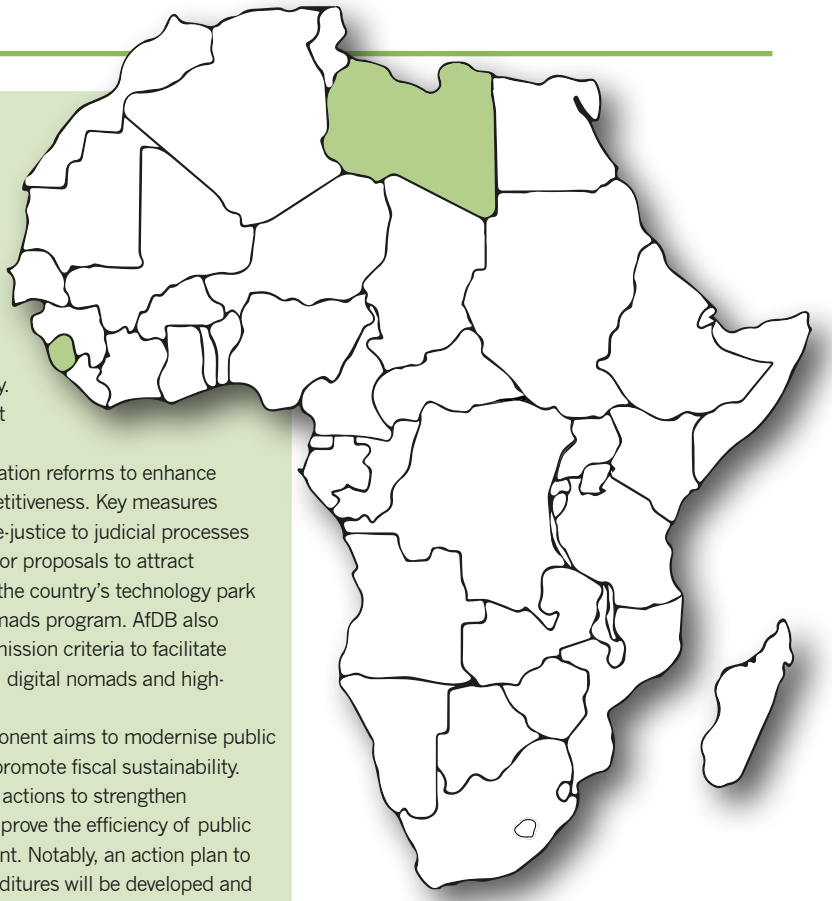
SES's role in Africa's digital transformation

Looking five years ahead, SES envisages playing a pivotal role in catalysing Africa's digital transformation. The company sees itself enabling universal broadband access, supporting smart infrastructure, and empowering digital education and entrepreneurship across diverse communities.

SES expects to be judged against a number of clear milestones: the number of communities it helps connect; the depth and breadth of its partnerships with governments and NGOs; the deployment of advanced satellite networks; and measurable contributions to economic development and social inclusion.

Ultimately, SES's success will be measured by its ability to bridge the digital divide, drive innovation, and deliver sustainable, high-performance connectivity that supports Africa's long-term growth. ■

ADB provides $20.7 million for Cabo Verde's e-governance reform



The African Development Bank Group (AfDB) has approved a $20.7 million loan to fund the second phase of Cabo Verde's E-Governance and Public Financial Management Reform Programme (E-PFMRP).

This multi-phase initiative, primarily supported by the AfDB and the World Bank, aims to modernise public administration, enhance fiscal transparency, and foster economic growth through digital transformation.

The funds build upon last year's ongoing support as Cabo Verde seeks to leverage technology to boost economic development and improve administrative efficiency, according to the AfDB. The financial support is intended to stimulate growth while advancing e-governance reforms that modernise public services and strengthen public finance management. Beneficiaries include key agencies such as the Ministry of the Digital Economy, Central Bank of Cabo Verde, Institute for Gender Equality and Equity, National Directorate of State Revenue, and the Public Procurement Regulatory Authority.

The initiative's first component focuses on continuing digitisation reforms to enhance private-sector competitiveness. Key measures include introducing e-justice to judicial processes and launching calls for proposals to attract private operators to the country's technology park under the digital nomads program. AfDB also plans to develop admission criteria to facilitate the establishment of digital nomads and high-growth tech firms.

The second component aims to modernise public administration and promote fiscal sustainability. It will support policy actions to strengthen transparency and improve the efficiency of public resource management. Notably, an action plan to rationalise tax expenditures will be developed and published, with full estimates included in the 2026 budget to enhance fiscal transparency.

Libya Telecom begins shutdown of traditional phone exchanges

Libya Telecom has announced plans to systematically shut down its traditional telephone exchanges as part of a broader effort to develop a more resilient and sustainable communications infrastructure.

The decision follows a recent bilateral meeting between Libya's Post, Telecommunications, and Information Technology Holding Company (LPTIC), the parent organisation of Libya Telecom, and the General Authority for Communications and Informatics. The discussions focused on strengthening national sovereignty, establishing a clearer regulatory framework, and exploring options for unifying regulatory structures, alongside plans to upgrade the country's telecommunications infrastructure.

The initial phase involves shutting down 70 telephone exchanges. The operator clarified that users of asymmetric digital subscriber line (ADSL) services will not be affected until fibre optic projects are completed. The company emphasised that the goal is to end reliance on outdated systems and build a modern, resilient network that aligns with the aspirations of Libya's digital future.

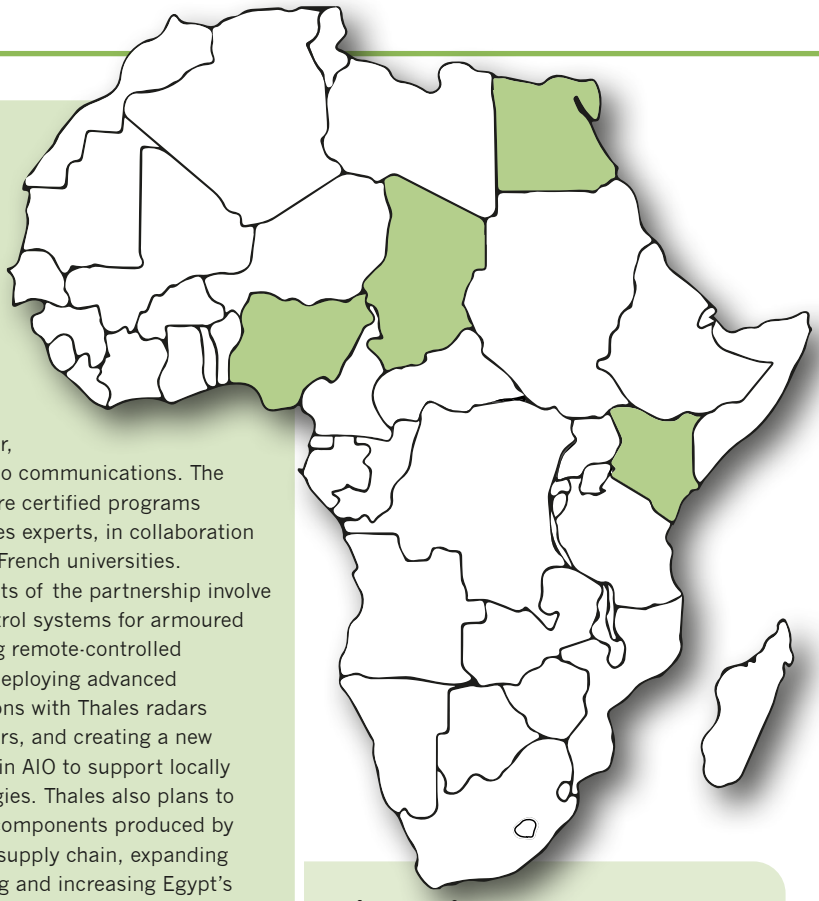
Orange Sierra Leone opens DC in Bo

Orange Sierra Leone has officially inaugurated a new data centre in the southern city of Bo, marking a significant milestone in the country's digital infrastructure development.

The €23 million facility mirrors the company's main data centre in Freetown and is designed to serve as a vital disaster recovery site, ensuring continuity of digital services amid emergencies, outages, or natural disasters.

Located strategically in the south, the new data centre aims to extend digital infrastructure reach into rural and regional communities, particularly along the southern and eastern corridors towards Makeni, Kono, and Kenema. By improving the distribution of network traffic and connectivity in underserved areas, the facility is expected to enhance overall service resilience and accessibility across the country.

The launch of this backup infrastructure comes at a time when Freetown remains vulnerable to natural hazards such as landslides and flooding, which have previously disrupted services, including a major incident in 2017. The new data centre underscores the government's and Orange Sierra Leone's commitment to safeguarding essential digital services and supporting the country's ongoing digital transformation.



Egypt strengthens Thales technology partnership

Egypt is accelerating its journey toward technological independence through an expanded partnership between the French multinational Thales and the Egyptian-based Arab International Optronics (AIO).

This collaboration aims to transform Cairo's defence, cybersecurity, and industrial capabilities over the coming decade, positioning Egypt as a regional hub for advanced technology and defence manufacturing.

Thales, a Paris-listed company with over 83,000 employees across 68 countries, is a global leader in defence, aerospace, cybersecurity, artificial intelligence, quantum computing, and cloud technologies. The company has maintained a presence in Egypt for more than 50 years, supporting sectors such as civil aviation, defence, enterprise security, and space systems. Its footprint across Africa also includes Morocco, Nigeria, Kenya, Algeria, and South Africa.

The renewed cooperation with AIO marks one of the most significant expansions of Thales' operations in the Middle East and Africa in recent years. AIO, established by the Egyptian Armed Forces, is a key manufacturer of optical and electro-optical equipment, producing night-vision systems, thermal imagers, fire-control systems, and remote weapon stations. It plays a vital role in Egypt's defence industry and exports military technology to allied nations.

The partnership encompasses six major initiatives, including the establishment of a Thales Academy aimed at training Egyptian military personnel, government officials, and civilians in areas such as AI, cybersecurity, radar, optronics, and radio communications. The academy will feature certified programs conducted by Thales experts, in collaboration with Egyptian and French universities.

Other components of the partnership involve upgrading fire-control systems for armoured vehicles, enhancing remote-controlled weapon systems, deploying advanced surveillance solutions with Thales radars and thermal imagers, and creating a new service centre within AIO to support locally deployed technologies. Thales also plans to incorporate more components produced by AIO into its global supply chain, expanding local manufacturing and increasing Egypt's export capacity.

