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CEOs spearheading Nigeria's Digital Economy Agenda





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CEO Perspectives on Nigeria's Digital Economy

Pathways to growth and innovation

Nigeria, with its population exceeding 220 million and a dynamic youth demographic, stands on the brink of a digital revolution. The digital economy, encompassing the Internet Economy, Web Economy, Cryptoeconomy, and New Economy, is poised to transform the nation's economic landscape. Recognizing this potential, Nigeria has outlined eight strategic pillars for its digital economy development: *Developmental Regulation, Digital Literacy & Skills, Solid Infrastructure, Service Infrastructure, Digital Services Development & Promotion, Soft Infrastructure, Digital Society & Emerging Technology, and Indigenous Content Promotion & Adoption.*

President Bola Ahmed Tinubu, at a recent engagement in Nairobi, Kenya, emphasized Nigeria's readiness to harness its youthful population to emerge as a global digital economy powerhouse. Represented by **Vice President Kashim Shettima** at the meeting of *African Heads of State on the 21st Replenishment of the International Development Association (IDA21)*, President Tinubu highlighted plans to transform Nigeria into a global hub for outsourcing talent in the digital and creative economy sectors. "Our interventions in the digital economy have been so extensive that we are no longer just boasting of having the most unicorns, but preparing to serve as a global hub for outsourcing talents," he declared.

Infrastructure as the Foundation

Leading ICT CEOs stress that robust digital infrastructure is fundamental to Nigeria's digital economy. In *IT Edge News'* special feature on Nigeria's digital economy, industry leaders unanimously call for prioritizing investments in broadband infrastructure to ensure widespread access to high-speed internet. They advocate for encouraging private sector investment in data centres to support data localization. Nigeria aims to achieve over 70% broadband penetration nationwide within the next five years, a goal that requires deliberate government support for infrastructure rollout.

Ikechukwu Nnamani, CEO of Digital Realty – Nigeria, underscores the importance of a comprehensive ICT infrastructure. "Nigeria's rapid digitization necessitates robust ICT infrastructure covering access, metro, long-distance, and international connectivity networks. These networks require next-generation data centers for data storage and exchange," he explains.

Lars Christer Johannisson, CEO of Rack Centre, highlights the need for more data centres. "Sub-Saharan Africa hosts only 2% of global data centers, with 50% in South Africa. Nigeria's demographics, cloud service adoption, mobile/broadband penetration, and data sovereignty offer a 12% CAGR in our sector. We plan a capacity increase of almost 50% in the near future," he notes.

Promoting Digital Skills and Innovation

Wale Owoeye, Managing Director/CEO of Cedarview Communications Limited, agrees with Nnamani and Johannisson on the need for expanded data center capacity. He emphasizes the importance of digital literacy and skills development, adoption of emerging technologies, fostering innovation, and ensuring data privacy and cybersecurity.

Muhammed Rudman, CEO of Internet Exchange Point of Nigeria (IXPN), points out the challenges of multiple taxation and high energy costs affecting telecom operators. He calls for government intervention to ensure a level playing field and support for the telecommunications sector. To leverage its youth population, Nigeria must prioritize digital skills development from primary education through higher learning institutions and vocational training centres. "Addressing connectivity and literacy challenges is crucial to ensuring accessibility," stresses **Johnson Oyeniyi, CEO of Flexify Solutions.**

Collins Onuegbu, Chairman of Signal Alliance Technology Holding (SATH), highlighted that successful

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Challenges and growth outlook

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Discusses CyberAgric's impact on Nigerian food security

CEO of PFS Okeremi advocates

for Nigeria's self-reliance in digital financial platforms

CED Technologies' CTO Ume-Ezeoke

shares winning strategies to unlocking digital transformation

Future of data privacy and protection services in Nigeria:

An insight from Switch Solutions Limited

Nwachukwu, Zoracom's CSEO,

reveals how digital transformation could unlock Nigerian business growth

Tunji Alabi, MD, Infratel Africa,

highlights role of connectivity infrastructure in digital transformation

Cedarview's CEO Wale Owoeye

envisions connectivity and cloud shaping Africa's market

IXPN CEO Rudman highlights

power and transmission costs as barriers but remains optimistic

SATH Chairman Collins Onuegbu

offers insights on navigating the evolution of Nigeria's software industry

ATCON President Tony Emoekpere

government action to boost Nigerian telecoms sector

BCN CEO Ibrahim Dikko

on the power of partnerships in Nigeria's digital growth

ICSL CEO Yemi Oshodi highlights

power challenges and the future of ICT industry collaboration

FiberOne CEO Lanre Ore

on tackling fiber challenges and how government can boost Nigeria's infrastructure

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local software ventures often struggle to reach their full potential due to Nigeria's challenging business environment. **Dr. Ayotunde Coker, CEO of Open Access Data Centres (OADC)**, stressed that optimal economic benefits from broadband adoption require increased penetration. **Ibrahim Dikko, Managing Director/CEO of Backbone Connectivity Nigeria Limited**, emphasized the importance of a collaborative ecosystem in the telecommunications industry. **Yemi Oshodi, CEO of Information Connectivity Solutions Limited (ICSL)**, identified power as the most significant obstacle. Mr. Lanre Ayoola, **Chairman/CEO of Tranter IT**, highlighted the need to build local capacity without the burden of Forex challenges. Lanre Ore, **CEO of FibreOne Broadband**, suggested that government could foster innovation and growth by providing tax incentives and facilitating access to financing. **Tony Izuagbe Emoekpere, CEO of Anchor Telecoms and President of the Association of Telecommunications Companies of Nigeria (ATCON)**, emphasized the need for government intervention to address the infrastructure deficit.

Morenikeji Aniye, Founder and CEO of Hotspot Network Limited, advocates for government policies to provide low-interest loans for technology investments and workforce training. He says "Government can develop policies and frameworks targeted at telecommunications service and ICT companies for access to low-interest loans for investment in technology and infrastructure upgrades, workforce training, and business expansion without being burdened by high-interest debt." **Tunji Alabi, the Managing Director of Infratel Africa** agrees with him. He says "Connectivity in underserved and unserved communities in Nigeria provides the potential for transformative change in the quality of life and economic opportunities for these dwellers. The provision of infrastructure is the foundation and bedrock on which digital transformational services can be delivered."

Enabling Regulatory Environment and Data Protection

Creating a supportive regulatory environment is crucial for sustaining digital economy growth. The establishment of the **Startup Act** aims to streamline processes and provide incentives for startups and small businesses. **Dr. Yele Okeremi, CEO and Co-Founder of Precise Financial Systems (PFS)**, believes that Nigeria can achieve self-reliance in technology through policies that prioritize local talent.

Data security and privacy are paramount in the digital transformation journey. **Abdulaziz Aliyu Ari, CEO of Switch Solutions**, highlights the growing demand for effective data protection services as cyber threats increase. **John Nwachukwu, Chief Strategy and Executive Officer (CSEO) at Zoracom**, and **Chukwuebuka Ume-Ezeoke, Chief Technology Officer at CED Technologies**, emphasize the need for organizations to integrate data protection and cybersecurity into their corporate strategies.

Patrick Ede, Director of Operations at PPC Limited, underscores the importance of adapting to the fast-evolving ICT landscape. "The transition from traditional IT to emerging technologies like AI and blockchain is impacting new services, products, and applications across sectors," he observes.

Conclusion

The World Bank's Digital Economy Diagnostic Report of 2019 remains relevant today, emphasizing the need for increased investment in infrastructure, an enabling regulatory environment, radical reforms for skill development, and public-private partnerships to drive digital economy growth. To meet the 2030 aspirations of greater digital economy access and creating 100 million jobs, Nigeria must continue to build a robust ecosystem that fosters innovation and entrepreneurship.

Digital Realty CEO Nnamani

Discusses Advancing Seamless Connectivity and Boosting Digital Economy



In a significant move last year, Nigeria's leading carrier-neutral data center operator, Medallion Data Centre Limited, following its acquisition in 2021, underwent a rebranding to become Digital Realty – Nigeria. This strategic transition not only strengthened its market presence in Africa but also positioned it to capitalize on the vast opportunities to address the growing demand for connectivity and enhance internet infrastructure across the continent. In this exclusive interview, Ikechukwu Nnamani, CEO of Digital Realty – Nigeria, shares insights into the company's efforts to advance seamless connectivity across all its data centers and drive growth in Nigeria's digital economy.

How does Digital Realty – Nigeria ensure compliance with local

regulatory requirements governing data centers and telecommunications infrastructure in Nigeria?

Digital Realty maintain the same global practice in all countries it operates in. We have a dedicated department under our corporate services unit that ensures there is full compliance in all aspects of our operations both during construction of new facilities and post operations.

What are some of the innovative technologies and solutions Digital Realty – Nigeria implementing to enhance the performance, security, and efficiency of its data center operations?

As part of the global standard of operations Digital Realty guarantees its customers the same SLAs irrespective of the country of operation. Our Service Now platform ensures seamless customer interface both to

order new services as well as maintain efficient services to the customers. We are also rolling out services in the Nigerian market that will both offer seamless connectivity across all our datacenters and enhance the digital economy in Nigeria

Does Digital Realty – Nigeria have in place a program to foster a culture of professional development among its employees as well as retaining top talent within the data center and telecommunications industry?

Yes. All staff in Digital Realty Nigeria has access to the Digital University platform of Digital Realty Global. This ensures that all staff have unlimited access to learning tools both within the datacenter industry and ICT in general. Several of our staff members have over the years been trained in Europe and North America to enhance their skill sets in the

Smartweb CEO Abdullahi

Tech advancements and regulations key to industry Growth



Founder/CEO of Smartweb Nigeria Limited, Murtala Abdullahi, says rapid technological advancements, evolving consumer preferences, and supportive regulatory frameworks will determine the industry's growth and innovation even in the face of increasing challenges.

What are some of the key challenges you have encountered while operating an internet-based business in Nigeria? Operating an internet-based business in Nigeria presents several challenges, including unreliable power supply, limited internet infrastructure, and regulatory hurdles. To navigate these challenges, Smartweb Nigeria Limited has invested in robust backup power solutions to ensure uninterrupted service delivery. Additionally, we've established strategic partnerships with reliable data centers for our colocation and

We remain committed to driving technological innovation, delivering exceptional services, and contributing to the growth and development of Nigeria's digital economy.

internet service providers to mitigate connectivity issues. Furthermore, we've proactively engaged with regulatory bodies to ensure compliance with evolving regulations, fostering a conducive business environment. By prioritizing customer satisfaction and leveraging innovative solutions, we've sustained growth and resilience in the face of

these challenges for about 20 years now.

What opportunities and challenges does emergence of technologies like AI present for companies like Smartweb Nigeria Limited?

The emergence of Artificial Intelligence (AI) presents both opportunities and challenges for businesses in Nigeria, including Smartweb Nigeria Limited. AI technologies offer immense potential to enhance operational efficiency, personalize customer experiences, and drive business innovation. However, the adoption of AI also poses challenges such as workforce displacement and ethical considerations. At Smartweb, we view AI as a transformative tool and we are considering integrating AI-powered solutions into our service offerings to streamline operations and improve customer engagement. We recognize the importance of ethical AI practices and are committed to responsible AI deployment to maximize its benefits while minimizing risks.

What strategies has Smartweb Nigeria Limited implemented to ensure that its workforce remains equipped with the necessary skills?

At Smartweb Nigeria Limited, we prioritize skill development to adapt to the evolving digital landscape. We've implemented various initiatives, including continuous training programs, workshops, and certifications, to equip our workforce with the necessary skills to leverage emerging technologies effectively. Additionally, we foster a culture of continuous learning and innovation, encouraging employees to stay updated on industry trends and acquire new skills through self-paced learning resources and mentorship programs. By investing in our employees' professional development,

datacenter space. We also have a very robust training programme for interns and NYSC staff where we give opportunities to students in their 3rd and 4th year industrial training program as well as also post graduate studies during their NYSC exercise.

How does Digital Realty – Nigeria prioritize sustainability in its data center operations to minimize environmental impact and promote energy efficiency?

Digital Realty is a major supporter of the global environmental sustainability program. We are fully complaint with six major ESG parameters that we not only measure and track but we also report to the key ESG supervisory bodies. We track and report on the following parameters amongst others: PUE, WUE, Renewable Energy, Circular Economy, Waste Heat Reuse, and Carbon footprint reduction

In the light of your insightful presentation at the recent 50MVPS in Lagos on *Myth and Facts of Nigeria's digital economy*, how does Digital Realty – Nigeria see the

← **Cont. From Page 7**

we ensure that they remain agile and capable of driving innovation in a rapidly evolving technological landscape.

What are the key factors driving sustainability in the industry and how does Smartweb Nigeria Limited position itself to remain competitive amidst changing market dynamics?