"With the reinforcement of this strong partnership with AIO, Thales in Egypt is proud to contribute to the technological sovereignty of Egypt. By anchoring Thales' advanced solutions locally, we aim to support Egypt's position as a regional technology hub capable of exporting high-value solutions," said Sherif Barakat, CEO of Thales Egypt.

This strategic deal underscores Egypt's long-term ambition to innovate independently, build confidence in its technological capabilities, and compete on the global stage in defence and advanced technologies.

Chad outlines digital strategy to support refugee camps

Chadian Minister of Telecommunications and Digital Economy, Boukar Michel, detailed a comprehensive plan to enhance connectivity in the country's most vulnerable regions, especially around refugee camps.

The strategy was presented during a videoconference involving officials from the International Telecommunication Union (ITU), the United Nations High Commissioner for Refugees (UNHCR), and other members of the United Nations system.

The Chadian Ministry of Telecommunications and Digital Economy explained that Chad is leveraging digital technology to combat isolation. The initiative includes efforts to improve network coverage around refugee camps, deploy solar energy solutions, facilitate easier access to telecom services, and develop digital educational spaces. These integrated efforts aim to enable refugee populations to communicate with loved ones, access vital information, continue their education, and engage in basic economic activities, addressing both infrastructural and humanitarian needs.

Chad currently hosts more than 1.5 million refugees, mainly fleeing the ongoing conflict in Sudan. To realise these ambitious plans, the government is seeking increased support from international partners. The overarching goal is to position Chad as a model of digital solidarity, demonstrating that even in environments affected by crisis, it is possible to provide essential technological solutions that uphold the dignity and resilience of displaced communities.

Nigeria approves 4,000 new telecom towers

Nearly 23 million Nigerians remain underserved in terms of communication, limiting their access to vital services, economic opportunities, and information. In response, the Federal Executive Council has approved the construction of 4,000 new telecom towers across the country, aiming to enhance connectivity, especially in areas currently lacking adequate coverage.

The announcement was made by Muhammed Idris, Nigeria's Minister of Information and National Orientation, after a council meeting led by President Bola Tinubu. Idris explained that the decision follows a joint memo from the Ministries of Communications, Innovation, and Digital Economy, and Finance. The project will finance the development of agricultural mechanization service centres and support digital economy initiatives, targeting communities without basic access.

Idris highlighted that poor connectivity has hampered commerce, compromised public safety, and slowed social inclusion in remote regions. The deployment of these new towers is expected to bolster national security and stimulate economic activity across Nigeria.

However, progress has faced challenges due to high right-of-way charges, multiple taxes, and policies that industry stakeholders say impede infrastructure development, among other issues.

This latest move builds on an earlier plan to deploy 7,000 rural telecom towers and complements ongoing efforts to roll out 90,000km of fibre-optic cables, all aimed at bridging Nigeria's connectivity gap.

Kenyan engages with Infratel to boost broadband and digital cooperation

A Kenyan delegation visiting Italy in early December held a high-level meeting with Infratel Italia, led by CEO Pietro Piccinetti, to discuss collaboration opportunities in expanding broadband access, developing a digital superhighway, and planning smart infrastructure projects.

The Kenyan team, headed by John Tanui, principal secretary of the State Department of ICT and the Economy, was joined by Frederick Lusambili Matwang'a, Kenya's Ambassador to Italy.

Tanui announced that both sides agreed to initiate work on a Kenya–Infratel Memorandum of Understanding focusing on connectivity, national infrastructure mapping, public Wi-Fi deployment, Smart City initiatives, and capacity building. He highlighted key areas of cooperation including large-scale fibre optic deployment, 5G rollout strategies, Italy's national infrastructure cadastre for coordinated planning and reduced excavation, and expanding public Wi-Fi networks to promote digital inclusion.

The discussions also covered submarine fibre connectivity for islands and remote regions, infrastructure mapping, national backbone planning, and exploring market opportunities under Italy's Piano Mattei framework. This strategy, established by Italian Prime Minister Giorgia Meloni's government, aims to strengthen Italy's engagement with African nations through a partnership approach focused on development, energy security, and migration management.

Tanui emphasised that this partnership will accelerate Kenya's Digital Superhighway agenda and enhance knowledge exchange between the two countries. The ambitious project aims to lay 100,000 km of fibre optic cable, establish 25,000 public Wi-Fi hotspots, and create 1,450 digital village smart hubs across Kenya.

Talking fibre

Tom Koster, Senior Vice President for Global Partnerships, Laser Light Communications

The rise of the land bridge economy

If you have been in this industry as long as I have, you might remember when we used to obsess over the "plumbing." We spent years debating the minutiae of specs, modulation schemes, and flashing lights in a server room. We loved our acronyms. We wore them like badges of honour.

But here is the truth, and it might sting a little for the die-hard engineers among us: the subscriber doesn't care.

Whether it's a teenager in Lagos or a CEO in Lusaka, nobody wakes up in the morning hoping to engage with "infrastructure." They want to engage with the world. They want the power to create, decide, and connect at their fingertips. The technology itself? It should be invisible. It should be seen and not heard. When we do our jobs right, the tech disappears, and the human potential takes centre stage.

However, to make that technology truly ubiquitous and invisible, we have to address a glaring geographical bias that has plagued our industry for decades.

The coastal bias

Historically, global networking has been obsessed with the path of least resistance — or rather, the path of least Capex. We have draped fibre optic cables around the world's coastlines like tinsel on a Christmas tree. Why? Because it was cheaper to land on the beach and backhaul a few miles inland than to tackle the difficult terrain of the interior.

The result is a connectivity map that looks like a hollow donut. The coastal regions — the edges — are comparatively well-fed with data, commerce, and knowledge transfer. Meanwhile, the interiors have been left on a starvation diet.

We have missed the middle. We have neglected the "Sleeping Giants."

I am talking about the massive, untapped potential of nations like Zambia, Zimbabwe, Malawi, Ethiopia, and the Central African Republic. I am talking about the Sahel region — Mali, Niger, Chad, Sudan — and the western expanses of Tanzania. By treating these regions as secondary markets or logistical headaches, we have created a dangerous socio-economic imbalance.

When you starve a region of connectivity, you aren't just slowing down Netflix; you are throttling education, dictating where manufacturing capacity can sit, and misaligning decision-making centres. You are effectively deciding who gets to participate in the future and who has to watch from the sidelines.

The rise of the land bridge

It is time for a new strategic vector. It is time to stop looking at these nations as "landlocked" — a term that implies entrapment and limitation — and start viewing them as "Land Bridges."

These are the future interX points of the continent. They are the critical junctions that can stitch the fabric of African connectivity together, rather than just hemming the edges. From a strategy and business development perspective, this isn't charity; it is a massive, latent market waiting to awaken.

At Laser Light Communications, this is the catalyst driving our partnerships. We are moving beyond the traditional coastal-first metrics. We are looking at the map and seeing opportunity where others see topography issues. We believe that by flooding these "Land Bridges" with data, we can facilitate a more equitable transfer of knowledge and wealth.

The "concern" and the cure

I want to leave you with a thought that is half-optimism, half-warning.

If we continue with the status quo — if we keep hugging the coast and ignoring the heart of the continent — we are courting discontent. A digital divide inevitably leads to an economic divide, which leads to social friction. We cannot claim to be building a global village if the town square is only open to those with an ocean view.

But the flip side is genuinely exciting. When we empower the subscriber — regardless of their longitude and latitude — we unlock human potential on a massive scale. We create employment. We democratize innovation. We put the control back where it belongs: in the hands of the individual.

We are returning to basics. The future isn't about more complex features or shinier boxes; it is about ubiquitous, reliable, invisible power. It is about acknowledging that a student in the DRC deserves the same digital agency as a banker in New York.

This is technology for good. It is a breadcrumb trail leading us toward a more balanced, connected, and prosperous future. The Sleeping Giants are waking up. The only question is, are we ready to connect them?

How secure device financing is the key to universal connectivity

The mobile usage gap isn't about network coverage, it's about cost. Across the globe, billions of people live in areas with mobile broadband coverage yet remain offline.

The GSMA's Barriers to Mobile Internet Adoption report shows that over 3.1 billion people live where coverage exists but don't use the internet. This usage gap is the divide between those who can connect and those who actually do.

For the past decade, governments, NGOs, and operators have invested heavily in expanding coverage. Towers have gone up, fibre has been laid, and data costs have fallen. Yet many remain disconnected. The bottleneck isn't infrastructure—it's affordability.

The affordability barrier

For millions living on daily or weekly wages, owning an internet-enabled smartphone remains out of reach. In low- and middle-income countries (LMICs), an entry-level handset costs around 16% of monthly income. That's several weeks of disposable income, a luxury few can justify when essentials come first.

Without affordable devices, people can't access jobs, digital payments, or government and healthcare services moving online. Yet many already own basic feature phones and maintain relationships with operators. They top up regularly, pay bills, and stay loyal. The infrastructure for financing exists—it just hasn't been fully activated.

A new wave of financiers

Mobile Network Operators, smartphone financiers, and retailers are positioned to solve this challenge. They have mass-market reach, customer insights, and established relationships, making them ideal to offer device financing. Instead of paying upfront, customers can spread the cost over manageable payments.

This model has succeeded across Sub-Saharan Africa, Latin America, and parts of Asia. Financed devices empower people to participate in the digital economy. A smartphone becomes a productive asset to generate income, manage businesses, and access education.

However, the opportunity isn't without risk. In markets with weak credit systems, operators face defaults, asset loss, and operational complexity.

Why traditional lending falls short

Traditional lending relies on credit histories and collateral, which most emerging-market consumers lack. Behavioral scoring or deposit requirements limit reach and exclude those the programs aim to help.

Many pilots stall. Operators face bad debt or struggle to secure backing. Unsecured handset-financing schemes report default rates of a quarter to a third, especially without remote-locking mechanisms, wiping out margins.

This isn't a technology or demand problem—it's a trust problem. Embedding trust directly into devices enables carriers and retailers to safely offer financing to underserved customers.

Mitigate risk through secure device financing

At Trustonic, the solution isn't to avoid risk, but to eliminate it.

Our device locking platform provides the foundation that makes large-scale financing viable. MNOs, retailers, and financiers can offer credit confidently by embedding a hardware-secured layer of trust. Customers are kept in touch with their bill with reminders, notifications and messages, and if necessary, the device can be temporarily locked. Once payment is made, functionality is restored. The process is automated, transparent, and secure.

Users gain fair access to smartphones without hidden penalties. Operators protect revenue and reduce bad debt. The technology supports

micro-repayments, subscription plans, and buy now pay later schemes, integrating with existing billing systems. Operators can scale efficiently while strengthening customer loyalty.

Security as a growth engine

Secure device financing reduces bad debt, enabling operators to expand portfolios. Each secured device represents a new connected customer, translating into higher ARPU, lower churn, and a stronger competitive position. Modest repayment plans can bring millions of new users online, increasing data usage and service adoption. This is how financing closes the usage gap.

Building trust through transparency

Technology alone isn't enough. Financing must be transparent and fair. Customers need to understand what happens if they miss a payment and how devices are reinstated.

Trustonic puts user trust at the center. Devices are never locked without communication, and unlocking is straightforward. The goal is accountability, not punishment, building long-term confidence. Transparency benefits the entire value chain, enabling sustainable scale.

The wider impact: unlocking digital participation

Affordable devices have profound ripple effects. Each new smartphone user participates in the digital economy—accessing banking, education, telemedicine, and more.

For governments, closing the usage gap accelerates national connectivity goals. For MNOs, untapped demand becomes active users, driving growth in data, fintech, and value-added services. A 10% increase in mobile broadband penetration can boost GDP growth in developing markets. Secure device financing is a catalyst for economic development.

A new era of universal connectivity

As coverage expands, the challenge shifts from building networks to building access. Secure device financing is a practical way to close the usage gap, aligning commercial incentives with social outcomes.

At Trustonic, we partner with operators, financiers, retailers, and OEMs to help millions take their first step into the digital economy safely.

The goal is simple: a world where everyone who can connect, does connect. ■

Could mega constellations rewrite Africa's future?

Africa is stepping into a new era. One defined not by the limits of its geography, but by the vast possibility of its skies. Mega satellite constellations could be the breakthrough that transforms connectivity from a stubborn challenge into a catalyst for continental acceleration.

A continent on the edge of a connectivity revolution

Standing on the outskirts of Nairobi, it's not uncommon to see a teenager balancing a smartphone and a textbook, searching for an evasive and unreliable signal. This is the paradox of Africa today: a generation eager to plug into the global digital ecosystem, and an infrastructure network that too often leaves them buffering.

Yet something fundamental is shifting. Conversations once dominated by the logistics of fibre trenches and tower placement have turned upward: toward the sky, where networks ignore borders and where satellites glide silently over regions that have waited decades for reliable connectivity.

"Across Africa, the conversation about connectivity is changing from possibility to inevitability," says Ayes Amewudah, Consulting VP Africa at Commercis Plc. "The continent stands on the edge of a digital revolution."

The optimism surrounding new low Earth orbit (LEO) constellations is not the usual hype cycle. It feels different, maybe because for the first time, the technology aligns with the continent's realities: widely dispersed populations, rugged terrain, and the soaring demand for affordable, high-performance communication.

"LEO, MEO, and GEO satellites each offer unique strengths that make them essential to global connectivity," asserts Pablo Catapodis, VP Sales Africa, SES. "LEO constellations provide low-latency links ideal for real-time applications, MEO satellites combine high throughput, low latency, and wide coverage for data-intensive use cases, and GEO satellites deliver unmatched global reach and reliability for data, broadcasting and critical communications. Together, they form the foundation of a versatile, truly global satellite ecosystem."

As Bob Potter, CTO of Global Invacom, frames it: "new NGSO constellations can deliver lower cost, low latency broadband to the African continent. Africans can benefit from services they may not have previously accessed — finance, education, health information, government services, the global marketplace."

The revolution isn't only technological. It's human.

Breaking the chains of geography

Africa's landscape is extensive: vast deserts, dense forests, and mountain ranges that defy even

the most ambitious engineers. For decades, these magnificent features have been the very things that held connectivity back.

"Africa has historically struggled to deliver broadband due to geography, topography and cost," Potter notes. "Africa has historically struggled to deliver broadband services to its communities due to challenges such as geography and topography and cost of deployment to remote areas. Utilising the mega constellations means that Africans can benefit from broadband services which in turn enable the people to access services they may not have previously gained access to (finance, government information, education, health information, access to the global marketplace, etc)."

Entire nations have been shaped by the simple fact that reaching remote communities required digging trenches through regions where roads themselves are a luxury. With satellite, those barriers vanish.

"Satellite removes geographical boundaries," says Helen Weedon, Managing Director of the Satcoms Innovation Group. "Mega constellations in LEO have the power to transform connectivity. For governments across Africa, this can have a massive impact on their universal service obligations (USOs) as they can help to connect rural and underserved areas at a lower cost. USOs aim to connect those communities that are disadvantaged due to lack of access to connectivity and therefore internet and phone services. The use of satellite removes geographical boundaries such as remoteness or terrain that prevents the rollout of copper or fibre cables or mobile phone masts in the area due to cost."

Out in the field, the change is palpable. Engineers no longer speak about the impossibility of reaching certain regions. Instead, they speak in timelines: days, not months; weeks, not years.

"The beauty of LEO," adds Stephen Tunnicliffe, Chief Strategy & Commercial Officer at Commercis Plc, "is that it can be deployed much faster — essentially wherever you can set up a terminal."

Suddenly, the continent's vastness feels like an advantage rather than an obstacle.

From isolation to inclusion

In rural Malawi, a teacher recently told visiting engineers that her students sometimes walk kilometres to find a reliable signal strong enough for a single online lesson. Stories like hers echo across the continent: stories of determination, resilience, and the frustration of knowing what's possible but being unable to reach it.

That is why the promise of LEO resonates so deeply.

"Connectivity transforms isolation into integration, and potential into productivity," says Amewudah. "Mega constellations could unleash an untapped reservoir of skills, ideas, and entrepreneurship. By extending digital access to rural populations, mega constellations could unleash an untapped reservoir of skills, ideas, and entrepreneurship that could reshape local economies from the ground up."

The most striking aspect of this shift is not the speed of the internet, but the speed of opportunity.

Weedon underscores this point with clarity: "satellite is inclusive. If affordable or subsidised, it can boost education, healthcare, business, finance — and level the playing field. It can transform communities and their ability to expand their reach in terms of trade, to develop their education systems, gain easier access to healthcare, take advantage of government services online, open bank accounts and a plethora of other benefits."

The transformation happens quietly. A mother in a rural community gains access to telemedicine. A small business owner connects with suppliers abroad. Students join digital classrooms that no longer buffer into oblivion.

"The value of a connected continent is well documented by organisations such as the United Nations, the World Bank, GSMA, the European Union and more, and is essential to elevating the African standard of living and competitiveness with developed nations," explains Yanniv Betito, Vice President, Sales and Business Development, EMEA, Telesat. "In fact, a World Bank study revealed that every 10% increase in broadband penetration drives GDP growth by 1.38% in developing countries. Achieving this level of connectivity simply cannot be done with terrestrial networks that are limited by terrain, national borders and other constraints."

The economics of scale: making access affordable

Africa's digital dreams have always collided with a familiar wall: cost. The expense of building fibre through remote areas has historically dwarfed the revenue those regions could generate. Investors, understandably, hesitated.

But LEO constellations are rewriting the balance sheet.

"While geostationary (GEO) satellite connectivity has been available for decades, the associated costs of accessing this small number of satellites made it prohibitive for wide scale use by African nations," says Betito. "But new low Earth orbit (LEO) constellations, many of which include hundreds to thousands of satellites, deliver greater economies of scale resulting in a far lower cost per megabit of bandwidth. This creates an affordable price point for telecommunications providers to offer to African enterprises and individual end users."

Unlike traditional infrastructure, which can be heavy, physical, and slow, LEO is agile. Once the satellite network is in place, the barriers to entry shrink dramatically.

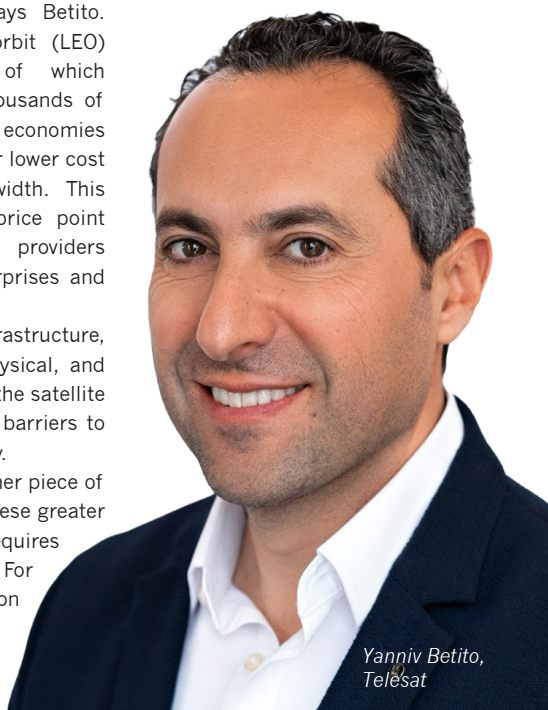
Betito highlights another piece of the puzzle: "achieving these greater economies of scale requires satellite standardisation. For instance, standardisation enables replicability across multiple enterprise sites that may be located across different regions or even countries. Each location can use the same satellite antennas and other equipment, simplifying the user experience and avoiding high integration and network configuration costs. As an example, by adopting the MEF 3.0 Carrier Ethernet / Layer-2 service, the Telesat Lightspeed™ LEO constellation delivers seamless interconnection with the African fixed terrestrial networks, just like any other Carrier Ethernet extension a provider purchases."

This standardisation simplifies everything from interoperability to network maintenance. It's the difference between each country reinventing the wheel and the entire region moving forward cohesively.

Of course, innovation doesn't erase reality. Africa's terrain still challenges engineers; logistical hurdles still complicate deployment; regulatory processes still move at their own pace.

"Africa comes with real challenges. Reliable electricity remains a major constraint, especially in off-grid areas where powering user terminals and gateways is not guaranteed. Poor road infrastructure can complicate logistics, transporting equipment to remote sites becomes especially difficult during the rainy season, when many roads become impassable," says Tunnicliffe. "Affordability is another key consideration. Although prices for satellite hardware are gradually falling, they remain out of reach for many households. Innovative

Pablo Catapodis, SES



Yanniv Betito, Telesat

business models, such as community access hubs, local cooperatives, or government-subsidised connectivity programs, could help overcome these barriers."

Technical complexity also lingers. Weedon raises concerns about flat panel antennas (FPAs): "at present, FPAs are not subject to a standard testing and certification procedure that ensures minimum performance standards and prevents interference being caused with GEO networks. SIG and GSOA are currently working hard to heighten awareness of this issue and to tackle it by coming up with a testing and certification procedure that is agreed by satellite operators and can be used by satellite manufacturers to ensure that their antennas meet the minimum standards."