Key factors driving sustainability in the internet-based business industry include technological innovation, customer-centricity, and regulatory compliance. At Smartweb Nigeria Limited, we position ourselves for sustainability by prioritizing innovation and investing in cutting-edge technologies to deliver superior services to our clients. Additionally, we place a strong emphasis on building long-term relationships with our customers, understanding their

← **Cont. From Page 8**

Digital Realty operates some of the most advanced datacenters in the world. We are amongst the leaders in developing the advances in the datacenter space globally.

future growth and development of tech sector over the next decade?

The Nigerian economy is undergoing rapid digitization. This calls for the implementation of very robust ICT infrastructure covering not only the access network but also the metro, long distance and international connectivity networks. All these networks need next generation datacenters for the storage and exchange of data to be generated.

needs, and delivering tailored solutions to address them effectively. Moreover, we remain vigilant about regulatory changes and proactively adapt our business practices to ensure compliance while maintaining operational efficiency. By staying agile, customer-focused, and compliant, we position ourselves as a sustainable and competitive player in the industry.

As the CEO of Smartweb Nigeria Limited, what is the future direction of tech/innovation businesses in Nigeria, considering factors such as technological advancements, regulatory changes, and evolving consumer preferences?

As the CEO of Smartweb Nigeria Limited, I foresee a promising future for tech and innovation businesses in Nigeria. With rapid technological advancements, evolving consumer

Digital Realty CEO Nnamani

Digital Realty is committed to support the emerging digital economy in Nigeria by implementing the necessary infrastructure.

How does Digital Realty – Nigeria anticipate addressing emerging opportunities and challenges within these sectors, considering technological advancements and evolving market dynamics?

Digital Realty operates some of the most advanced datacenters in the world. We are amongst the leaders in developing the advances in the datacenter space globally. All datacenters with the Digital Realty designation are operated under the same global operating standard. These same standards apply in the operation in Nigeria. Realizing that Nigerian is a difficult market to implement new infrastructure and also operate the built infrastructure, Digital Realty relies on the more than 15 years of on the ground datacenter experience of the management team in Nigeria in navigating the Nigerian operating space to ensure we blend the best in global practices with the local environment we operate in.

Smartweb CEO Abdullahi

preferences, and supportive regulatory frameworks, the landscape is ripe for growth and innovation. We anticipate increased adoption of emerging technologies such as cloud computing, AI, and IoT, driving digital transformation across industries. Furthermore, regulatory changes aimed at fostering innovation and entrepreneurship will create new opportunities for tech businesses to thrive. At Smartweb, we remain committed to driving technological innovation, delivering exceptional services, and contributing to the growth and development of Nigeria's digital economy.

Thank you for the opportunity to share our insights, and we look forward to collaborating with IT Edge News to further promote innovation and excellence in Nigeria's tech industry.

Hotspot Network Limited CEO Engr. Morenikeji Aniye reveals sector Challenges and growth outlook



In an exclusive interview with IT Edge News, Morenikeji Aniye (FNSE, FNIEEE, FIMC, FCIPMN), Founder and CEO of Hotspot Network Limited, delves into the multifaceted challenges facing the sector. From regulatory uncertainties to compliance requirements, market competition, infrastructure limitations, and evolving customer expectations, Aniye provides valuable insights. Despite these hurdles, Aniye remains hopeful about the sector's potential for growth and sustainability.

In Nigeria's dynamic regulatory environment, what are the primary challenges Hotspot Network Limited faces as a Telecoms infrastructure provider and Internet service provider (ISP),

and how do you navigate these challenges to ensure compliance while maintaining operational efficiency?

Hotspot Network Limited operates as a Telecoms infrastructure and Internet service provider (ISP). In this context, the primary challenges the company faces include regulatory uncertainties, compliance requirements, market competition, infrastructure limitations, and customer expectations.

The feasibility study sponsored by USTDA for Hotspot Network Limited's rural network service project provides us valuable insights and recommendations that enable the company to make informed decisions, plan effectively, and maximize the project's impact. These challenges were duly addressed by the feasibility study recommendations, and made it

possible for us to ensure compliance while maintaining operational efficiency.

Some of these challenges include changes in regulations. We try to manage this by staying updated by following-up and active participation in regulatory briefing and stakeholder engagements.

There is also challenge with Compliance. We maintain a compliance team that is responsible for constant review of processes to ensure compliance to standards and regulation. This helps us manage compliance issues effectively. There are lots of challenges but we are able to manage them through strategic processes.

In conclusion, Hotspot Network Limited navigates the challenges of operating as an ISP in Nigeria by combining proactive regulatory compliance, strategic risk management, infrastructure development, service quality enhancement, market differentiation, customer engagement, and strategic partnerships. By adopting a holistic approach to address these challenges, the company positions itself for sustainable growth and success.

Hotspot Network Limited aims to extend internet coverage to previously unconnected rural communities in Nigeria using OpenRAN technology, what specific strategies does Hotspot Network Limited employ to implement this technology effectively, and what impact do you anticipate on bridging the digital divide in rural areas.

Hotspot Network Limited has adopted several key strategies to effectively implement OpenRAN technology to extend internet coverage to rural communities in Nigeria.

Our collaboration with Parallel Wireless, the OEM for our OpenRAN solution provides us the advantage of a reliable solution with strong coverage and upgrade capabilities to meet growing demands.

We have also entered into collaboration with InfraCredit to provide us local currency guarantees for long-term credit. This has given us the required liquidity to expand our network service to more rural locations. We currently have 100 villages live on MTN network and have additional 250 planned for this year. Our target is 2000 villages in the next 3 to 5 years.

We have other collaborations to provide add-on services in these rural communities to stimulate the economy and encourage internet usage and create a financial ecosystem in these rural communities.

The impact of using Parallel Wireless OpenRAN solution in providing voice and data service in these rural communities cannot be overemphasized. It creates access to information, empowerment and inclusion, improved quality of life, and economic growth.

Our strategic implementation of OpenRAN technology in rural Nigeria serves as a catalyst for positive social, economic, and technological transformation. By prioritizing community engagement, partnerships, customized solutions, capacity building, and ongoing support, they are effectively narrowing the digital gap and enabling rural residents to reap the benefits of connectivity and digital inclusion.

“Government can foster growth and innovation through grants and subsidies specifically targeted at indigenous ICT companies to help them cover operational costs, research and development activities, and expansion efforts.”

As a local network-as-a-service (NaaS) provider, what initiatives or policies would you recommend the government implement to support indigenous companies like Hotspot Network Limited in the ICT sector, particularly regarding funding, infrastructure development, and regulatory framework?

To support indigenous companies like Hotspot Network Limited in the ICT sector, the government can implement various initiatives and policies aimed at fostering growth and innovation. The government can offer grants and subsidies specifically targeted at indigenous ICT companies to help them cover operational costs, research and development activities, and expansion efforts. An example of such subsidies is the USPF; supporting the development of telecommunications infrastructure in rural areas to bridge the digital divide and ensure universal access to communication services but more can still be done.

Government can develop policies and frameworks targeted at telecommunications service and ICT companies for access to low-interest loans for investment in technology and infrastructure upgrades, workforce training, and business expansion without being

burdened by high-interest debt.

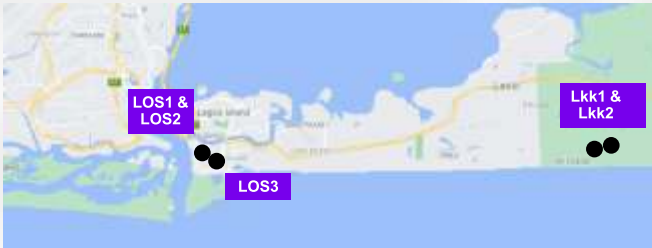
There are many other initiatives that Government can also introduce to encourage both SMEs and startup ICT firms like Seed funding, Infrastructure Development; Broadband Infrastructure, Data Centers, Innovation Hubs, Simplified Licensing Procedures, incentives and many more. This can greatly reduce operational costs for these related companies and increase their growth potentials.

How does Hotspot Network limited prioritize and improve the overall experience for its customers, especially in terms of service reliability, speed, and customer support?

Hotspot Network Limited prioritizes and improves the overall customer experience through various strategies focusing on service reliability, speed, and customer support. We invest in robust infrastructure to ensure service reliability. We implement redundancy measures to ensure that in case of any network failure, backups are in place to minimize downtime and disruptions for customers. We employ advanced monitoring systems to promptly identify and address any issues that may arise, ensuring quick resolution and maintaining service reliability. We continuously upgrade our networks to keep up with technological advancements and increasing demands for faster speeds. We have a dedicated 24/7 customer Support to address any queries, concerns, or technical issues customers may face. This ensures that assistance is readily available whenever needed. We use feedback mechanisms such as surveys, reviews, and customer feedback forms to gather insights into customer experiences and areas for improvement, enabling continuous enhancement of services.

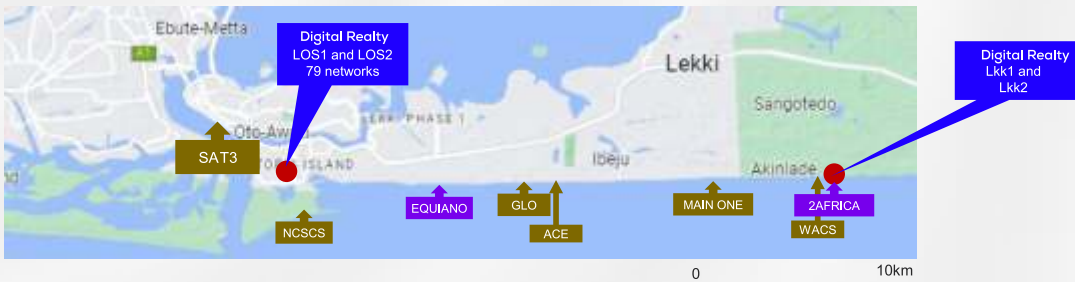


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1. PFEM = 2AFRICA PFE Module



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Rack Centre's Johannisson

Sustaining growth of Nigeria's data centre industry



In an exclusive interview with *IT Edge News*, Lars Christer Johannisson, Chief Executive Officer of Rack Centre, an IFC Edge certified data centre operator, sheds light on the remarkable achievement of sustaining a 100% uptime for clients despite Nigeria's power challenges. Johannisson delves into the factors driving the growth of the data centre sector, projecting a nearly 50% increase in capacity in the near future and discussing its implications for economic development in Sub-Saharan Africa. He also explores the critical issue of Nigeria's digital divide and its impact on both new opportunities and the high threshold costs required to bridge this gap.

How does Rack Centre address the challenges related to power availability and reliability, and what measures are implemented to ensure

“We are autonomous in power generation with gas turbines, diesel engines, enhanced by PV and redundant in all categories. More so, we are the only IFC Edge certified facility in Europe, Middle East and Africa.”

uninterrupted power supply to its data centres?

In an industry and country where power is both a critical success factor and a limited source, everything we do at Rack Centre or any data centre in Nigeria, becomes a “Power availability and reliability” question. I do believe it boils down to, the 3 P's;

Planning, Processes and People. Rack Centre, since inception in 2013, has managed this reality with a 100% uptime for our clients, also ensuring continuous re-assessment. As we expand to become one of the largest data centres in Nigeria, we have designed our new facility with the same expectation for uptime, redundancy, efficiency and resiliency. We are autonomous in power generation with gas turbines, diesel engines, enhanced by PV and redundant in all categories. More so, we are IFC Edge certified and take pride in having a designed PUE on par with the most efficient data centre in Sub-Saharan Africa.

Regulatory compliance is crucial in the data centre industry. How does Rack Centre ensure adherence to local and international regulations, and what steps are taken to maintain compliance while providing innovative data centre solutions to

Flexify Solutions CEO Johnson Oyeniyi

Discusses CyberAgric's impact on Nigerian food security

In this conversation, Johnson Oyeniyi, CEO of Flexify Solutions, delves into the impactful role of artificial intelligence (AI) across diverse sectors of the economy. With a special emphasis on tackling hurdles in education and food security, Oyeniyi sheds light on his company's groundbreaking AI-driven solution: 'CyberAgric.' This innovative platform aims to revolutionize Nigerian agriculture by harnessing AI to boost productivity and ensure food sustainability. Oyeniyi shares his perspectives with Anthony Nwosu.

Can you provide insights into Flexify Solutions' journey in the information technology (IT) sector, particularly regarding AI solutions in Nigeria?

Flexify Solutions' journey in the IT sector has been characterized by significant strides, especially in deploying AI and mobile app solutions within Nigeria. Since our inception, we've been committed to leveraging cutting-edge technologies to address critical challenges and foster innovation in the Nigerian market.

Through relentless innovation, a commitment to excellence, and strategic partnerships, such as our collaboration with Cybermate Technologies, a company I am also a founding member, we've steadily positioned ourselves as a prominent player in the Nigerian IT landscape. Our journey is fuelled by a passion for transformative technology and a commitment to driving positive change in communities worldwide.

As our footprint expanded, we expanded our operations globally, becoming registered in the United Kingdom and looking ahead, we're poised to venture into the American market with cutting-edge AI solutions in 2025.