Yet the industry is neither complacent nor unprepared. The rapid pace of innovation suggests that these challenges, while real, are surmountable. Indeed, the race to innovate is more than competitive: it's collaborative, with the continent's future connectivity hanging in the balance.

Rewriting Africa's telecommunications map

Walk into any telecom operator's headquarters across Africa, and you'll find a mix of excitement and caution. LEO isn't just adding capacity; it's redrawing entire business models.

"The rise of mega constellations will certainly disrupt Africa's telecommunications ecosystem," observes Amewudah. "There is debate about whether satellite internet will compete with or complement traditional telecom infrastructure investments in Africa. The most forward-looking operators see partnership, not competition. A hybrid model, where satellites handle remote and hard-to-reach areas, while fibre and 5G networks serve urban cores, could create a resilient, multilayered digital ecosystem. Such collaboration could optimise network costs, accelerate expansion, and ensure that no community is left behind. Ultimately, the question is not whether satellite and terrestrial systems can coexist, but how effectively they can converge to deliver universal connectivity."

The old dichotomy — satellite vs. terrestrial — is dissolving. Hybrid networks are becoming the blueprint for Africa's future. Fibre in cities, 5G in economic hubs, satellite in remote and rural zones.

"Mega constellations will provide more bandwidth, improving the overall quality of service by providing backup solutions for terrestrial networks or by extending coverage to areas where laying fibre is not economically or physically viable. However, because many mega constellations provide direct connectivity service to end users, they compete head-to-head with existing telecom providers," says Betito. "Another key issue is overcoming network latency. African terrestrial connectivity routing often sends network traffic through Europe or the Americas before returning to Africa; this is slow and inefficient. Instead, LEO connections take the most direct path, increasing reliability and reducing latency, which is critical for applications like mobile payments."

This is more than connectivity: it's economic infrastructure.

Regulation, sustainability, and the African sky

Africa's regulatory map has always been a mosaic. A patchwork of policies, priorities and processes, each tied to its own history and political context.

"Regulation in Africa is very different to other world regions," explains Weedon. "It is not straightforward and there is no blanket regulation, so it's difficult to navigate. Access to spectrum can also be a challenge but this is gradually changing. Limited infrastructure can also create barriers."

Potter echoes the complexity: "regulation is very fragmented, with each country with a different set of regulation. There is currently no consistent framework in place in terms of satellite regulation so this needs to be taken on a country-by-country basis."

Yet harmonisation is slowly emerging. As governments see the economic potential, regulatory clarity becomes a competitive advantage.

Environmental sustainability has also become firmly part of the conversation. Betito emphasises the growing global responsibility: "all satellite operators are required to comply with several international rules and treaties developed by the United Nations and other cooperative organisations, along with regulations from the International Telecommunication Union (ITU). These policies cover a range of issues such as collision avoidance and space debris mitigation, fair radio frequency spectrum utilisation, and safe, sustainable use of space. There is also growing international consensus around the need to mitigate light and radio pollution from satellites that can interfere with terrestrial activities like astronomy."

In a continent deeply affected by climate change, the alignment of connectivity with green energy — particularly solar-powered terminals and gateways — creates a rare moment where technological progress and climate stewardship coexist.

Digital inclusion at continental scale

In townships, markets, tech hubs, and rural villages, connectivity is increasingly viewed as a necessity, not a luxury. And the benefits extend far beyond convenience.

"The ultimate promise of mega satellite constellations extends far beyond internet access; it is about accelerating Africa's social and economic transformation," Amewudah says. "Reliable connectivity enables digital education platforms that reach every child, telemedicine programs that serve every community, and e-commerce ecosystems that empower entrepreneurs to trade globally. It allows farmers to access agricultural data, young professionals to work remotely for international companies, and governments to digitise public services efficiently."

"As industries evolve and connectivity demands grow more complex, multi-orbit solutions will remain central to delivering reliable, adaptive, and future-proof satellite communications across Africa and around the world," says Catapodis. "Already, more customers from across the continent come to count on the broad reliability profile of multi-orbit solutions."

Connectivity becomes a foundation for inclusive growth, it breaks down geographic barriers, promotes innovation, and ensures that opportunity is not confined to cities.

"Given that so much of the African continent is still underserved or not served at all, mega constellations can have a transformative effect on the economic development and digital inclusion across Africa," adds Weedon. "Satellite provides the most inclusive technology that ensures that every community can gain access to connectivity no matter where they are from the nearest town or city."

According to Potter, Africa has the lowest internet penetration at just 39%. Access to broadband can transform this.

Betito describes the broader societal shift: "increased access to satellite connectivity has the potential to make a huge difference to Africa's economic development and digital inclusion. It opens doors to critical services such as healthcare, education, financial and agricultural management, and creates potential for businesses to expand and flourish. It is the continent with the lowest internet penetration at just 39% and its people struggle with poverty. Access to broadband and therefore the internet can transform this, and mega constellations provide the ideal connectivity medium."

In countries where entire generations have grown up just outside the reach of the digital world, this shift is not merely technological: it is liberating. ■

Bob Potter, Global Invacom

Satellites powering Africa's next digital leap

Africa's digital leap won't happen on fibre alone — and satellites are quietly becoming the continent's most strategic back-up plan and launchpad in one...

Africa's connectivity challenge remains vast and varied. Where do you see the largest gaps and which of those can satellite technology realistically address first?

Infrastructure remains the greatest challenge across Africa, although regulation and affordability also add significant complexity. Satellite connectivity can directly strengthen infrastructure by improving reliability, interconnecting countries and gateways, and providing both primary and backup links that accelerate development.

Affordability is also improving as satellite capacity costs continue to fall. What used to be viable only for highly remote areas is now increasingly affordable for broader use cases, helping close the digital gap.

Regulation is evolving alongside technological progress. It remains a challenge, but one that we actively manage. We've worked with regulators and governments across Africa for more than 50 years, and our experience ensures we can continue aligning satellite operations with national digital priorities.

Yanniv Betito, Telesat's RVP of Business Development for EMEA

LEO satellites promise to "democratise connectivity." What does that really mean on the ground in Africa — for a student in a remote village or a health clinic far from the grid?

It's important to distinguish between consumer and enterprise use cases.

On the consumer side, satellite is a powerful way to connect people in areas where terrestrial networks can't reach. Companies like Starlink have demonstrated this potential, though in some regions, mobile connectivity remains more suitable and cost-effective.

For enterprises, requirements are different. Businesses and institutions often need very specific performance levels — low latency, high reliability, committed information rates and strong service level agreements (SLAs) — which is where we focus. For example, in telemedicine, where lives depend on stable, high-quality connections, enterprise-class LEO satellites deliver the reliability and responsiveness needed.

Affordability for individuals and small organisations remains a challenge, but costs are coming down. Satellite can also serve as a backhaul for local terrestrial or community Wi-Fi networks, extending access to villages that fibre and mobile haven't yet reached. This model allows shared access at comparable prices, making it more attainable for rural communities.

Many African countries are heavily investing in fibre and 5G backhaul infrastructure. How do you see satellites working with these investments rather than against them?

We see satellite as a complementary technology that helps terrestrial operators accelerate their rollout. It enables them to start serving new areas immediately — even before investing in fibre or tower infrastructure — and to generate revenue while planning longer-term deployments. Once terrestrial links are in place, the satellite connection can either remain as a backup or be redeployed elsewhere.

Satellites also provide valuable resiliency. Fibre cuts and terrestrial outages are common, and having satellite backup ensures critical services, such as mobile financial transactions, remain online. You don't need to back up an entire fibre network — just the essential traffic. That reliability is vital for economic activity and user trust, and it strengthens Africa's overall digital transformation.

Affordability is a recurring barrier. What business model or financing innovations can make satellite internet sustainable for low-income users or small ISPs across Africa?

Our model is to provide satellite infrastructure at costs comparable to terrestrial networks, enabling local service providers to build affordable plans that fit their markets. Operators can use satellite backhaul to extend mobile or Wi-Fi networks, tailoring pricing and contention levels to local conditions.

For example, community Wi-Fi can bring access to small villages for as little as $1–2 per month. We've operated within this framework for decades, working closely with regulators, local ISPs, and national telcos to ensure our solutions strengthen — not disrupt — local ecosystems.

Our approach is about partnership: creating win-win models that make

satellite viable while supporting national digital goals. We don't aim to replace terrestrial operators or go directly to consumers, but to complement existing players and make connectivity sustainable across income levels.

With mobile towers expanding and terrestrial options often cheaper, is that a potential barrier to satellite adoption?

Not necessarily. We don't see satellite as competing with terrestrial networks but as enabling them. Telcos are expanding aggressively — Airtel Africa and Helios Towers, for example — and satellite can backhaul these new sites efficiently, making it feasible to reach more remote regions.

Where fibre and terrestrial infrastructure make economic sense, they'll continue to grow. Satellite simply fills the gaps where those investments aren't viable, helping operators extend coverage faster and more cost-effectively than waiting for ground infrastructure.

Looking ahead to 2030, what does a "connected Africa" look like in your vision — and what are the biggest risks that could derail achieving that vision?

Our immediate focus is near-term execution. We'll launch our first satellites in 2026 and commence global services by the end of 2027. By 2030, we expect every country to benefit from scalable, reliable satellite infrastructure that supports ongoing digital transformation.

We view challenges such as regulation, affordability, and deployment logistics as areas for collaboration, not barriers. Our goal is to work with governments, telcos, and local partners to ensure that as demand grows, we can rapidly scale capacity, add local hubs, and support each country's connectivity priorities.

Beyond broadband access, where will satellite connectivity have the biggest impact — in education, fintech, healthcare, or agriculture — and which will move fastest?

All of these sectors will benefit, but those with the highest performance requirements — such as healthcare and fintech — will likely lead adoption. These industries demand low latency, high SLAs, and always-on connectivity, all of which LEO satellites provide.

That said, education and agriculture will also see significant gains as connectivity expands. Our technology is designed to integrate seamlessly with existing networks, delivering terrestrial-grade performance through the sky. Over time, as affordability improves and awareness grows, adoption will spread across all sectors.

What are the key priorities you want Telesat to bring to the Africa Tech Festival table, and what do you hope to accomplish while you're here?

Our priority this year is execution. In previous years, our goal was to introduce our technology and demonstrate its potential. Now, the market recognises our reliability and service quality, and conversations have shifted to implementation.