“By tailoring CyberAgric to these crops, we are empowering these small-scale farmers with a powerful tool that can significantly improve their crop management practices, enhance productivity, and ultimately contribute to their economic well-being and food security”

Could you elaborate on how Flexify Solutions introduced and established solutions like FlexKids, FlexFit360, Healthify, and FlexSuite in the Nigerian market?

Our approach involved extensive research to understand the local culture and specific pain points. For example, recognizing the demand for quality educational resources, we developed FlexKids in collaboration with Nigerian educators. This user-centric design approach led to swift success, with FlexKids earning the *“Teacher Approved”* badge from Google within its first month of launch.

Building on this momentum, we

addressed the critical need for health and wellness solutions with FlexFit360 and Healthify. These offerings resonated strongly with health-conscious Nigerians, garnering significant user engagement and trust. Our commitment to meeting the needs of Nigerian businesses led to the creation of FlexSuite, a comprehensive business management platform designed to enhance efficiency and competitiveness. Throughout our journey as a firm, we remained dedicated to user-centric design and forged strategic partnerships with local experts, ensuring our solutions resonated with the unique needs of the Nigerian market.

clients?

Regulatory and compliance are inherent key attributes of any data centre. Rack Centre and the industry on a whole works very closely with all relevant certification bodies and in our case, NCC or similar government regulatory bodies in Nigeria. It is mandatory. But I also think the question drives demand, because decisions and regulations impact the planning scenarios especially around energy efficiency, data sovereignty, telecom competitive landscape and the broader Nigerian digital agenda.

Can you discuss some of the innovative technologies and solutions implemented by Rack Centre to enhance the capabilities and reliability of its data centres, and how these innovations contribute to meeting the evolving needs of clients in Nigeria and beyond?

As an example, our upcoming 12 MW facility in Lagos is designed according to most efficient global standards for a very low PUE in Nigeria. Additionally, we know that AI will drive the energy consumption almost seven times versus a traditional non-AI enabled data centre. Our LGS2 facility is hyperscale ready and we have already considered absorbing this growing energy need and capacity over the next few years.... A concept we like to refer to as: "Build for today, Ready for tomorrow".

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As one of your flagship solutions, could you explain how the AI-powered agritech solution, CyberAgric, addresses Nigeria's food security challenges?

CyberAgric, developed in partnership with Cybermate Technologies, directly tackles food security challenges by leveraging AI and mobile technology. Its advanced disease detection capabilities, such as early detection of Cassava Brown Streak Disease (CBSD) in cassava leaves within the first two weeks of infection thereby enabling farmers to implement timely intervention measures, safeguarding crop yields and food supply. By utilizing smartphone cameras, farmers

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What strategies does Rack Centre employ to cultivate local talent and develop the necessary skills within its workforce?

Rack Centre's growth and operational excellence stands on the shoulders of our staff. We invest heavily in our staff and operational resources, which makes us an attractive employer of highly skilled talent, helping us retain a lot of knowledge and experience within the company. Additionally, we align our CSR strategy around Nigeria's digital transformation agenda, where developing skills and competencies is crucial.

Emerging technologies such as edge computing and artificial intelligence are reshaping the landscape of data centre operations. How is Rack Centre leveraging these emerging technologies to optimize data centre performance, enhance security measures, and deliver value-added services to clients?

On the demand side, emerging technologies, data inclusion and cloud-based services, drive our industry growth and on the other side, AI and new technologies make it feasible to enhance our operations to be more efficient and resilient. We already now see that the thousands of data points that we have in our data centre can be improved by AI extensions and data analytics. As we evolve, Rack Centre will continuously

can capture images of their crops and receive real-time analysis and recommendations, putting advanced agricultural technology literally at their fingertips. Additionally, CyberAgric serves as an educational platform, empowering farmers with the latest agricultural best practices and resources.

What led to the decision to focus specifically on maize and cassava farmers with CyberAgric?

Our collaboration with Cybermate Technologies ensured that CyberAgric was tailored to the unique needs of Nigerian farmers. We started with cassava modules and after wide

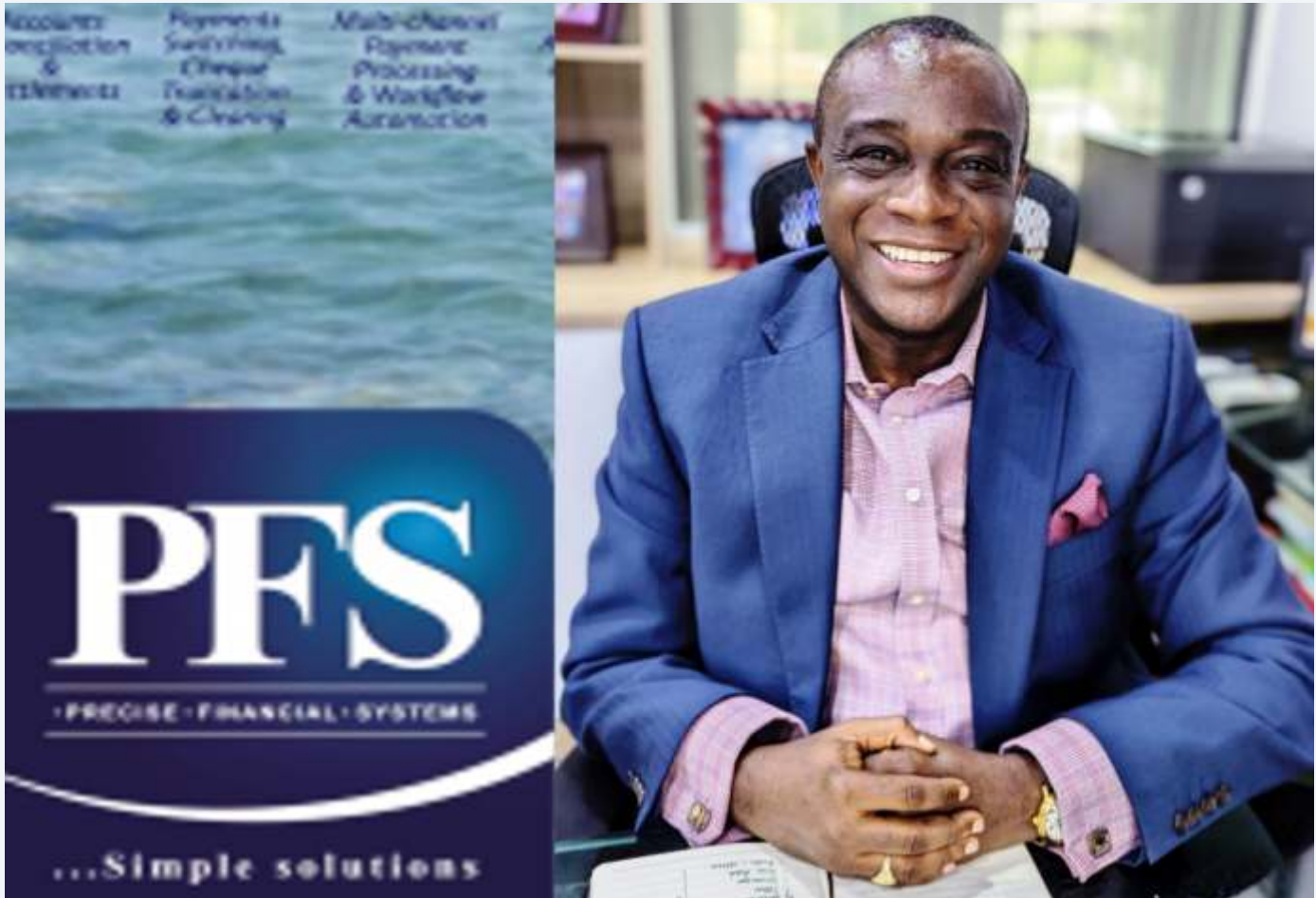
utilize emerging technologies to improve our service offerings to our clients.

What are your insights into the future prospects of the data centre industry in Nigeria, considering factors like increasing demand for digital services and evolving technology trends?

Sub Saharan Africa is home to only 2% of global Data centres in the world (a similar capacity of Switzerland today), out of which 50% are located in South Africa. The demographics of Nigeria, cloud service adoption, mobile/broadband penetration, data sovereignty, and low latency application are estimated to provide a CAGR of 12% in our business over the next few years. This means that right now, our sector looks at a planned capacity increase of almost 50 % in the near future. In Sub Saharan Africa, there is still a digital divide and lack of access to technology which defines the opportunity but also captures a high threshold cost to improve it. Fibre access/coverage, device, data costs and resilience, make subscribers transition from e.g. 2/3G to 4G a bit slower in Sub Saharan Africa. The good thing though is that between SMEs and the Public sector, almost 70% of these industry segments will shift to cloud services adoption over the next few years.

consultations we decided to add Maize (corn) to it. Maize and cassava were chosen due to their significance as staple crops in Nigeria's agricultural economy and their susceptibility to devastating diseases. By targeting these two crops, our aim is to have a direct and significant impact on securing the nation's food supply and supporting the livelihoods of a large segment of the farming community. CyberAgric's advanced disease detection capabilities, leveraging AI and image recognition, are especially valuable in combating these specific crop diseases, enabling early intervention and containment measures.

CEO of PFS Okeremi advocates for Nigeria's self-reliance in digital financial platforms



Dr. Yele Okeremi, the CEO and Co-Founder of Precise Financial Systems (PFS), shares insights with *IT Edge News* on Nigeria's potential to establish ownership within the digital financial ecosystem. He highlights the abundant opportunities present in the space and emphasizes the country's capacity for self-reliance in technology. Okeremi advocates for a unified government policy that places a premium on local talent and fosters a culture of success. He stresses the importance of governmental collaborations with Nigerian companies for targeted projects to retain knowledge and expertise domestically.

How has PFS maintained its significance and relevance in the software ecosystem?

For three decades, Precise Financial Systems (PFS) has been a leading advocate and innovator, ensuring Nigeria's digital economy thrives. We believe a vibrant digital economy requires a nation to own its platforms, not rely on others. At PFS, our mission is to empower Nigeria to own its platforms within the digital financial ecosystem. This space is ripe with opportunities, and we've been developing essential applications and tools to make it a reality. For instance, PFS designed, implemented, and maintains the Automated Clearing House switch, the backbone of Nigeria's electronic transactions. Many nations import such critical technologies, but owning our financial platforms is essential for true independence. When you control how money flows, you control your

Nigeria has the potential to be self-reliant in technology. This can be achieved through a single government policy that prioritises local talent and promotes a narrative of success.

destiny. PFS is dedicated to this mission, and we've accomplished much more in the financial technology space.

What is your vision for the future and the government's role?
Nigeria has the potential to be self-

CED Technologies' CTO Ume-Ezeoke shares winning strategies to unlocking digital transformation



That's a very good question. Managing an IT company in Nigeria amidst the ongoing digital transformation certainly presents its fair share of challenges. One of the most significant hurdles we encounter is the dissemination of information externally. In the realm of digital transformation, it's crucial to understand that one size does not fit all. Each organization has its unique needs and requirements when it comes to adopting digital solutions or seeking business process improvements. Another challenge we face is the turnaround time from inception to onboarding. Sometimes, the process of digitally transforming an organization can take years. This delay can stem from various factors, including funding constraints and the priorities of the organization's management. In some cases, there's a dilemma where the increase in the bottom line is prioritized over investing in digital transformation initiatives. Navigating through these challenges requires a concerted effort and a strategic approach. At CED Technologies, we rely on three pillars: Our People, Our Technology, and Our Strategy. These pillars serve as the foundation for delivering last-mile digital solutions and ensuring business continuity and growth.

Our People: We believe that our team is our greatest asset. We invest in continuous training and development to ensure that our cross-functional teams are equipped with the skills and knowledge needed to address the evolving challenges of digital transformation. **Our Technology:** Leveraging cutting-edge technology is essential in staying ahead of the curve. We continuously innovate and invest in the latest tools and platforms to provide our clients with the most effective industry-specific solutions tailored to their specific needs. **Our Strategy:** A well-defined strategy is key to overcoming obstacles and driving success. We work closely with our clients to develop customized strategies that align with their business objectives and drive tangible results.

By focusing on these pillars, we can effectively navigate the challenges of managing an IT company in Nigeria's

In an insightful conversation with *IT Edge News*, Chukwuebuka Ume-Ezeoke, Chief Technology Officer at CED Technologies, shares his expertise on the crucial elements required to successfully navigate the complexities of digital transformation and lead IT companies towards sustainability in Nigeria's ever-evolving landscape. According to Ume-Ezeoke, the triumvirate of People, Technology, and Strategy forms the foundation for overcoming challenges and achieving success in this dynamic environment. As a design technology company, CED Technologies prioritizes delivering a seamless experience for its clients through responsive communication channels, industry-specific solutions, and proactive problem-solving approaches.

As the CEO of CED Technologies, what are the most significant challenges you encounter in managing

At CED Technologies, we prioritize cybersecurity education and support for our clients. We conduct regular training sessions, workshops, and provide educational resources to raise awareness about potential threats and best practices for mitigating risks.

an IT company in Nigeria amidst the ongoing digital transformation?

How do you navigate these challenges to ensure business continuity and growth?

reliant in technology. This can be achieved through a single government policy that prioritises local talent and promotes a narrative of success. Why do we think we are less intelligent than anybody you and I know that Nigerians are even more intelligent than the people that you call intelligent. Particularly, I say this without any equivocation that Europe or America is not even in our class when you do head-to-head in intelligence. If you are going to Asia, I can respect some nations.

Instead of focusing on failures, we should celebrate our achievements and use them as inspiration for further growth. As long as we are promoting narratives of failures, project failures-we won't go anywhere. Don't projects fail in other countries as well? Why don't we promote the successful ones?

We should prioritise partnerships with Nigerian companies for specific projects, ensuring that knowledge and expertise remain within the country. We must control our own platforms in the digital space to ensure security and independence. This is especially important in areas like cybersecurity. We have the intelligence and human capacity to develop our own technology, and we should focus on creating solutions that address our specific needs.

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dynamic landscape. Our commitment to delivering value-driven solutions enables us to not only survive but thrive amidst the ongoing digital transformation.

How does CED Technologies leverage emerging technologies such as AI, blockchain, and 5G to reinvent business productivity and drive innovation in Nigeria?

CED Technologies leverages emerging technologies like AI, blockchain, and 5G to enhance business productivity and drive innovation in Nigeria. Through AI, we automate repetitive tasks, streamline workflows, derive actionable insights from data, and optimize processes. Blockchain ensures transparency and security in transactions, this we are currently leveraging for a yet to be commissioned project with one of the state

← Cont. From Page 16

I think the Nigeria government needs to really sit up and ensure that we can promote our ability to be self-reliant in these areas. We are saying that we're developing in software development. How much of Nigeria-made software is in the system?

Go to agriculture-we are producing cocoa but it is priced in London. Let's examine the value chain. People make chocolates, they do all this cocoa, butter, and stuff like that. And they are so when Nigeria is making one dollar, people that are not even involved in the production are making maybe 13 dollars. In the oil and gas sector, we should focus on the entire value chain and extract maximum value from it. This means not just producing raw materials but also developing the technology and expertise needed to process them. By investing in our own capabilities, we can ensure that Nigeria's economy grows and prospers. We are producing the food, but other nations are producing technology, they are producing even human resources to do many things and we are losing out and yet we say that we are powering the economy. We don't understand how to grow. If we are going to grow, we must ensure that we extract maximum value from the entire value chain. I am not saying we should close up our economy. We are open to partnerships. But why

governments while 5G enables real-time communication and remote collaboration for our cross-functional teams. This strategic adoption empowers CED Technologies to stay competitive and resilient in the digital landscape.

In today's digital age, customer experience is paramount. What strategies does CED Technologies employ to enhance customer satisfaction and ensure a seamless experience for clients utilizing your services or products?

CED Technologies prioritizes customer satisfaction by employing personalized services, timely support, and continuous feedback mechanisms. We ensure a seamless experience for clients through responsive communication channels,

can't Nigeria produce the experts? And we have them. Why can't we invest in the machinery? That's capital. If you don't have the cash, the capital will find you. It's about creating the value system and the right policies. So, we still see Nigeria doing oil and gas projects and even welders are being imported. I don't think Nigeria is going to make progress if we continue that way.

How does PFS prioritise sustainability in operations and software development?

Sustainability for PFS goes beyond just environmental concerns; it's about ensuring the company thrives even after I retire. My father taught me is that there's nothing called success until you have a successor, and that guides my actions every day. We're focused on creating solutions that remain relevant over time, while staying adaptable and open to change. This approach attracts top talent, which is crucial for our continued success. While we actively work on these factors, ultimately, the company's future also rests on factors beyond our control. However, by building a strong foundation, fostering innovation, and attracting the best people, we're confident that PFS will continue to flourish for years to come.

CED Technologies' CTO Ume-Ezeoke

industry specific solutions, and proactive problem-solving.

Mobile app development has become increasingly important for businesses to stay competitive. How does CED Technologies approach mobile app development, and what role do you see mobile apps playing in transforming enterprises in Nigeria?

That is true. However, simply having a mobile presence isn't enough; the quality and functionality of mobile apps are paramount. At CED Technologies, we approach mobile app development with a focus on user experience, functionality, reduced steps, and scalability. We prioritize understanding our clients' unique needs and target audience to deliver tailored mobile solutions that align with their business objectives.



Let's Get Africa Communicating Better, Together.

Infratel Africa is a leading telecommunication infrastructure service provider in Nigeria and Sub-Saharan Africa. We provide RAN, backhaul and power as a service across Africa.



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- Build Services
- MS Operations
- Maintaining telephony infrastructure

Powerco

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- Community Wifi
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Future of data privacy and protection services in Nigeria:

An insight from Switch Solutions Limited



In today's rapidly evolving digital landscape, the importance of data protection has become paramount, affecting individuals, businesses, and government organizations alike. In Nigeria's rapidly expanding sector, ensuring strong data protection measures is essential to safeguarding sensitive information from cyber threats, maintaining the integrity of digital assets, and upholding the confidentiality and reliability of electronic resources. Switch Solutions Limited, a leading player in Nigeria's data protection arena, is at the forefront of implementing innovative approaches to address cybersecurity risks, adopt effective talent management strategies, harness technological advancements, and promote sustainability initiatives within the industry. IT Edge News speaks with Abdulaziz Aliyu Ari, CEO of Switch Solutions on the changing dynamics in the sector and

Switch Solutions' approach to talent acquisition and skill-building initiatives in ICT services and data protection is poised to shape Nigeria's digital landscape

the future of data protection in Nigeria.

Data Protection Services in Nigeria's ICT Sector: The Future Outlook
The increasing reliance on data-driven processes in Nigeria has led to a surge in digital technologies, underscoring the critical need for robust data protection measures. With the government's digital transformation propelling rapid growth in the ICT sector, the demand

for effective data protection services is escalating. As cyber threats grow in sophistication and frequency, organizations are realizing the imperative of investing in comprehensive cybersecurity solutions to safeguard their valuable data assets. Switch Solutions Limited, a prominent provider of data protection services in Nigeria, is at the forefront of addressing these evolving cybersecurity challenges through an innovative approach that integrates cutting-edge technologies and best practices, the company ensures the security and privacy of sensitive information for its clients. Offering tailored solutions encompassing encryption, access control, threat detection, and incident response services, Switch Solutions empowers organizations to mitigate risks and bolster their cybersecurity defences in an increasingly digital landscape. Moreover, as a company deeply concerned about the future of Nigeria's digital footprint, we have initiated various awareness and enlightenment campaigns targeting secondary and tertiary institutions. Collaborating with various organizations, we aim to boost awareness of the Nigeria Data Protection Act (NDPA) 2023. Recognizing that information is paramount for informed decision-making, Switch Solutions Limited are committed to providing crucial insights, engaging with individuals across sectors, and educating them on the NPDA 2023. By arming individuals with knowledge of their rights concerning data privacy, expectations from data-collecting entities, and the perils of neglecting privacy safeguards, our goal is to empower individuals and

organizations to understand, assert and protect their data privacy rights, fostering a more digitally secure and empowered society.

Talent Management and Local Skill-Building Initiatives

In the competitive ICT industry, talent management plays a crucial role in the success of firms like Switch Solutions Limited. Anchored in a commitment to continuous learning and professional growth, the company's approach to talent acquisition and skill-building initiatives in ICT services and data protection is poised to shape Nigeria's digital landscape. At the heart of Switch Solutions Limited's strategy lies the cultivation of local talent. By investing in local talent, Switch Solutions Limited not only contributes to the growth of the ICT sector in Nigeria but also builds a skilled workforce capable of addressing the challenges of data protection and cybersecurity. Our team includes interns from the National Youth Service Corps (NYSC) and graduate trainees with promising potential, whom we provide with opportunities for growth and skill development. Placed within teams tailored to their expertise, these individuals are entrusted with responsibilities aimed at honing their technical and leadership acumen. Providing ample opportunities for professional development, aligning skill enhancement with both daily responsibilities and long-term career aspirations. Through strategic partnerships with educational institutions, industry associations, and government agencies, we are actively involved in promoting ICT skills development and capacity building initiatives. By offering training programs, internships, and mentorship opportunities, we empower young professionals to excel in the dynamic field of data protection and cybersecurity. Additionally, our staff from time to

time, volunteers as teachers in government secondary schools to support computer studies lessons and identify and nurture talent in the community.

Technological Innovation and Emerging Technologies

In an era marked by disruptive technologies like artificial intelligence (AI), blockchain, and cloud computing which are significantly influencing data protection services, Switch Solutions Limited places paramount importance on proactively engaging with technological innovation to effectively combat the constantly evolving cybersecurity landscape. By integrating advanced technologies into its service repertoire, the company delivers cutting-edge solutions that bolster the resilience and efficacy of data protection measures. At Switch Solutions Limited, our operations are streamlined through the utilization of cloud-based collaboration tools, empowering our workforce to access resources seamlessly from any location at any given time. These platforms for project management, document sharing, and virtual collaboration foster a cohesive environment for our dispersed teams, enhancing productivity and collaboration. Driven by a commitment to continuous advancement, Switch Solutions Limited through dedicated research and development endeavours, is actively exploring the potential uses of AI for threat intelligence, blockchain for secure data storage, and cloud computing for scalable cybersecurity solutions. To facilitate delivery of innovative and future-proof data protection services that cater to the dynamic requirements of clients within an increasingly digitized environment.

Industry Sustainability and Corporate Social Responsibility (CSR)

Ensuring the sustainability of

Nigeria's Information and Communication Technology (ICT) sector is paramount for the long-term growth and stability of data protection companies. Switch Solutions Limited is dedicated to supporting industry sustainability efforts through its emphasis on ethical practices, environmental responsibility, and social impact initiatives.

We prioritize integrity and transparency in our operations by adhering to industry best practices, regulatory standards, and ethical guidelines. Additionally, the company prioritizes environmental sustainability by implementing energy-efficient technologies and promoting eco-friendly practices. Through community engagement, philanthropic initiatives, and corporate social responsibility programs, Switch Solutions Limited is committed to making a positive impact on society. For example, through the Nigeria Data Protection Commission adopt-a-school program, the company has adopted several educational institutions to provide data protection awareness training, demonstrating its commitment to giving back to the community.

As a final point, the future of data protection services in Nigeria's ICT sector is poised for significant growth and transformation. As organizations continue to navigate the complexities of cybersecurity threats and data privacy concerns, innovative companies like Switch Solutions Limited are leading the way in developing cutting-edge solutions that address the evolving challenges of the digital age.

Through a strategic focus on talent management, technological innovation, and sustainability efforts, Switch Solutions Limited is well-positioned to shape the future of data protection services in Nigeria and drive positive change within the ICT sector.

Nwachukwu, Zoracom's CSEO,

reveals how digital transformation could unlock Nigerian business growth

John Nwachukwu, the Chief Strategy and Executive Officer (CSEO) at Zoracom, emphasizes the vast potential of digital transformation for Nigerian businesses in a recent interview with IT Edge News. He highlights how such transformation can spur innovation, bolster competitiveness, and open doors to new growth avenues. However, Nwachukwu acknowledges the hurdles on this journey, citing technological barriers, cybersecurity risks, cultural resistance, and resource limitations as key challenges. Despite these obstacles, he expresses confidence that with Zoracom's guidance and support, Nigerian businesses can confidently navigate the digital landscape, fostering resilience and paving the way for future growth and prosperity.



As a leading provider of cybersecurity solutions in Nigeria, how do you assess the current state of cybersecurity adoption in the country, and what are the key challenges that organizations face in this regard?

In Nigeria, cybersecurity adoption demonstrates advancement alongside persistent gaps. While awareness of threats rise, implementation remains inconsistent. Organisations require enhanced resources and awareness to effectively counter evolving cyber risks, including challenges such as limited awareness, regulatory non-compliance, resource constraints, sophisticated threat landscapes, and infrastructure limitations.

Digital transformation is a buzzword in today's business landscape. What are some of the most significant challenges that Nigerian businesses encounter when undergoing digital transformation,

and how does Zoracom assist them in overcoming these challenges?