Partners are coming to us asking, "How can we collaborate?" That's exactly where we want to be. We're now focused on finalising the commercial, technical, and regulatory models that will make LEO connectivity operational by the end of 2027 — and, ultimately, help accelerate Africa's digital transformation. ■

Proactive threat hunting: securing Africa's digital future

African operators are navigating a cyber landscape where threats evolve faster than traditional defences can react, making proactive discovery essential rather than optional. With AI-driven threat hunting now within reach, the region has a real opportunity to leapfrog outdated security models and build intelligence-led resilience from the ground up.

Many African operators and enterprises still rely on traditional reactive defences. What steps can they take to build a proactive threat discovery and hunting capability?

What we've seen with CSPs, operators and our partners is that many still operate in a reactive mode, deploying traditional IT security tools like antiviruses and firewalls that only respond after an attack. But the cyber landscape has evolved dramatically — cybercriminals are becoming stealthier and more intelligent, using AI to run massive attacks at scale and target critical infrastructure.

The mindset needs to shift from "detect and respond" to "anticipate and hunt." This is where AI and automation play a key role. At Nokia, our suite of solutions — such as Nokia Cyber Dome — embeds proactive AI-driven tools for intelligent threat hunting and real-time monitoring and response. This allows attacks to be identified and contained quickly, before incidents occur.

Dalia Nabil, MEA Head of Pre-Sales, Nokia Cloud and Network Services (CNS)

That's become essential given the sheer rise in cyberattacks globally. Every day and every month we hear about new breaches, so anticipating threats and having the right tools is the right approach.

Given the shortage of cybersecurity expertise across the continent, how can AI-driven threat detection and automation help operators and enterprises overcome the challenge of increasing cyber-attacks without compromising on accuracy or control?

This is one of the biggest challenges for African operators. The demand for cybersecurity analysts and professionals keeps rising exponentially, but the supply isn't keeping pace. This is where AI and automation play an important role.

AI acts as a force multiplier — not replacing humans but supporting them. Instead of analysts manually reviewing endless logs and alerts, AI can analyse huge volumes of data in real time, while final decisions remain with humans. This balance is critical.

If we left everything to AI, would it take control? My view is no. It must be handled responsibly. AI does the heavy lifting, but final decisions stay with trained security professionals within the operator or organisation.

With Africa's networks spanning hybrid legacy and cloud environments, data visibility can be patchy. How does Nokia help ensure that the data fuelling AI models for threat discovery is complete?

The strength of any AI-driven security solution is only as good as the data it's trained on. The better the data, the better the output — especially when trained on local patterns and user behaviours.

At Nokia, we integrate data across all network types — legacy, virtualised, and cloud-native — into one analytics layer using AI and automation. This provides end-to-end visibility so that nothing is missed.

We also work closely with operators across Africa, customising our solutions with local data, traffic patterns, and regulatory requirements. Our regional presence ensures that data is locally relevant and compliant with country and regional regulations, which is critical as these are becoming increasingly stringent.

Fast detection is crucial, but false alarms and high costs can derail operations. What should African telcos and enterprises do to achieve the right balance between speed, accuracy and affordability in security operations?

This is the reality for many organisations today. Investment in security is often lower than expected, and small teams are expected to protect critical infrastructure.

The key is to move away from siloed endpoint solutions like firewalls and instead focus on a single, integrated pane of glass that connects end to end across the network — from core and radio to transport. Having one consolidated view gives full visibility, helps assess the potential impact of alerts, and makes it easier to separate false alarms from real threats.

That approach improves speed and accuracy, even with limited resources and smaller operational teams.

What kinds of previously unseen or silent threats has Nokia's AI detected in complex telecom environments, and what lessons can African operators draw from these global insights?

Some of the most dangerous threats are the quiet ones — the slow, silent intrusions that stay

dormant in the network. One major global example is the breach at SK Telecom in Korea, where dormant malware remained undetected for three years, compromising SIM and confidential data for 23 million users.

At Nokia, we tackle such threats with solutions like EDR (Endpoint Detection and Response) and Nokia Cyber Dome, which offer proactive threat analysis and detection. These tools can identify dormant malware, configuration changes, or unusual patterns, then automatically raise an alarm, isolate affected areas, and take action.

We continuously update our solutions based on global and local experiences. Being both a telecom and a cybersecurity provider allows Nokia to combine technical and security expertise, with playbooks continuously updated to reflect global threats.

African networks face unique challenges — patchy connectivity, power outages, and smaller data centres. At Nokia, we address this by developing lightweight, adaptive AI models that run at the network edge.

This ensures they continue operating even if there's a network cut or power issue, while continuously learning and improving locally. Our goal is to deliver cybersecurity that's fast, resilient, and tailored to Africa's needs — minimising cyber risks without slowing digital growth.

As African networks adopt AI for cybersecurity, how can operators ensure that these systems remain transparent, explainable, and aligned with local data governance and regulatory expectations?

AI is a powerful enabler, but trust is crucial. At Nokia, we ensure transparency and compliance with all local regulations. Every key decision point in our AI systems is explainable to the end user — showing clearly why an endpoint was flagged or why an alert was triggered.

We also ensure that all data and decision-making align with local and regional laws and ethical standards. The human remains central to the process, making final decisions based on transparent, traceable AI insights.

How can African telcos, regulators, and technology partners like Nokia work together to share threat intelligence responsibly and build a stronger, more resilient regional security posture?

Cybersecurity doesn't stop at borders. A single incident in one country can ripple across others, which is why collaboration between regulators, operators, and vendors is key. Regulators set the rules, operators provide visibility into their networks, and vendors like Nokia bring global expertise and continuously updated solutions.

This collaboration must also protect confidentiality. Data should be anonymised so that sensitive information isn't exposed, but insights can still be shared to strengthen regional resilience.

We already see progress in several countries, where regulators host forums bringing operators together and setting standards. Nokia actively participates in these collaborations, sharing best practices and learnings from other markets — always with customer consent and confidentiality in mind.

Many African mobile operators are expanding 4G and rolling out 5G alongside legacy infrastructure. How can AI-powered threat hunting adapt to protect these multi-generation networks, especially where older systems were never designed with modern cyber risks in mind?

African operators are running complex networks — evolving and modernising while still maintaining legacy systems. That's the challenge.

Our solutions, such as EDR and Cyber Dome, integrate with all network types, from legacy to virtualised to cloud-native 5G. They collect data and telemetry across all layers, correlate and clean it, and use AI to learn continuously from network behaviour.

AI adapts over time, learning from both legacy and new systems to maintain protection across all generations of infrastructure.

At Nokia, we see AI-based proactive threat hunting as a game changer. AI detects anomalies in real time, whether in mobile money transactions or rural broadband traffic, allowing threats to be stopped before they impact users.

Real-time detection keeps services secure without taking them offline, enabling operators to expand networks confidently while maintaining strong defence and uninterrupted access.

Looking ahead, how do you see proactive threat hunting evolving in Africa's rapidly digitising telecom landscape?

With the rise of 5G, IoT, and disaggregated networks, the threat landscape is expanding quickly. Cyberattacks are becoming more sophisticated and innovative.

AI and automation are key to proactive, real-time threat hunting — enabling faster detection and response before threats impact end users or services. As Africa's digital ecosystem grows, proactive security will be vital to protect users and maintain trust. ■

Designing fibre right the first time

As demand for fibre-to-the-home (FTTH) networks surged across South Africa, engineering consultancy EES Live (Pty) Ltd found itself wrestling with increasingly complex design workloads. Traditional design tools — a patchwork of desktop GIS software, static maps, spreadsheets, and manually assembled bills of materials — were slowing projects down and creating significant room for costly errors.

Engineers regularly had to switch between different applications to map routes, validate addresses, assign splice points, calculate cable lengths, and prepare construction documents. Because none of these systems talked to each other, the team struggled with version control issues, inconsistent datasets, and long feedback loops. Every project required re-building documentation from scratch and repeatedly verifying that the design still aligned with real customer locations and actual field conditions. As the firm's client base expanded and deadlines tightened, the risk of rework — or, worse, misaligned fibre builds — became increasingly problematic.

A platform built for fibre networks

To streamline their approach, EES Live began searching for a dedicated tool that could eliminate unnecessary steps and tie every stage of FTTH planning into a single, coherent workflow. This search led them to VETRO FiberMap, a cloud-based platform designed specifically for fibre-network planning, design, and management. Unlike conventional GIS software, VETRO operates on a fibre-native data model that treats ducts, cables, closures, splitters, splice points, demand locations, and customer addresses as core components rather than generic map features.

By shifting to VETRO, the firm could build routing, topology, splice design, address assignment, and construction planning inside one unified environment. Network paths no longer had to be drawn in one tool while materials were calculated in another; everything now lived within a single, accurate model anchored to validated address data and real-world geospatial context. The platform's cloud-native architecture also meant that engineers no longer had to deal with the friction of passing files around or maintaining isolated desktop installations. Multiple team members, and even external stakeholders, could collaborate in real time from the same authoritative version of the network design.

Design once, use everywhere

One of the biggest breakthroughs for EES Live was the transition away from manual documentation toward fully automated generation of design deliverables. Because every component in the network was tied to accurate address points and build areas, VETRO FiberMap could instantly produce materials lists with precise cable lengths, duct quantities, closure counts, and split ratios, along with splicing schedules aligned tightly to the selected network topology. Construction-ready route maps and both high-level and low-level design views could be created on demand, complete with network hierarchy diagrams that previously required painstaking manual drafting.

Any design adjustment made within the platform propagated automatically through the relevant documentation, eliminating the inconsistencies that often plagued spreadsheet-based workflows. For clients, this meant more transparent proposals with accurate cost forecasts and fewer surprises once equipment hit the ground. The ability to anchor every design decision to verified customer address data also helped avoid routing errors, saving considerable time and cost by ensuring that fibre infrastructure was deployed where it was actually needed.

Efficiency, accuracy, and better collaboration

Since adopting VETRO FiberMap, EES Live has seen a substantial boost in its overall productivity. Work that once required days of cross-checking spreadsheets, diagrams, and GIS layers can now be completed far more rapidly, supported by intelligent automation and a single coherent dataset. Internal reviews have become more efficient, duplication of effort has decreased, and the team has far greater confidence in the accuracy and completeness of every design.

Perhaps most importantly, collaboration across the organisation has improved dramatically. With a live, visual representation of the network available at any time, engineers, planners, project managers, and clients can all work from the same up-to-date information, speeding up decision-making and reducing communication friction. The platform also simplified onboarding for new engineers; instead of training them across multiple disconnected systems, the firm now introduces them to one unified environment with clear logic and fibre-specific data structures. This has allowed EES Live to scale up its design capacity without compromising quality.