One of the foremost challenges that Nigerian businesses encounter during digital transformation is the lack of adequate technological infrastructure and resources. Many organizations in Nigeria struggle with outdated IT systems, limited internet connectivity, and insufficient technical expertise, which hinders their ability to adopt and leverage cutting-edge digital technologies effectively. Zoracom addresses this challenge by offering comprehensive infrastructure management solutions tailored to the unique needs and constraints of Nigerian businesses. From network optimization and cloud migration to IT asset management and remote monitoring, Zoracom's solutions empower organizations to modernize their infrastructure, enhance operational efficiency, and lay a robust foundation for digital transformation. Another significant challenge for

Nigerian businesses embarking on digital transformation is cybersecurity threats and data privacy concerns. As organizations digitize their operations and embrace cloud computing, IoT, and mobile technologies, they become increasingly vulnerable to cyberattacks, data breaches, and regulatory compliance risks. Zoracom specializes in cybersecurity solutions that provide end-to-end protection against evolving cyber threats, safeguard sensitive data, and ensure compliance with relevant regulations such as the Nigeria Data Protection Regulation (NDPR). Through a combination of advanced threat detection, proactive risk mitigation, and comprehensive security awareness training, Zoracom empowers Nigerian businesses to navigate the complex cybersecurity landscape with confidence and resilience. Cultural resistance and organizational change management represent additional hurdles that Nigerian

businesses must overcome during digital transformation. Traditional mindsets, resistance to change, and siloed organizational structures can impede the adoption of new technologies and inhibit collaboration across departments. Zoracom recognizes the importance of change management in successful digital transformation initiatives and offers tailored consulting services to help organizations foster a culture of innovation, collaboration, and agility. By conducting organizational assessments, stakeholder engagements, and training workshops, Zoracom equips Nigerian businesses with the knowledge, skills, and tools needed to navigate cultural barriers, drive adoption of digital technologies, and achieve sustainable transformational change.

Lastly, limited access to affordable financing and technical expertise poses a significant challenge for Nigerian businesses seeking to embark on digital transformation initiatives. Zoracom collaborates with government agencies, financial institutions, and industry associations to promote digital inclusion and facilitate access to funding, training, and capacity-building programs for SMEs and startups. Through partnerships with local universities, vocational training centres, and technology incubators, Zoracom helps bridge the digital skills gap in Nigeria by offering internship opportunities, mentorship programs, and scholarships to aspiring IT professionals and entrepreneurs. Digital transformation holds immense promise for Nigerian businesses to drive innovation, enhance competitiveness, and unlock new growth opportunities. However, realizing these benefits require overcoming various challenges, including technological barriers, cybersecurity threats, cultural resistance, and resource constraints. Zoracom stands as a trusted partner for Nigerian businesses embarking on their digital transformation journey, offering tailored solutions, expert guidance, and strategic partnerships to navigate challenges, mitigate risks,

“Another significant challenge for Nigerian businesses embarking on digital transformation is cybersecurity threats and data privacy concerns. As organizations digitize their operations and embrace cloud computing, IoT, and mobile technologies, they become increasingly vulnerable to cyberattacks, data breaches, and regulatory compliance risks.”

and achieve sustainable success in the digital age. With Zoracom's support, Nigerian businesses can embrace digital transformation with confidence, resilience, and a clear path to future growth and prosperity.

Co-location and infrastructure sharing are vital components of modern IT infrastructure. How do you envision the future of co-location and infrastructure sharing services in Nigeria, especially considering the emergence of new technologies like 5G and edge computing?

The future of co-location and infrastructure sharing services in Nigeria is poised for significant growth and evolution, particularly with the emergence of new technologies such as 5G and edge computing. Here's how I envision these trends shaping the landscape:

- a) **Increased Demand for Data Centre Services:** With the proliferation of digital services, cloud computing, and data-intensive applications, there will be a growing demand for data centre services in Nigeria. Co-location facilities, which

provide shared infrastructure and resources, will play a crucial role in meeting this demand by offering cost-effective and scalable solutions for businesses of all sizes.

- b) **Acceleration of 5G Deployment:** The rollout of 5G networks in Nigeria will drive the need for edge data centres located closer to end-users to reduce latency and improve network performance. Co-location providers will leverage their existing infrastructure to deploy edge data centres, enabling faster and more reliable connectivity for applications such as IoT, augmented reality, and autonomous vehicles.
- c) **Edge Computing Adoption:** Edge computing, which involves processing data closer to the source of generation, will gain momentum in Nigeria as businesses seek to analyse and act on data in real-time. Co-location facilities will become key enablers of edge computing by hosting edge servers, storage, and networking equipment in proximity to where data is generated, processed, and consumed.
- d) **Diversification of Services:** Co-location providers in Nigeria will expand their service offerings beyond traditional hosting and storage to include value-added services such as managed security, disaster recovery, and hybrid cloud integration. This diversification will cater to the evolving needs of businesses looking to outsource IT infrastructure while maintaining control and flexibility.

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Tunji Alabi, MD, Infratel Africa, highlights role of connectivity infrastructure in digital transformation



Tunji Alabi, the Managing Director of Infratel Africa, emphasizes to IT Edge News the crucial role of connectivity infrastructure as the cornerstone for delivering digital transformational services, particularly in underserved and unserved communities across Nigeria. He elaborates on Infratel's initiatives aimed at catalyzing transformative change in enhancing the quality of life and unlocking economic opportunities within its operational areas.

How do you envision the future of connectivity service industry in Nigeria and what role do you see Infratel Africa Limited playing in shaping this future?

Connectivity in underserved and unserved communities in Nigeria provides the potential for transformative change in the quality of life and economic opportunities for these dwellers. The provision of infrastructure is the foundation and bedrock on which digital

transformational services can be delivered.

It is through the deployment of connectivity in rural communities that one can begin to bridge the digital divide between urban and rural communities. It is also an avenue for bringing close to 48% of our population into the formal sector by the introduction of digital initiatives such as banking, healthcare, power, education, government services to mention a few.

Currently, Infratel Africa partners with government, MNOs, and local communities to deploy connectivity infrastructure within these unserved and underserved rural communities. With a mission to transform and significantly improve the quality of life in Africa through the deployment of technology solutions, Infratel Africa currently have deployed over 150 digitally connected communities in Nigeria.

Infratel Africa have deployed the following innovative digital solutions in these communities: Agency Banking; Telemedicine Service; E

learning solutions for digital literacy, targeting women and youths; Off grid Power solutions using renewable energy; Solar based cold rooms for crop and produce preservation in farming communities; and Smart Wifi solutions that provides internet access to all.

How is Infratel Africa Limited leveraging emerging technologies to expand access to reliable and high-speed internet in remote region?

Infratel Africa has deployed all the above stated innovative digital solutions in these communities. In developing these solutions, Infratel goes through a rigorous geomarketing and design / dimensioning process within each community, to ensure that its portfolio of innovative digital solutions is fit for purpose and value for money. Infratel Africa continuously monitors and evaluates the impact of its solutions and makes adjustment where necessary.

What initiatives does Infratel Africa Limited undertake to develop the

skills and capabilities of its workforce, particularly in rural areas?

Infratel Africa has employed over 300 individuals who reside within its digitally connected rural communities. Developing the skills and capabilities of the workforce, especially in rural areas, is crucial for sustainable growth and development. Infratel Africa Limited implements several initiatives to build and nurture local talent, ensuring that the workforce is equipped with the necessary skills to support and sustain the company's operations. Some of these initiatives are as follows: -

1. Digital literacy programs focused mainly on women and youths.
2. Training and development programs which offer comprehensive training programs for employees, including technical, operational, and soft skills training. Tailor these programs to the specific needs of the local workforce, covering areas such as network maintenance, customer services.
3. Apprenticeship and Internship Opportunities that offer local young people opportunities to gain work experience and learn from seasoned professionals. These programs serve as a talent pipeline for the company.
4. Partnerships with Educational Institutions which collaborates with local schools, vocational training centers, and universities to develop specialized training programs and offer scholarships or sponsorships. This strengthens ties with the community and ensures a steady flow of skilled workers.

How is Infratel Africa Limited exploring emerging technologies such as satellite internet, LEO satellites, and wireless broadband hold to enhance rural connectivity and address infrastructure challenges?

Infratel Africa explores emerging technologies such as satellite internet, LEO satellites, and wireless broadband to enhance rural connectivity and address infrastructure challenges. Some of these technologies are as follows:

- I. Smart Wifi which is a satellite Internet hotspot service within the community that offers a broad coverage area and provides connectivity to rural and remote locations where other forms of internet are not feasible. This is achieved by partnering with satellite internet providers.
- II. Utilizing advanced wireless broadband technologies such as 4G LTE significantly improves connectivity in rural areas. These technologies provide high-speed internet access to users, especially in regions where wired infrastructure is limited.
- III. Conducting pilot projects and trials in specific rural areas allows Infratel Africa to assess the effectiveness of emerging technologies in different environments. These trials provide valuable insights for scaling up successful solutions.
- IV. Infratel Africa combines different technologies to create a hybrid approach that maximizes coverage and performance. For example, using satellites technology for backbone connectivity and wireless broadband for last-mile connections.

Implementing these emerging technologies, Infratel Africa bridges the digital divide and enhances rural connectivity. This not only benefits the company's business but also empowers rural communities

with access to high-speed internet, opening up new opportunities for education, healthcare, and economic development.

What steps does Infratel Africa Limited take to promote sustainability in its operations and infrastructure deployments in rural Nigeria?

Promoting sustainability in operations and infrastructure deployments is essential for Infratel Africa Limited to ensure long-term viability and positive impact, both environmentally and socially, in rural Nigeria.

Here are some steps that Infratel Africa takes to promote sustainability:

- I. Infratel Africa uses renewable energy sources to power its network infrastructure using such as solar, wind, and hydro power. This removes the reliance on fossil fuels and eradicates the carbon footprint on our operations.
- II. Infratel Africa uses energy-efficient equipment such as advanced network hardware with low power consumption, reduces overall energy use and operational cost.
- III. Optimize network infrastructure and operations to reduce redundancy, increase efficiency, and minimize energy consumption.
- IV. Incorporate green building practices when constructing new facilities, such as using locally sourced and sustainable materials, and designing energy-efficient buildings.

“ DEPLOYMENT OF CONNECTIVITY IN RURAL COMMUNITIES BRIDGE THE DIGITAL DIVIDE BETWEEN URBAN AND RURAL COMMUNITIES BRINGING CLOSE TO 48% OF OUR POPULATION INTO THE FORMAL SECTOR BY INTRODUCTION OF DIGITAL INITIATIVES IN BANKING, HEALTHCARE, POWER, EDUCATION, GOVERNMENT ”

Embracing the Future: Lare Ayoola

on cybersecurity and the role of emerging technologies



Lare Ayoola, CEO and Chairman of Tranter IT, shares with *IT Edge News* the growing importance of cybersecurity for organizational sustainability and the necessity for businesses to adopt emerging technologies such as AI, cloud, and edge computing. As the newly elected president of the Information Technology Association of Nigeria (ITAN), Ayoola outlines his vision for revitalizing the association to spearhead transformational changes across all sectors where IT is pivotal.

As a provider of infrastructures support for commercial banks and companies across the various industries what are the key challenges your clients face?

In Nigeria today, we face quite a number of challenges some of which people in other parts of the world don't face. However, if we address it from a core IT and not an environmental perspective. I would say that cybersecurity threats are one of the most critical or most worrying challenges that our clients face. If our clients face threats, it means we also face the threats because it's our responsibility to resolve those threats or prepare those clients against those threats and ensure that the clients are safe. With increasing sophistication of cyber threats, protecting our clients' IT infrastructure from cyber-attacks, data breaches, ransomware, and other

malicious activities is a top priority for Tranter IT. Staying ahead of evolving threats requires constant vigilance, and investments in robust security measures. So in an environment of limited cash, if you like, limited investment capital, you can imagine that achieving what I've just said, is not always easy for the clients. The second challenge is the legacy systems integration. A lot of clients are using like the C systems, that is systems that have been in existence for quite a number of years and they are not easily compatible with modern IT infrastructure solutions. So integrating these systems with newer technologies while ensuring smooth operations and minimal disruptions can be complex and time consuming. But fortunately, one of the attributes that Tranter IT has, is being able to retain manpower. So we have a season's crop of engineers that are able to address these types of issues and integrate legacy systems with modern technologies like ManageEngine. As you know, a ManageEngine is an IT automation and operations as B2B applications that facilitate the easy operation of complex IT infrastructure, making it a lot more efficient to operate. The third item I'll talk about in terms of challenges is scalability and flexibility. Businesses today require IT infrastructure that can scale up or down rapidly to accommodate changing needs and growth. Now, we need to ensure

that our infrastructure solutions are flexible and scalable, or sufficiently so to meet evolving business requirements. This is a crucial challenge that we have. Nobody wants to invest in software, and then when they grow, they have to discard that software or be forced to buy brand new software. So if the software that is installed from day one is scalable and flexible, it reduces the cost down the road. This is why you know, CIOs and heads of IT ensure scalability and flexibility as some of the characteristics of any software application that they are buying today. The fourth is downtime and reliability. This has always been a challenge, and we to minimize downtime and ensure high availability of IT services which is obviously paramount for our clients. Any disruptions or outages can have significant financial and reputational consequences. Implementing robust disaster recovery and redundancy measures is essential to mitigate these risks. So, you know, we have been a company that has been leading in the IT support arena, both the back office and the front office, the clients end, and we have developed what I would call an advanced specialization in ensuring that support so that downtime is minimized. That has been one of the key businesses or focused service offerings that we have provided to the world, well to Nigeria in this case.

The next challenge is the skill shortage. As we know, there's something called *Japa* where we have a lot of our brains, a lot of our intelligent, skilled, experienced personnel, professionals, leaving the country to other countries. Skill shortage is a major challenge. Shortage of skilled IT professionals in certain areas poses a challenge in delivering high quality infrastructure services. Recruiting and retaining talents with the necessary expertise in areas such as cloud computing, cybersecurity, and emerging technologies can be competitive and resource intensive. We have not been left out from that *Japa* syndrome. But because we are very proactive and reactive, you can't be 100% proactive because you can't foresee everything. But you can try your best to be proactive, to pay attention to the needs of your staff. We pay attention to

market trends, to what makes people want to stay and what makes people want to join us and focus on those things to ensure that we are always equipped with the right quality and the right skills in-house to deliver services to clients, which is why our service levels in our clients sites are above 99%. I know that sounds almost untrue, but we've been in business for a long time. Tranter IT is now 20 years old this July. We have perfected the art of recruiting properly, training appropriately, retraining and embarking on policies of continuous training and continuous assessment to ensure that the skill levels of our people is top notch at all times. We are able to exceed the expectations of our clients and this is indeed, an art taking HR and manpower development seriously is certainly a key component of success. It is a key pillar of success in industry today, whether you are an IT services organization or a bank, or a manufacturing outfit, if you don't focus on your manpower, on your technical manpower, you might find yourself unable to meet your targets.

The next item is technological advances. I would say keeping pace with rapid technological advancements, and adopting new innovations such as cloud computing, Internet of Things (IoT), AI and automation. compatibility with existing systems requires strategic planning and investments. So many organizations are falling short of their technological advancements simply because they are looking at cloud computing separately, IoT separately, AI separately, and automation separately. They are not looking at an integrated strategy for making the organization digitally compliance, and digitally proficient. You cannot talk about cloud computing, if you also don't cater or consider IoT. The Internet of Things collects data from the clients or ecosystem and brings that data into the center, which is analyzed; when it is analyzed, it has to go somewhere, or to someone. Then the question is whether you have the data analytical capabilities of processing the huge amount of data that the Internet of Things solutions are

going to bring to you? Do you have an objective in knowing precisely why you're collecting the data and how it will benefit the organization because collecting data is certainly not the end of the story? Utilizing that data to improve the bottom line of the organization to increase efficiency, productivity and to improve staff' job satisfaction to make working exciting and not boring - all these things have to come into play. So an integrated approach is what we would recommend.



CYBERSECURITY THREATS ARE ONE OF THE MOST CRITICAL OR MOST WORRYING CHALLENGES. WITH INCREASING SOPHISTICATION OF CYBER THREATS, PROTECTING OUR CLIENTS' IT INFRASTRUCTURE FROM CYBER - ATTACKS IS A TOP PRIORITY FOR TRANTER IT.



performance overall. It is also to mitigate risks and to achieve, you have to be abreast of the most recent technologies or emerging trends usually driven by what others who are on the cutting edge have tried and found to be successful. Then by word of mouth or by sharing case studies, other companies now jump on the bandwagon so to speak. Some of the emerging trends that are likely to shape the future of IT infrastructure services is cloud adoption and now Edge Computing. Many organisations have moved from on premise data centers on premise data storage and data processing to cloud based solutions. So businesses will increasingly move towards cloud based IT infrastructure for its scalability. Cloud adoption also allows companies like **IoT Africa Networks**, which is a subsidiary of Tranter IT, to offer flexible and on demand services tailored to specific industry needs. So basically IoT Africa is involved in collecting the data from the fields, from the factories, from the mines, from the farms, from the oil and gas fields, from your offices and

In the rapidly evolving landscape, what emerging trends do you foresee will shape the future of IT infrastructure services across industries?

Emerging trends are certainly important to organizations, for the clients to see what solutions are available and can now be applied to improving the

from your restaurants and your supermarkets, fridges and freezers and coolers and children's schools. It not only allows you to collect data and manage your ecosystem, it also provides data analytics services, which allows you to analyze that data and convert the raw useful information that will now be utilized and used in developing useful reports that are tailored to the needs of each of the managers within an organization, the HR manager is interested in something quite different from the IT manager and the CIO needs the information that's different from the head of IT. So all that data analytics, processing the data into useful information in the form of concise and to the point reports is what IoT Africa can deliver.

Edge computing is something that's becoming very important because it brings a processing and analytics of the data closer to its source or the sensors and devices. So processing and analyzing data closer to its source will be crucial for applications and real analytics in manufacturing, oil and gas, logistics and other sectors. IoT Africa can provide Edge computing solutions to complement cloud infrastructure for industries heavily reliant on real-time data.

Cybersecurity is an emerging trend and increasingly important because as we know, many banks in Nigeria and many organisations have suffered cyber-attacks so reliance on interconnected devices raises security concerns. That is one of the reasons why the Internet of Things has not moved as quickly as it should have moved because people are worried about these interconnected devices being the gateway for cyber-attacks. With a solution like Sigfox 0G Technology, that challenge can be effectively addresses and this is why IoT Network Africa is the Sigfox 0G Technology partner for Nigeria. The Sigfox 0G Technology doesn't allow cyber-attacks. It is virtually immune to that because of the way that the technology is structured so it is not possible for someone to utilize the Sigfox network to penetrate a client's IT infrastructure.

Lastly, we have IoT and 5G Network rollout. The rollout of 5G promises faster speeds and lower latency, enabling new applications like remote monitoring and control. IoT Africa Networks can adopt its services to leverage the potential of IoT and 5G for improved performance and efficiency across industries.

Cedarview's CEO Wale Owoeye

envisioning connectivity and cloud shaping Africa's market



In this conversation with *IT Edge News*, Wale Owoeye, Managing Director/CEO of Cedarview Communications Limited, shares insights on the transformative impact of connectivity, communication, and cloud services on Africa's market dynamics. Despite Nigeria's ongoing foreign exchange challenges, Owoeye remains optimistic about the resilience of technology companies in delivering optimal services and innovating new offerings. He emphasizes the critical role of talent management in fostering creative expression among young people and expanding avenues for innovation.

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Director/CEO of Cedarview Communications Limited, shares insights on the transformative impact of connectivity, communication, and cloud services on Africa's market dynamics. Despite Nigeria's ongoing foreign exchange challenges, Owoeye remains optimistic about the resilience of technology companies in delivering optimal services and innovating new offerings. He emphasizes the critical role of talent management in fostering creative expression among young people and expanding avenues for innovation.

Cedarview Communications Limited is known for innovative solutions, particularly in mobile app development and network

monitoring. How do you foresee the future of this technology evolving in Nigeria? And what role do you aim Cedarview to play in shaping the evolution of mobile application and mobile monitoring?

Cedarview focuses on three key areas. Number one is Connectivity. We specialize in the business of last mile connectivity solutions. We partner with major players to deliver connectivity to enterprises and other ISPs, leveraging innovative collaboration.

Second, we concentrate on Communication. We hold a value-added service license for SIP trunking (as opposed to C trunking), and provide Contact (Call) Center as a Service using Centrex solutions for small and medium enterprises. This includes toll-free and vanity numbers.

Third, we concentrate on Cloud services. We emphasize data sovereignty, ensuring that sensitive data is stored locally in Nigeria. By partnering with leading data centers in Lagos, Abuja, and Port Harcourt, we provide comprehensive cloud solutions akin to those offered by global platforms like Windows Azure, AWS, and Alibaba Cloud, but tailored for Nigeria. (Rephrased this paragraph) Our goal is to lead in connectivity, communications, and cloud services, offering innovative, cost-effective, and high-value solutions to our customers. We are committed to enhancing delivery, cost efficiency, and the perceived benefits of our services. As we grow, our aim is to make Cedarview an household brand for these focused areas using platforms like yours to spread the word.

Local talent is crucial for sustainable growth. What are your strategies at Cedarview for talent

challenging projects that allow young professionals to prove themselves, upskill, and advance their careers.

One example is a young software developer named Gboye, who started with us and has since moved on to work internally, inspiring others. Despite it took him a while to get into university, he was equipped with a laptop while in school and learned programming. He did an internship with us, before proceeding to work with Konga. Today, Gboye is living and working in Germany, inspiring other people through his journey to becoming. We've had many such success stories. We provide connectivity solutions to schools, prepare students for the workforce, and connect them with employers. Furthermore, we partner with NYSC to engage and mentor young talents, focusing on empowerment through expression, access, and guidance. We challenge, reward, and expose them

We focus on challenging the status quo by targeting Fintech, insurance, and SMEs rather than legacy players. We partner with cost-effective platforms from Eastern Europe to bring cost advantages to our solutions. By investing in local infrastructure, we avoid relying heavily on foreign exchange, making our services more accessible, bearing in mind that every Naira saved is a Naira earned.

Our goal is to provide comprehensive cloud solutions locally, offering everything from DevOps to disaster recovery. This local approach can significantly impact various industries, particularly Fintech, insurance, and education. We believe these technologies will drive growth and innovation boosting Nigeria's GDP and technology landscape.

How exactly do you envision the future of Cedarview in the next decade, 10 years from now?

In the next decade, we aim to be one of the top 10 ICT solution providers on the African continent and one of the top five within the next five years. We plan to expand our presence across West, East, South and North Africa. We believe African solutions should be developed by Africans, addressing unique needs with a communal approach. As I often say to my friends, in Africa, “good morning” is more than just a greeting. When we say it, we say it, we inquire about your well-being, your family, your work, and so much more. This reflects the communal way we live and the deep connections we value in our culture.

Hence, we are committed to solving African problems with African solutions, leveraging our cultural strengths and deep understanding of the local context.



THERE ARE THREE AREAS THAT WE ARE LOOKING AT, CONNECTIVITY, COMMUNICATIONS, AND CLOUD. IT'S OUR DESIRE TO SHAPE OUR USAGE OF INNOVATIVE SOLUTIONS IN TERMS OF DELIVERY, IN TERMS OF COSTING, IN TERMS OF VALUE AND PERCEPTION OF BENEFITS TO OUR CUSTOMERS.

management and skill-building initiatives to sustain your growth within the ecosystem?

Absolutely! As an American thinker once said, as long as there are youths, civilization will not move backward. Our approach to talent is to harness the energy and potential of young people. Talent is universal, but opportunities are not always equally distributed. At Cedarview, we provide mentorship and

to real-world opportunities, ensuring they are well-prepared for future challenges.

How do you envision the technologies you mentioned earlier transforming business operations in Nigeria? Are there specific industries where Cedarview sees significant potential for adoption in the next five years?

PPC's Ede highlights importance of system integration and compliance for staying competitive

In an exclusive interview with *IT Edge News*, Engr. Patrick Ede PhD, Director of Operations at PPC Limited, emphasizes the crucial role of system integration in driving business growth and innovation. He highlights the importance of companies continuously leveraging system integration to develop new services and solutions that enable them to stay ahead of the competition. Ede also stresses that compliance is a critical foundation for achieving any corporate objective, and companies must prioritize it to succeed in today's fast-paced business landscape.

How does PPC Limited ensure compliance with the regulatory frameworks governing the engineering and infrastructure sectors, particularly in ICT, Power, Healthcare, and Building Services?

I can tell you that we actually have a dedicated person whose job is to ensure compliance. He also manages our quality system. He has access to all the regulatory compliance across all the sectors we are operating whether in ICT, building infrastructure for example. For ICT, all the things as required by the NCC for instance comes under his purview. We ensure we meet whatever approval is needed from the NCC and whatever payment or professional certifications the law demands we undertake whether in the power or telecommunications sector must be met. The power sector regulations require a lot of these certifications and these certifications require regular renewal. Many are even annual. Your operational licenses may require annual license renewal while some may be done after specific years. We have a dedicated staff handling issues relating to regulations and the regulatory authority.

Is that to say Regulatory compliance is one of the key cornerstones in your daily operation at PPC?

Every sector has some regulatory



PPC
Systems Integrator

licensing and we are duty bound to comply as a responsible organisation. The person in charge has a database of all those compliance issues on his dashboard. He knows what is applicable within a year or in 10 years – that's a decade. Under the Council for the Regulation of Engineering in Nigeria (COREN), there are set rules requiring adherence. COREN has the stipulated requirement for staffing and qualifications of each engineering staff to have a corporate registration. COREN states the minimum number of staff that must be COREN-registered to be fit to do a particular kind of engineering job. In fact, a senior manager for special project manages all the regulatory compliance related issues.

How does PPC Limited integrate technological innovation into its engineering solutions across its diverse service areas and are there recent tech innovations implemented by PPC Limited?