"By validating connections and identifying inconsistencies in a network design, VETRO FiberMap catches errors before they become costly problems. For example, in a 9,000-point design, even a small 10% error rate could mean 900 points need fixing. Imagine discovering these errors during installation – the delays, the budget overruns! VETRO FiberMap pinpoints these issues upfront, saving time, money, and frustration," says Anton Hochleutner, Director at EES Live.

EES Live's decision to implement VETRO FiberMap has fundamentally reshaped how the company designs and delivers FTTH networks. By replacing fragmented, manual processes with a cloud-based platform built expressly for fibre, the firm now completes network designs with greater speed, accuracy, and consistency. The ability to generate precise route plans, materials estimates, and documentation directly from a single model has significantly reduced errors and rework, while improved collaboration has made the entire project lifecycle smoother. ■

Turning data into mobile access

In its push to become a cashless economy by 2024, the Government of Rwanda has made heavy investments in digital infrastructure, and mobile money swiftly became one of the nation's go-to channels for transactions. During the COVID-19 pandemic, that shift was even more dramatic: mobile money transaction values soared, jumping from RWF 3 trillion in 2019 to RWF 10 trillion in 2021.

But then growth began to plateau. Despite what many believed was good overall network coverage, a closer look revealed a major barrier to reaching their digital-economy goals: poor connectivity, especially outside urban areas. In rural zones and small towns, network reliability and capacity issues were undermining efforts to drive widespread adoption of digital payments.

Recognising this as a systemic problem, regulators and policymakers under the Rwanda Utilities Regulatory Authority (RURA), the Rwanda Information Society Authority (RISA) and the Ministry of ICT & Innovation (MINICT) asked for deeper insight — not just anecdotes or regional averages, but data-driven evidence pinpointing where and why connectivity was failing.

Using real telecom data to map the problem

To get beneath the surface, a data-driven investigation was launched in collaboration with consulting partner 71point4. Researchers began by combining insights from a qualitative survey among rural farmers and retailers (capturing real-life experiences of digital financial exclusion) with a deep analysis of telecom data supplied by RURA.

The data set included Call Detail Records (CDRs) — logging every call, data session and SMS on major operators' networks during January and August 2020 — together with cell tower location information from 2021 and 2022. With these, analysts built metrics reflecting network load and coverage quality. Because the data didn't directly indicate failed transactions or calls, the team instead inferred connectivity stress by examining the number of towers per administrative region (down to the local sector level) and measuring how many connections each tower handled during peak hours. Towers with high load — or regions with few towers — were flagged as high-risk for service degradation.

This method revealed stark disparities. For instance, in urban districts such as those around the capital, tower density was high — giving roughly one tower per 232 people. By contrast, in rural parts of the Eastern Province, some districts had as few as one tower per 1,300 people, and 42 entire sectors countrywide lacked a single telecom tower.

When infrastructure fails the user journey

The data told a clear story: outside the main cities, infrastructure was stretched dangerously thin when demand peaked. Between January and August 2020 — a period coinciding with heightened mobile money use — the number of voice and data connections during peak hours rose by about 30%.

This increase meant that many towers, especially those in sparsely covered rural regions, were operating beyond comfortable capacity. Under such strain, the likelihood of failed or delayed transactions went up, which in turn discouraged users from relying on digital payments. The unreliability was not simply inconvenient — in some cases, money would be debited from a payer's wallet even though the receiver never got it; in others, transactions would time out and fail.

Because existing Quality-of-Service (QoS) metrics tracked by regulators were measured at the provincial level, these local problems remained hidden behind averaged statistics. That meant many connectivity "black spots" went unaddressed, undermining efforts to expand digital finance across the whole population.

Shaping a tower rollout strategy

With the findings in hand, analysts shared their insights with RURA, RISA, MINICT and mobile network operators, helping to build a shared, data-driven understanding of where connectivity was failing and why.

The recommendations were twofold. First, regulators should adopt a new set of QoS metrics that reflect the user's full experience — not just aggregated network statistics. Monitoring should drill down to cell-tower and even sector-level performance, rather than relying on broad averages. Second, the data underscored a need for infrastructure expansion: new towers should be built in underserved areas to achieve universal access and ensure sufficient capacity to support mobile money and other digital services.

The analysis triggered real action. The Government committed to deploying 100 new sites by end of 2023 and set a goal of achieving full network coverage within three years. MINICT convened a task team within RURA to specifically address connectivity gaps, highlighting 42 regions with limited or no tower coverage, and engaged mobile operators to close those gaps.

Data-driven governance

This case demonstrates how carefully analysed telecom data, when combined with real user feedback, can illuminate problems invisible to traditional oversight frameworks. By enabling granular, cell-level insight, the analysis made it possible to identify which communities were effectively cut off from reliable mobile connectivity. That in turn allowed policymakers to target infrastructure investment where it mattered most, rather than spreading limited resources evenly across regions regardless of need.

Moreover, the approach shifted power toward independent, evidence-based oversight. Rather than relying solely on reports from operators, regulators now have the tools to audit network performance themselves, boosting transparency and accountability. This kind of data-driven governance helps ensure that efforts to drive digital financial inclusion — or broader digital transformation — don't leave behind rural or under-served areas.

Finally, by grounding policy decisions in real data rather than anecdotes or top-line averages, Rwanda made a stronger case to mobile operators, development partners and community stakeholders that infrastructure expansion was not just desirable, but essential for the country's digital future. The ripple effect: more inclusion, more trust in digital payments, and stronger foundations for sustained economic growth. ■

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Precision testing for hollow core fibre networks

EXFO has unveiled the industry's first hollow core fibre (HCF) optimised OTDR (Optical Time Domain Reflectometer) equipped with bi-directional testing capabilities.

This innovative device is specifically designed to enhance the reliable testing of data centre interconnects supporting AI applications, offering high-precision measurement of HCF networks. This breakthrough is part of EXFO's broader portfolio of hollow core fibre-capable testing solutions, aimed at accelerating the adoption of HCF technology, which promises to revolutionise network performance through higher speeds, lower latency, and greater reliability.

Hollow core fibre differs from traditional solid glass fibre by utilising a central vacuum or air-filled channel, which significantly reduces signal latency and enhances transmission speed—crucial attributes for data centre interconnects. To effectively measure and optimise these fibres, EXFO's new OTDR combines lab-grade accuracy with field durability, providing essential parameters such as loss, return loss, and overall transmission quality. Its dynamic range is tailored for HCF characterisation, while dedicated software enables bi-directional analysis, allowing precise extraction of fibre parameters like splice loss, reflectivity, and length.

In addition to the OTDR, EXFO's comprehensive hollow core fibre testing portfolio includes several specialised tools. The CTP10 attenuation profile device delivers ultra-high-resolution spectral loss measurements at 0.01pm, making it suitable for testing WDM components and photonic integrated circuits. The OSA FTBx-5235 characterises CWDM and DWDM networks and can be used in a portable format with a source to determine attenuation profiles of HCF. The FTBx-570 dispersion analyser is the industry's only single-ended solution for rapid chromatic dispersion and polarisation mode dispersion testing, which is vital for hollow core fibre validation. Supporting these tools are the MaxTester 945 and FTBx-88810 series optical loss test sets, which

provide precise optical loss and latency measurements essential for next-generation networks.

"Watch this space as EXFO continues to lead the industry with solutions that facilitate hollow core fibre adoption and network performance transformation," said Etienne Gagnon, Senior Vice President of Test & Measurement at EXFO.

SENCITY Urban 300 boosts 5G urban coverage

HUBER+SUHNER's recently launched SENCITY Urban 300 brings a new addition to the company's range of indoor and outdoor directional antennas designed to enhance 5G network performance. This compact antenna is tailored for wireless operators and installers seeking high data throughput in a small footprint within the 5G frequency spectrum.

As the proliferation of smart mobile devices continues to challenge network capacity, small cell solutions and Distributed Antenna Systems (DAS) are becoming essential for increasing network density. These technologies enable wireless systems to support more users with faster speeds, especially in urban environments where coverage is difficult to achieve with traditional macro cells. The SENCITY Urban 300 aims to address these challenges by providing a high-capacity solution suitable for city streets, airports, train stations, shopping malls, and sports stadiums.

"Future mobile networks will deliver much more. As networks evolve and upgrade, we are committed to providing infrastructure that supports the growth and adoption of 5G. The SENCITY Urban 300 strengthens this effort by enhancing capacity in central locations," said Cristina Olimpieri, Product Manager at HUBER+SUHNER.

This dual-polarised antenna combines an aesthetic design with excellent electrical performance. It features a PIM-optimised design that minimises network interference, helping operators maximise system performance. Equipped with MIMO 2x2 technology, it enhances wireless capacity and quality without requiring additional bandwidth or higher transmission power. The antenna offers a gain of 5-7 dBi and good port isolation within the 5G frequency range.

Installation flexibility is another key feature; the compact size allows for discreet mounting on walls or poles, making it suitable for street furniture and in-building applications. The SENCITY Urban 300 is the third antenna in HUBER+SUHNER's series, following the successful Urban 100 and 200 models, further expanding options for 5G network deployment.

Opanga guarantees 10X ROI on traffic optimisation

Opanga has introduced its groundbreaking 10X ROI Guarantee Program, marking the industry's first performance-backed commitment to delivering tangible results in real-time traffic management.

This innovative program assures network operators that deploying Opanga RAIN, their advanced AI-powered Traffic Optimisation Platform, will yield a minimum tenfold return on investment within the first year, or the operator will not be responsible for the software licensing fee. The program will be available starting December 2025.

"After years of refining real-time traffic optimisation in Tier One networks worldwide, we understand that operators prioritise measurable performance. RAIN reliably scales networks, enhances customer experience, and reduces costs. Our 10X Guarantee offers a predictable, proven ROI — no hype, no vapourware — just verifiable results or you walk away," said CEO Cole Brodman.

The 10X ROI Guarantee applies to both traditional wireless and Fixed Wireless Access (FWA) networks. It hinges on key performance metrics such as throughput, Physical Resource Block (PRB) utilisation, active-user load, and congestion reduction, all benchmarked against the operator's existing RAN KPIs. To ensure transparency and accountability, Opanga provides quarterly reports that track ROI through established metrics, allowing operators to independently verify results via on/off testing procedures.

This low-risk commitment means that if Opanga fails to meet the agreed-upon performance levels and cannot rectify the issues within the first twelve months, the operator will incur no charges and has the option to exit the contract.