Integration of technological innovation is at the core of all the solutions of the PPC whether engineering, healthcare, power, building and other sectors. We have a department and a general manager for systems engineering. In fact, the idea is that every system must embody a system integrator in order for you to be on top of your game. We have

a systems engineer who is a general manager and he has quite a lot of senior managers below him. Each of them is assigned a specific role. They have structure, structural engineers who are looking at the structure because if you are going to do some building, and it's a turnkey project that requires some structural issues, you must have that basis for integration that requires proficiency from the structural, mechanical, ICT, and other specialists. Then we have people in healthcare. So system engineering looks at innovation and looks at new things; looks at what applications are coming into focus. It looks at innovative ways and as a system integrator you have to be on top because you need to look at the new system to provide current and updated solutions to your customers. Technology changes, you need to provide up to date solutions. This applies across all the departments devoted to engineering solutions across all the verticals we are operating including the transport division. It may interest you to know that we worked on the Red Line and the Blue Line in Lagos in 2009. We were one of the people who worked on the telecoms aspect of those tracks. We stayed on that job from 2012 to 2017 reviewing some of those deployments. In ICT, for example, you're talking about AI, IoT and all that. We have people who are looking at what applications are evolving and what impact they could cause. What for example will AI do? What change is it going to bring? And then how are we going to key into that to provide solutions to the customer. What are some innovative things in the lift system that manages the lift in buildings, and other building services? What are the new processes to control the temperature of your building, and all that. People are working every day in our system engineering department to get the latest, the updated and then innovate on how to apply these solutions for our customers in business.

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Connecting
rural people

Impacting rural lives through digital inclusion

IXPN CEO Rudman highlights

power and transmission costs as barriers but remains optimistic



In an insightful conversation with *IT Edge News*, Muhammed Rudman, the pioneering CEO of Internet Exchange Point of Nigeria (IXPN), sheds light on the lingering challenges and promising prospects in the sector. As the helm of Nigeria's first and only neutral IXP, Rudman highlights the vital impact of power and transmission capacity costs on service quality. Despite these challenges, IXPN remains dedicated to its mission of promoting affordable Internet access nationwide. Rudman expresses optimism that increased investment in data centres will enhance capacity, drive data domestication, and ultimately lead to more affordable internet services for Nigerians.

As the leading internet exchange point (IXP) in Nigeria. What are some of the most significant connectivity challenges you are currently facing in ensuring seamless internet traffic exchange among ISPs, content providers and IP centric organisations?

The major challenge we have and we still have is the cost of transmission capacity between our locations as you know, for example, IXP right now is in eight different locations in Lagos and in different data centres. If we want to link up all the various exchanges, it remains a big challenge to connect to

our remote locations. IXP has presence in Abuja, Port Harcourt, Enugu, Kano, and recently in Gombe, so, the major challenge is the cost of transmission capacity, when we want to interconnect these exchanges towards the demystification of traffic.

Another thing like every other service provider, is of course, the cost of energy, cost of electricity. Because most of the data centres we are in are powered by generators, there is high cost of co-location, and then in locations where there is no data centre, we have to find ways to power those locations 24/7, and considering in some of those locations, you know, we don't generate much revenue. We are doing it as a subsidized service just to ensure that there is even growth of internet service providers in the country and to promote cheaper Internet access in every location in Nigeria that's why we're operating those sites. So the major challenge actually is the cost of the transmission capacity and cost of power.

With emerging trends like IPv6 and Web 3.0, how is IXPN preparing to adapt its infrastructure and services to accommodate these advancements and facilitate the transition to the next generation of the internet?

In terms of IP version six, from the point of view of IXPN (Internet Exchange Point), you will realise that

we are already on IP version six (IPv6); you can go to our website to confirm this and all our members that have IP version six appearing at the exchange point run with the IP version six IP addresses. So, that one is already done, you can confirm in terms of the web 3.0 that we already engaging with the future of the Internet. We try as much as possible to use the most recent application software that we can get our hands on, when it comes to the exchange point. For example, there are different software that we now use to automate peering at the exchange point. Initially, when someone connects to the exchange point, we have to do the configurations manually and all that. Now, all those things are a bit automated in such a way that there are just a few parameters we put, and the software does the actual implementation. So we are poised to embrace the future as a technology company every time, every now and then, that new things come on board and so we follow the trend and ensure that we are not left behind as we are constantly, you know, monitoring some of the largest exchange points in the world to see the general direction, so that we are not left behind.

How will you describe the Nigerian Internet space in terms of adoption - what are the worrying issues from a user and an operator's point of view that government needs to address to bring about fulfilment to the end users?

The providers, to some extent, need to have the right enabling environment for them to render the kind of service that the end users would really enjoy. There is need for infrastructure but the government should provide the enabling environment. If government does not do that, then it's difficult for the operators to provide the right quality of service that the end users deserve. For example, in the areas where insecurity is rampant, quality of service cannot be guaranteed. We had situations in Borno during the Boko Haram period where there were no telephone services because Boko Haram destroyed substantial part of

the mast. There was no telephone service and no electricity in Borno for months. Insecurity means that the mobile network operators cannot send their engineers to go and work on those sites and therefore they cannot provide better quality of service in those locations. Government has a critical role to play in ensuring that their citizens enjoy the best telecommunications services by ensuring a level playing ground for all the telecom providers. For example, all the telcos have been complaining about the high cost of energy now; they have been complaining about multiple taxation. Based on what the president of ALTON [Association of Licensed Telecoms Operators of Nigeria] said, around 47 different taxes apply to the telecom operators. These are serious challenges that must be addressed so customers can access good quality of service. Locations also matter. We are in Lagos, a major metropolitan area, people are in business here and operators would want to invest more here to ensure that there is return on investment. For example, 5G will practically enjoy higher patronage here where people can afford 5G phones. Because it a new technology and will not attract such patronage in rural areas due to its higher cost. Telcos are complaining because the cost of power input to running the network has jumped. All the inputs that go into generating telecom services have increased. But the regulators have not allowed the operators to increase their prices in commensurate with the increase of prices of things and inflation. Therefore the quality of service that you expect to get, you might not get it because additional investments are not coming into the country. As long as operators are not getting benefits in running their businesses things will stall in a way that impact on quality of service. They are for profit organisations and not NGOs.

Give us insight on the trends that will shape the internet space in Nigeria in the next five years and also share your comment on how to manage undersea cable cuts. MainOne recorded outages months back because of cable cut and today, Kenya, Uganda or Tanzania are experiencing internet blackout because there is an undersea cable cut. What can be done to keep service

going when such issues occur?

It's for governments of all the countries that have different landing stations to ensure that there is handshake across networks; there is collaboration between the major submarine cable operators, even though they are competitors. For example, there is need for a serious collaboration between Glo and MainOne and all the rest that are here in Nigeria. When MainOne fails for example, Glo can offer quick assistance in terms of capacity. That actually happened when MainOne had issues to keep the connection going until its problem was solved. Collaboration ensured that some of the services were restored. Collaborating between the submarine cable operators will ensure that even if one or two should go down, they can now move to others and share capacity. The second one is to ensure that at least there is domestication of data. About 50% to 60% of the data that any country is using, to some extent if it's possible, should be domesticated. If all our banks, all our schools, all our government agencies are hosting all their information in Nigeria, when there is a major submarine cable that goes down it means that we should be able to do our online banking; we should be able to apply for support from government; we should be able to apply for taxes and all that because the information resides within Nigeria. That's why you don't hear about submarine cable failure in China or submarine cable failure in Germany because 90% of what the Germans are using is in Germany and 90% of what the Chinese are using in terms of Internet access is in China. Unless we achieve that same level and ensure that critical resources that we are using in Nigeria are domesticated then of course, the impact would be really limited. Diversification comes with a push for set up of data centres and we're happy in Nigeria that we have a lot of data centres coming in and a lot of investment in terms of data centres coming in. We hope that the major big players in the world that carry content will also be present in those data centres and that will reduce the dependence on the international submarine cables.

Peep into the future of internet in Nigeria in the next five years.

In my perspective, I see more data centre investment coming in. As we

speaking now, we have around 10 megawatts of data centre space. In the next few years, I think it will grow, maybe five times to 50 megawatts of data, because as of this year alone, there are some data centres that are upgrading and based on the upgrade an additional 10, 15 megawatts will be added. So I foresee a large investment in data centre space and if you have large investments that are in data centre space, it means that more content operators and more content providers will not be coming into the country. The Hyper scalars like the Googles, the Facebooks, the Microsoft will have significant data in Nigeria and if they have significant data in Nigeria, it means that we are domesticating our traffic and by domesticating our traffic, it means the cost of the internet in Nigeria will drop and that means that the affordability of the Internet will be there. More than 70% of Nigerian people will be online at a broadband speed. Based on the National Broadband Plan, broadband right now is around 45%. But in that five years, around 70% to 80% of the end users will be on high speed broadband Internet access. With that, it means that opportunities for people to learn will come in and they will take advantage of new technologies that are coming in like AI, Internet of Things and the rest. There will be greater application of AI, IoT in agriculture, in industries, and in educational sector among others.

“ [We must] ensure that there is domestication of data. About 50% to 60% of the data that any country is using should be domesticated....That's why you don't hear about submarine cable failure in China or in Germany because 90% of what the Germans are using is in Germany and 90% of what the Chinese are using in terms of Internet access is in China. ”

SATH Chairman Collins Onuegbu

offers insights on navigating the evolution of Nigeria's software industry



Collins Onuegbu, Chairman of Signal Alliance Technology Holdings (SATH), shares with *IT Edge News* the journey of local software development in Nigeria over the past 30 years. He reflects on the various phases of growth, noting periods of both boom and bust. Onuegbu highlights that while there have been successful local software ventures, they have often struggled to reach their full potential due to the challenging Nigerian business environment. He emphasizes that the Nigerian IT market's growth is intrinsically linked to the country's GDP, which has halved over the past decade, impacting business opportunities, consumption, and production. Onuegbu also discusses the increasing prevalence of AI products and underscores the need for a national conversation around their safety and ethical implications. In his interview, Onuegbu remains optimistic, describing the sector as a work in progress with significant potential for future development.

As the Chairman of Signal Alliance Technology Holdings (SATH), what do you see as the primary challenges facing software development in Nigeria, and how is your company

addressing these challenges to ensure continued innovation and growth?

It's going to be three years by the end of June that I have been chairman while the Signal Alliance has been in existence for 27, 28 years. I think our business has evolved just as technology has evolved over this period. We started as a basic networking and infrastructure company and evolved to what we do now, which is mostly around software. But as a Holding Company, we have a portfolio of companies that are specialized in different areas. We have a cloud company, we're an IT consulting company. We have a few portfolio companies that have software development as their primary focus so we're a fully integrated technology holding company. As for your question around software development, I think that over a period of time, a long period of time, Nigeria has been a net consumer of package technology software that comes into the country and we have been involved in this. But developing local software has evolved in different phases over the past 30 years. Sometimes there has been a boom, sometimes there has been a burst. I remember there was a time when some of the local banks here used local

banking software as their core banking software and then consolidation happened and most of these companies lost out and some of them could not scale beyond Nigeria. There are other areas where local companies have invested and built software; and some have been successful, perhaps not as successful as they should be. But again, I think that part of it reflects some of the challenges that come with operating in an environment like ours. So I would say the sector is work in progress.

We have a company today that's a leading provider for a particular space in the healthcare industry. But because of the overall size of the healthcare industry, and the technology for the healthcare industry, it limits their capacity to scale. I think part of the challenge that exists is that we cannot go beyond the size of the market or the potential size of the market. The Nigerian IT market has not really scaled and you can tie it to the growth in our GDP. For instance, our national GDP has halved in the past 10 years. We came from basically about half of where we were, maybe in 2015, and that reflects in the capacity for the opportunity that exists for certain kinds of businesses because that fall in GDP is related to consumption, to production and it's related to business, so everybody feels the pinch, but we will continue investing in development and hoping that our economic turns sometime in the future, and that our investments will bear fruit.

With businesses adapting to new technologies, including AI, the big issue is now cybersecurity.

Cybersecurity threats are a significant concern for businesses worldwide. How does SATH approach cybersecurity, and what measures are in place to protect your clients' data and systems from cyber threats?