Opanga RAIN's capabilities include real-time data collection, processing, and performance scoring to significantly reduce network congestion. Its industry-disrupting guarantee delivers verifiable financial outcomes; for example, in a recent deployment with a Tier One North American carrier, RAIN achieved a 20% increase in average user throughput, an 18% reduction in congested cells, and a 28X ROI.

"This guarantee is transforming not just network performance but also how operators assess AI solutions. They can now measure, prove, and financially benefit from AI-driven optimisation," said Ben Hadorn, Vice President of Product at Opanga Networks.

High-efficiency Ku-band beamforming for LEO satellite terminals

Qorvo's new Ku-band beamformer IC has been specifically designed to meet the increasing demand for compact, power-efficient SATCOM terminals supporting time-division duplexing (TDD).

TDD architectures allow a single antenna array to handle both transmit and receive functions, reducing system size and complexity. This enables the development of low-profile, electronically steerable terminals suitable for mobile and airborne platforms. Building on the company's previous March release of Ku-band FDD beamformer ICs, this new device completes Qorvo's scalable and versatile SATCOM portfolio, catering to both TDD and FDD terminal architectures.

The new TDD solution, the AWMF-0247, is ideally suited for terminals used in low Earth orbit (LEO) satellite constellations, where power efficiency, performance, and cost are critical factors. It supports Ku-band operation from 13.75 to 14.5 GHz for transmit and 10.7 to 12.75 GHz for receive, ensuring full compatibility with current and upcoming SATCOM networks that require compact, electronically steerable antenna arrays. The device integrates transmit and receive functionalities into a single chip, significantly enhancing efficiency and signal quality. Notably, the AWMF-0247 reduces receive array power consumption by 40%, improves signal clarity by over 20%, and offers up to five times greater transmit efficiency compared to competing solutions. Even when EIRP (Effective Isotropic Radiated Power) efficiencies are comparable, Qorvo achieves these improvements with a much smaller die area, facilitating easier integration and more cost-effective terminal designs.

"The AWMF-0247 enables a new class of TDD-based SATCOM terminals that demand greater efficiency, integration, and signal performance. It provides customers with the tools to develop more capable, compact arrays while reducing power consumption and system costs," said Ryan Jennings, Director of SATCOM & Systems Engineering at Qorvo.

Ultra-fast WiFi 7 for industrial environments

Zyxel Networks has announced the launch of its inaugural industrial-grade wireless access point, the BE5000 4-Stream WiFi 7 Dual-Radio NebulaFlex Pro Industrial Access Point (IAP500BE).

Designed specifically for demanding indoor environments such as warehouses, storage facilities, and maintenance workshops, the IAP500BE combines rugged durability, extended coverage, and ultra-fast WiFi 7 performance to support industrial digital transformation initiatives.

As industrial environments become increasingly interconnected, ensuring reliable connectivity remains a significant challenge. Harsh conditions, signal interference, and outdated WiFi infrastructure often create network bottlenecks that hamper productivity. Zyxel's IAP500BE addresses these issues by enabling businesses to extend high-speed WiFi across expansive factory floors and hard-to-reach corners, fostering seamless operational workflows.

The IAP500BE leverages WiFi 7 technology, providing multi-gigabit connectivity with ultra-low latency, ideal for supporting factory equipment, sensors, mobile devices, automated guided vehicles (AGVs), and control systems. Its industry-first Smart Mesh MLO (Multi-Link Operation) combines multi-link operation with mesh networking to establish a dual-radio mesh backhaul, increasing throughput by up to 40% and extending coverage. Additionally, the RF-First design incorporates antenna isolation technology and optimised layouts to minimise interference from nearby WiFi, Bluetooth, and mobile networks, resulting in cleaner, stronger signals vital for industrial environments.

Built to withstand tough conditions, the IAP500BE features a metal housing and fanless design to endure impacts, dust, and oil ingress while maintaining efficient heat dissipation. It operates reliably in temperatures ranging from -25°C to 65°C, with 6KV lightning protection and 15KV ESD safeguards to prevent weather-related and electrical damage. Dual power inputs with reverse polarity support ensure continuous operation during power failures or wiring issues, reducing maintenance costs.

The device offers versatile deployment options, including mounting on DIN rails, wall mounting, or enclosure installation, with external antenna support to optimise coverage. Management flexibility is a key feature; it can operate standalone, integrate with on-premises controllers, or be managed via Zyxel's Nebula Cloud platform. Each Nebula-managed unit includes a one-year Nebula Pro Pack license for advanced cloud features, enabling scalable, efficient network management and easy upgrades.

Look out for...

Beyond Earth: the future of space-based data centres

Future technology is rapidly evolving, with ambitious plans to revolutionise data storage and processing beyond Earth's atmosphere.

One company leading the charge is Lonestar Data Holdings, which envisions establishing a data centre on the Moon. President Stephen Eisele asserts that placing data centres in space offers unmatched security, shielding data from terrestrial threats and hacking attempts. Recently, Lonestar successfully tested a tiny, hardback-sized data centre that travelled to the Moon aboard the Athena Lunar Lander, launched by SpaceX.

The growing demand for data processing, driven by artificial intelligence and digital expansion, has strained Earth's existing infrastructure. Finding suitable locations on Earth is increasingly difficult due to environmental concerns, land availability, and local opposition. Space-based data centres could circumvent these issues, leveraging the limitless solar energy available in space and eliminating local environmental impacts.

Recent research, including a European Commission-backed study by Thales Alenia Space, explores the feasibility of orbiting data centres. The proposed constellation of satellites would provide a data processing capacity comparable to large terrestrial centres, with plans for modular, expandable systems built in orbit. However, experts warn of significant hurdles, such as the high costs of launching equipment, challenges in cooling without gravity, and vulnerability to space weather and debris.

Despite these challenges, companies like Lonestar remain optimistic. They plan to launch a Moon orbiting data centre by 2027 and anticipate broader adoption within the next decade. These space-based solutions promise enhanced security and compliance with data sovereignty laws, as data stored in space would be governed by the laws of the country that launched the hardware. As interest and investment grow, the future of data centres may very well be beyond our planet, marking a new frontier in digital infrastructure.

Azerbaijan celebrates first student-built satellite launch under SPACE Academy of Azercosmos

On 3 December, Azerbaijan marked a historic milestone in its space endeavours with the successful launch of its first-ever satellite built entirely by school students.

The PocketQube satellite, developed by 7th to 9th grade students under the SPACE Academy of Azercosmos, was launched into orbit aboard SpaceX's Falcon 9 rocket.

This significant event was also a tribute to the 5th anniversary of Azerbaijan's Victory in the Karabakh War. The satellite symbolises a powerful fusion of patriotism, youth innovation, and the country's expanding technological ambitions.

The project, executed through a partnership between SPACE Academy and IDEIA Space, represents a major breakthrough for Azerbaijan's education and innovation sectors. A total of 672 students from 41 secondary schools nationwide participated, making it one of the largest school-level space initiatives in the region.

"By giving students the opportunity to design, test, and launch real space hardware, we are cultivating the next generation of space scientists, engineers, and thinkers," said Dunay Badirkhanov, Chair of the Board (acting) of Azercosmos.

He emphasised that SPACE Academy aims to open the cosmos to youth, and today, these students reached orbit not just with a satellite, but with their dreams. Their success demonstrates how Azerbaijan's investments in education are translating into tangible technological achievements.

The participating students, selected from schools across the country, dedicated months to mastering space engineering fundamentals, experimenting with components, running simulations, and assembling the PocketQube satellite under expert guidance. This project stands as a cornerstone of Azerbaijan's growing STEAM ecosystem and is the first satellite initiative of its kind to be wholly conducted by schoolchildren.

Once in orbit, the satellite will perform basic experiments, collect telemetry data, and serve as an educational platform to continue inspiring students and deepening their understanding of satellite operations.

The launch of PocketQube aligns with Azercosmos' broader strategy to develop local talent, motivate young innovators, and foster a sustainable national space ecosystem.

Solomon Islands to get second subsea cable connection

The Solomon Islands is preparing to receive a second international subsea cable connection, thanks to a project funded by the Australian government. This new cable will connect with Google's upcoming Bulikula system, enhancing the country's digital infrastructure.

According to a statement from the Australian Infrastructure Financing Facility for the Pacific (AIFFP) last week, the Solomon Islands Submarine Cable Company (SISCC), along with the governments of Solomon Islands and Australia, has agreed to construct the 1,015km Adamasia Cable System 1. This new cable will link the islands to the Bulikula subsea network being developed by Google.

The project is financed with AUD 104 million, comprising a grant of AUD 71.9 million and a loan of AUD 31.9 million. Additionally, the financing package includes AUD 1.8 million from the Pacific Climate Infrastructure Financing Partnership to support off-grid electricity generation and storage capabilities, aiming to bolster climate resilience.

The Bulikula cable system, announced by Google in January 2024 and co-invested by Telstra, Amalgamated Telecom Holdings (ATH), and APTelecom, plans to create a fiber ring connecting Fiji, Guam, French Polynesia, and the Northern Mariana Islands. The Adamasia cable will interconnect with Bulikula between Fiji and Guam, providing critical redundancy and disaster resilience for the Solomon Islands' existing international connectivity.

Currently, the Solomon Islands relies solely on the Coral Sea Cable System (CS²), connecting it with Papua New Guinea and Sydney, Australia. No specific timeline has been provided for the Adamasia cable's completion, but the Bulikula system is expected to be operational next year.

Looking ahead, another potential project is the Hawaiki Nui 1 subsea system, developed by BW Digital and Telin (Telkom Indonesia's international division). With a capacity exceeding 240 Tbps, it will link Australia, Indonesia, and Singapore, with optional branches extending to the Solomon Islands, Papua New Guinea, and Timor Leste. This system is scheduled for completion in 2027.

NHAI and Reliance Jio to launch countrywide road safety alert system

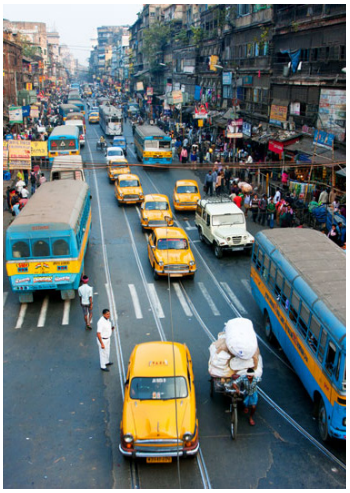
The National Highways Authority of India (NHAI) has announced the signing of a Memorandum of Understanding (MoU) with Reliance Jio to implement a comprehensive safety alert system across India's national highways, leveraging Jio's 4G and 5G networks.

The new initiative aims to improve road safety by delivering timely alerts via SMS, WhatsApp, and high-priority calls to drivers. These alerts will warn motorists in advance about risk areas such as accident-prone zones, stray cattle crossings, fog-affected stretches, and emergency diversions.

According to NHAI, the system will utilise Jio's existing telecom towers, eliminating the need for additional roadside hardware, which allows for rapid deployment. The service will be integrated gradually with NHAI's digital platforms, including the Rajmargyatra mobile app and the 1033 emergency helpline.

Initially, the alerts will be available only to Jio subscribers, but NHAI plans to extend the service to other telecom providers in the future.

NHAI Chairman Santosh Kumar Yadav stated that integrating digital infrastructure with real-time communication will significantly enhance driver awareness and help reduce preventable accidents. He expressed confidence that this project would set a new benchmark in technology-enabled road safety management in India.



K-Towers and PowerX to enhance remote tower management in the Pacific

K-Towers has announced a strategic partnership with PowerX to modernise rural tower networks across the Pacific, delivering reliable and affordable connectivity to some of the most hard-to-reach communities.

This partnership underscores K-Towers' commitment to ensuring accountable tower operations, operational transparency, and remote AI-driven management that safeguards long-term infrastructure returns.

In November, K-Towers conducted a successful pilot deployment of PowerX across 64 ultra-remote tower sites in Papua New Guinea's Western Province. The sites were rapidly onboarded into the PowerX AI platform, gaining real-time, unified visibility into power system performance. This integration reduced the need for blind troubleshooting, accelerated fault resolution, and decreased the frequency of costly field visits, transforming traditional maintenance practices.

This deployment marked a significant milestone as it was the first time data from previously siloed systems was consolidated into machine-learning and data science models capable of automating fault detection and managing prioritised actions toward resolution. The insights generated by PowerX are fully integrated into K-Towers' Network Operations Centre, enabling remote monitoring and management of each site. This capability allows the NOC to "see" into every tower remotely, drastically reducing the reliance on helicopter dispatches and manual inspections in a region where nearly 98% of sites operate off-grid.

Papua New Guinea's tower environment is among the most operationally complex in the Pacific, with many sites accessible only by helicopter and limited grid connectivity. Previously, troubleshooting issues involved expensive field visits with minimal site data, hampered further by fragmented information across multiple power systems. PowerX addresses these challenges by unifying diverse data streams into its vendor-agnostic platform. Its machine-learning models provide actionable insights into site health and energy consumption, enabling proactive infrastructure management, reducing field visits, and improving overall service reliability.

"We bring discipline, transparency, and accountability to every tower we operate, particularly where these elements have been historically limited. PowerX gives us real-time visibility into sites that previously required helicopter access just to diagnose. This shift allows us to transition from reactive to proactive, data-driven operations, ensuring greater accountability for tower owners and mobile network operators," said Hussein Abdulkader, Managing Director of K-Towers.

"We are excited to collaborate with K-Towers to bring unified intelligence, AI insights, and process automation to these remote sites. This partnership enables K-Towers to deliver world-class connectivity sustainably, cost-effectively, and at scale. We believe it will strengthen their competitive edge, allowing for increased tenancy growth and improved long-term returns," said Andrew Schafer, CEO of PowerX.

Looking ahead, the partnership will expand to incorporate additional predictive models from PowerX. These enhancements will further enable K-Towers to detect issues before they impact service and optimise off-grid power systems, ensuring continued advancement in managing remote tower networks across the Pacific.

Indosat Ooredoo Hutchison implements Qualcomm's Dragonwing RAN automation

Indonesian telecommunications provider Indosat Ooredoo Hutchison announced on Saturday that it has integrated Qualcomm's Dragonwing RAN automation suite to improve the performance and efficiency of its growing multi-vendor network.

The advanced AI and machine learning-powered solution aims to reduce operational costs and streamline the management of complex network systems. Indosat highlighted the significant role played by local systems integrator Lintas Teknologi Indonesia in deploying the new technology.

The company stated that incorporating Qualcomm's automation suite is part of its broader strategy to embed AI-driven automation throughout its network infrastructure. This initiative is designed to optimise network operations, lower operating expenses, and enhance the overall customer experience.

Indosat's Director and CTO, Desmond Cheung, described the deployment as a major milestone in the company's ongoing innovation journey, emphasising that this is just the beginning of their digital transformation efforts. Qualcomm's Vice President of Product Management, Ofir Zemer, noted that the Dragonwing suite aligns well with Indosat's broader goals by offering a flexible, AI-powered solution for network management and optimisation, supporting the company's commitment to delivering cutting-edge connectivity services.

America Movil abandons joint bid for Telefonica Chile

America Movil, a major telecommunications provider across Latin America, announced it will no longer pursue a joint purchase of Telefonica Chile with Entel, citing the end of a non-binding agreement that would have allowed a combined offer for the Spanish telecom group's Chilean assets. Instead, America Movil has indicated it may submit its own standalone bid for Telefonica Chile.

The move comes amid challenging financials for Telefonica Chile, which reported losses of US$127.6 million through September — an increase of 33% compared to the same period in 2024. Telefonica, the Spanish parent company of the Chilean operator, has been actively selling its Latin American operations, excluding Brazil, as part of a regional exit strategy. Recent sales include operations in Argentina, Peru, Ecuador, Uruguay, and Colombia, with the company leaving Central America years ago. Currently, only Chile, Mexico, and Venezuela remain in its portfolio.

BNamericas reports that Telefonica aimed to complete the sale of its Chilean assets between November and December, but no binding proposal was ever submitted. Regulatory hurdles, pricing disagreements, and Telefonica's involvement in the wholesale company OnNet are cited as obstacles to closing the deal.

With the joint bid off the table, the future of Telefonica Chile's sale remains uncertain, and whether America Movil will proceed independently is yet to be confirmed.

Bharti Airtel and Nokia to offer network APIs for third-party developers

Bharti Airtel is now providing its network capabilities to third-party developers through Nokia's developer portal platform.

After successful testing, Airtel's network APIs will be accessible on a subscription basis to an established ecosystem of developers, system integrators, and enterprises via Nokia's Network as Code platform. This initiative aims to empower the developer community to create advanced solutions that leverage Airtel's network features, including artificial intelligence, 5G, and edge computing.

Sharat Sinha, CEO of Airtel Business, explained that network APIs enable operators to virtualise parts of their networks and deliver customised data and features to developers: "this allows the ecosystem to utilise our network capabilities for automation, innovation, and the development of secure digital services."

Nokia's Network as Code platform offers developers standardised access to network functions without the need to understand the complexities of underlying network technologies. It connects multiple API ecosystems, providing operators with a wide range of network exposure options, along with strong multi-tier API security and simplified access to network functionalities.

Edotco Bangladesh signs five-year partnership with Summit Communications

Edotco Bangladesh has entered into a new five-year space and power lease agreement with tower company Summit Communications. The collaboration aims to establish a more integrated infrastructure model to accelerate the rollout of telecom towers across the country.

Under this renewed partnership, Edotco and Summit will work together to enhance high-capacity, low-latency transmission links between sites, facilitating a more efficient expansion of network coverage throughout Bangladesh. The agreement provides a clear operational framework that supports the long-term strategy of coordinating tower deployment plans more seamlessly, enabling faster development of new sites and smoother integration of colocation opportunities.

This collaboration is designed to support the growth of 4G and 5G infrastructure, ensuring networks have the performance and stability necessary for modern digital services. It also aims to better serve rural and semi-urban areas, where demand for reliable connectivity is increasing as communities increasingly adopt digital solutions.

Edotco highlighted that the partnership with Summit, leveraging their combined tower networks and Summit's nationwide fibre backbone, will strengthen Bangladesh's end-to-end connectivity infrastructure. Both companies are working towards aligning their strategies to provide a scalable foundation for the country's ongoing digital transformation and future growth.

Ericsson and SBB achieve Europe's first live GSM-R and IMS integration with VoLTE

Ericsson has partnered with Switzerland's national rail operator, SBB (Schweizerische Bundesbahnen), to deliver Europe's first live integration of legacy railway communication systems with a modern IP Multimedia Subsystem (IMS) platform supporting Voice over LTE (VoLTE).

This groundbreaking upgrade ensures continuous, reliable communication across Switzerland's 3,100 km rail network, ahead of Swisscom's planned decommissioning of 3G services by the end of 2025. The project also includes onboard 4G enhancements for approximately 1,000 trains, significantly improving connectivity and operational reliability.

For years, Swiss rail voice communication relied on Swisscom's 3G network in areas lacking GSM-R coverage. With Swisscom's decision to phase out 3G, SBB faced an urgent need to modernise its network. Rather than expanding the aging GSM-R system, SBB enlisted Ericsson to develop a future-proof solution based on IMS and VoLTE technology, seamlessly bridging traditional rail-specific functions with contemporary mobile and fixed telephony systems.

Ericsson successfully designed and deployed the integrated solution, combining multiple vendor technologies into a converged IMS core. This system guarantees continuous, end-to-end communication for safety-critical operations, establishing new standards for railway modernisation across Europe. The deployment prioritised zero service disruptions and strict safety compliance, including features such as IMS-GSM-R interworking, GSM-R numbering adaptation, emergency stop calls, group calls, and onboard announcements.

This modernised infrastructure ensures high-performance rail communication, reducing risks associated with legacy systems. Importantly, key rail-specific functions — including the European EIRENE radio network, emergency stop calls, group calls, and onboard announcements — are preserved and seamlessly integrated. The upgrade also lays the groundwork for future 5G and FRMCS (Future Railway Mobile Communication System) innovations, supporting Switzerland's transition to next-generation railway communication standards.

"Our collaboration with SBB demonstrates our ability to deliver complex digital transformations within tight timelines. We are proud to set new benchmarks in railway communication and support the ongoing transition to FRMCS," said Nicolas Segond, Head of Mission Critical Communications for Railways at Ericsson.

As the project progresses toward full migration by December 2025, the insights and experience gained will inform similar railway modernisation efforts worldwide, ensuring safer, more reliable, and future-ready rail networks.

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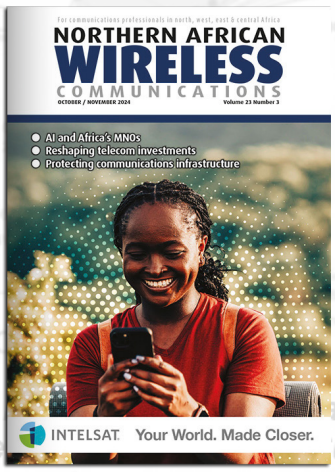

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