As I said before, we're one of the early adopters or providers of cloud for corporate organisations and security is actually one of the reasons why some people move to the cloud. But every generation of technology always comes with its own threats. Remember 30

years ago, the biggest threat to technology was the viruses that used to infect systems. People build antivirus systems and make sure to protect people from their system being messed up from viruses to phishing, to malware. There has always been cyber threat, so long as tech has been in existence. More and more as we move to the cloud, and systems get hacked or get more vulnerable to breaches and with the internet, it is becoming easier to spread the threats. Because of that, a lot of investment has gone into securing technology infrastructure and technology services. Now, there are two layers of that, one is that the major global providers of technology, like Microsoft or Google and Amazon have to protect what is worthy of provisioning to the public so they have to provide their own cybersecurity protection for their own devices, for their own services. Then there are independent providers of security who build to ensure they secure the rest of the world whether it is securing the internet, securing access to internal or securing things for corporations who are using the internet or technology platforms to deliver services to the public. That gives you the layers of the technology we are having that provides cybersecurity services to organisations. As a system integrator, we are involved at all these layers to show that we secure our customers - whether we provision it in partnership with the companies we're delivering their products like at Microsoft, or deliberately to corporations that need to secure their systems and infrastructure against threat. So we have a cybersecurity service that serves a lot of customers in Nigeria. As the technology landscape evolves, and the cybersecurity threats evolve, we keep building teams that can ensure that we secure customers, but again, it is taken for granted today, there will always be cybersecurity challenges, it's not going to go away. Just as in the physical world where the threat of security never goes away so is the same thing with cybersecurity. As a technology company, we have to be ready for that. We always have to make sure that any service we deliver to customers is secured and they can use it without being unduly exposed to threat. We also provide advisory services for customers because threat in physical space is the same as in the cybersecurity space where about 80% of security

threats in organisations are internal. So sometimes it's not just the technology, but the human factor that creates these threats or allow the threats to manifest. It's also important for us to make sure that our customers understand the implications, they are trained to use this system, don't leave any gaps that allow you to come in and then get into the system to commit crime or create chaos in the system. That human element is always important, and very, very important to making sure that any environment is secure.

Tell us about the SATH Foundation. You are hosting an AI ethics and safety roundtable. What is this roundtable all about?

The SATH foundation is our effort to give back and to advocate for safe use of technology. We want to give back to the industry that we've been a part of for more than 20 years and we thought it would be good for us to start at this point when we're entering that phase of technology adoption. We decided to advocate for safe use of AI. Look at every generation of technology. There's always been issues around safety. If you think about the internet, the internet changed the world and the Internet spun up things like Facebook, social media, Google, and each of those things has had ethical issues, safety issues. As you are aware, today we're battling with the consequences of too much use of social media for instance.

When you have full blown AI products



“DEVELOPING LOCAL SOFTWARE HAS EVOLVED IN DIFFERENT PHASES OVER THE PAST 30 YEARS. SOMETIMES THERE HAS BEEN A BOOM, SOMETIMES THERE HAS BEEN A BURST. THERE ARE OTHER AREAS WHERE LOCAL COMPANIES HAVE INVESTED AND BUILT SOFTWARE; AND SOME HAVE BEEN SUCCESSFUL, PERHAPS NOT AS SUCCESSFUL AS THEY SHOULD BE. BUT THAT PART OF IT REFLECTS SOME OF THE CHALLENGES THAT COME WITH OPERATING IN AN ENVIRONMENT LIKE OURS. THE SECTOR IS WORK IN PROGRESS.”

that are pervasive and available to everybody, we just thought that as early as possible, we should have a conversation around how to make sure that we are conscious of these safety and ethical issues. Whether it's from the pope, from presidents or from governments. I think everybody is aware that because of what people fear about the possibilities of AI, everybody's conscious of the fact that there could be ethical issues, there could be safety issues. I thought that this conversation will help us kind of atomize those issues, look at them as different practitioners, or institutions or even government and ask ourselves, how ready are we to make sure that we don't get into trouble adopting these technologies. There is nothing bad in AI, it is an evolution that has been there for a long time. It didn't start today, most people today are using AI products, whether you know it or you don't know it. Just as it is important for us to take this leap, it is equally important that we're aware that there are consequences. We need to make sure that we talk enough about this and ensure the use of AI does not disobey our moral, religious, schools or societal codes or even government codes of practice. So we want to have this conversation. We are bringing people who want to represent different spheres of life. I am hoping that we can have an initial conversation, and then take it from there and make sure that we're aware that we should adopt as fast as possible. But we should also be aware of any consequences to us as human beings, and make sure that we don't run into trouble. So yeah, we want to have this conversation early next month. It is a conversion, not a seminar, not a workshop. It is people talking to people, and discussing how we should be aware of some of the dangers that are possible as technology evolves. We are hoping that by having that conversation, we can catalyze an awareness in people to start thinking and talking about it whether in our educational industry, the media or government or corporate sector. An awareness that is also not driven by fear. We cannot have people who say we're not going to adopt AI because it is dangerous or is going to create this problem. I think that people should adopt AI, knowing the dangers ahead, and then making sure that they are taking the measures so it doesn't become a problem for them.



Redefining the Future of Connectivity

A DIGITAL INFRASTRUCTURE COMPANY

Backbone Connectivity Network offers a range of customised and personalised digital service offerings to Corporates, MNOs, Ministries, Departments and Agencies of Government (MDAs), Small and Medium-Sized Enterprises (SMEs), and home users.

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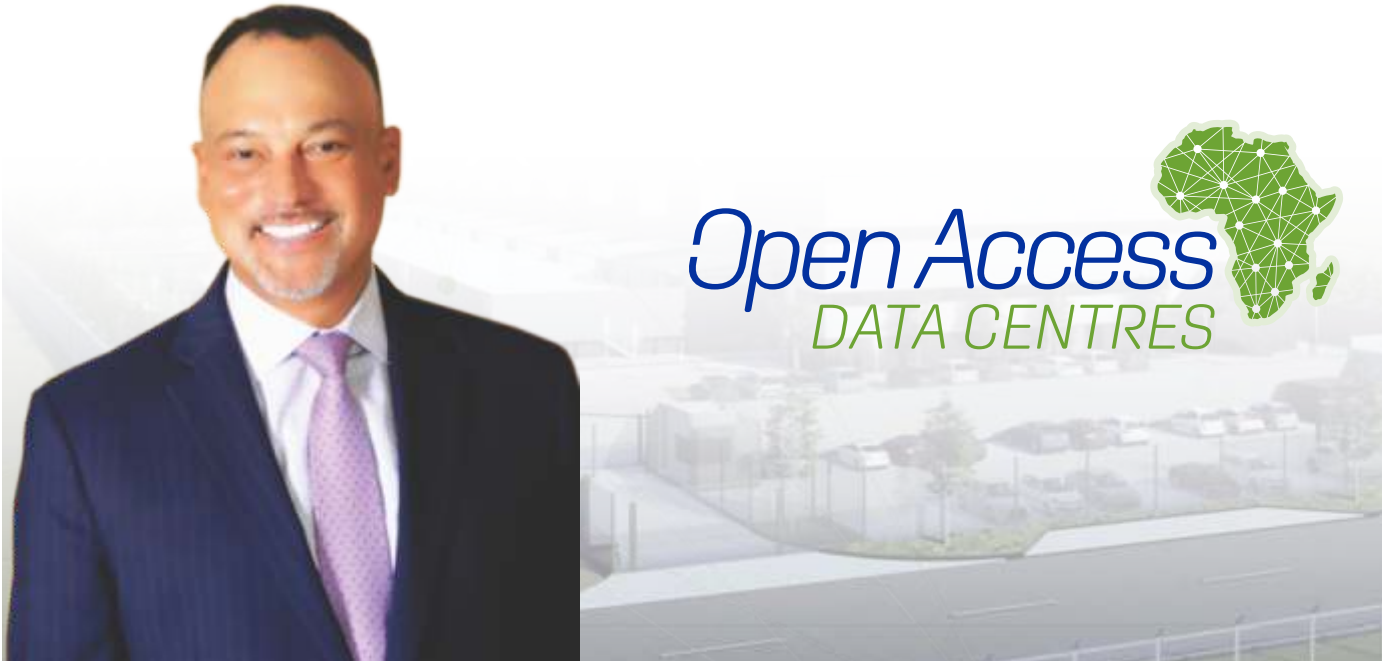
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Ayotunde Coker on WIOCC's unique role in driving Africa's digital economy and future of AI in infrastructure



Dr. Ayotunde Coker, CEO of Open Access Data Centres (OADC), shares with *IT Edge News* how WIOCC's open interconnectivity is poised to drive the digital economy by introducing innovative market propositions unique to Africa and the world. He emphasizes the importance of fostering a talent-building culture within countries and corporate entities to bridge skill gaps. Dr. Coker also highlights the positive impact of AI on critical infrastructure project planning, including the development and maintenance of data centres.

How is OADC Nigeria leveraging technological innovation within its data centres to meet the evolving needs of clients and drive industry advancement in Nigeria? Technological innovation is at the heart of our operation. But also, broadband adoption is very important because that's where you need the penetration to get the adoption. But if you don't have the adoption you don't get the economic

benefits. Actually, the things that drive the broadband sits in data centers and data centers need power to operate and they have to operate with the right level of availability to have the right kind of reliability and additional infrastructure. Your question focused on OADC Nigeria with facility in Lekki near Jakande by the seas. It's a top engineering facility. Critically, it is part of the landing point for the Google Equiano Cable for which WIOCC Group, the parent company of Open Access Data Centres (OADC), is one of the consortium partners. WIOCC Group has two parts to it, the connectivity business and the data center business. Connectivity business has been in place across Africa, over the last 15 years and has been growing. The OADC data center business was set up five years ago, I joined about two years ago. One thing that's unique is that we are able to bring open access wholesale connectivity together with our data center proposition to build this converged infrastructure. So, you have open connectivity and

open networks. Now, WIOCC has a point of presence in every single main data center in the country that also connects all of the cable landing stations on the coast of Lagos and as they appear everywhere else in the country, and has metro network across Lagos and we're building our national digital infrastructure. So OADC is a hub for interconnection. The WIOCC's open interconnectivity will enable the digital economy and that's an innovation of propositions that we have brought into the market which is actually very unique in Africa, and quite unique in the world. The other thing that we then saw with the last cable cut on the West African coast is that OADC is actually the most network resilient data center in the region. Nigeria's internet actually was running on OADC pretty much, because we have capacity on Equiano. So when they had the cable cut, we had to provide a significant amount of restoration and the most amount of restoration actually. It became quite clear that the network connectivity



THE WIOCC'S OPEN INTERCONNECTIVITY WILL ENABLE THE DIGITAL ECONOMY AND THAT'S AN INNOVATION OF PROPOSITIONS THAT WE HAVE BROUGHT INTO THE MARKET WHICH IS ACTUALLY VERY UNIQUE IN AFRICA, AND QUITE UNIQUE IN THE WORLD.

and resiliency of the OADC facility in Lagos is huge and significant indeed. So that is from the aspect of innovation and the other one, the reality of how resilient it is. Now in driving industry advancement in Nigeria, we've built a site that is capable of hosting hyperscale companies. We have key global players as clients in the space of content, connectivity and cloud. We've done our phase one and now we're commencing on our phase two, which is a 24 megawatts build out, that hyperscale design is engineered to bring in all of the cloud providers with a comprehensive connectivity and interconnect capability that we have. This actually will significantly drive industry advancement by bringing significant global data into the region, and enabling broadband penetration, that broadband

adoption in a very network resilient environment. Do you see what I mean? Once again, we are involved with changing the game and that's what we have done. We are a key, significant digital infrastructure player across the continent.

How does OADC Nigeria contribute to bridging the skills gap in the Nigerian ICT industry?

You see the skills gap in question is a long term strategic play, and has a lot of dimensions to it. People talk about *Japa*, and it's a fact of life. When you have strong people with talent in global demand, they will leave and you can't stop them leaving and shouldn't. But you do everything to make them stay. We always make sure we're a great place to work and that's why we invest in our talent, world class capacity building and training and everything. We also recognize they have global skills base, so we consider them within that context. I think in the ICT industry, we need to think about people in a global context or global skills base, we don't have a choice. But around the world people are leaving and moving. It's not just a Nigerian thing. People are moving from country to country across Europe; Nigeria to Europe; Europe to the US; US to Canada; it's just what happens. So what we need to do is to make sure that we secure the core of the talent we have and we build the talent to core standards. What we do is to make sure that we have a talent building culture - that means we can grow people. So to that end, we really engage with the talent pool for want of a better term, from NYSC level into entry level. And a program is underway that allows us to bring that talent in, grow them, some will be retained to do what we need, some will not meet the ultimate cutoff points, after a year or so but still at a point where it fits into the rest of the economy. What I realized actually is that the raw material of people and talent that we have is really very strong.

How much of AI is being

integrated into your operations?

In terms of AI, we are increasingly using a new set of technologies to run the data center, to diagnose and to make sure that we better spot issues as they arise or as they might come up. We address them ahead of them coming up in that way, we run the data center much more efficiently, get a higher power usage effectiveness. You know we run very large projects. If you're building a one two, three megawatts data center, you're spending tens of millions of dollars and you have to make sure that you're efficient in your delivery on time and in respect of quality. The new tools coming out now really put AI into critical infrastructure project planning so that's one aspect of it in terms of how we use AI. The hyperscale infrastructure we're building here is AI ready. The quality of technology of cooling is so sophisticated that we can support very high density racks that are required for AI per square meter footprint of the facility. AI is going to be a significant fabric of economic development in Africa. In my view, its impact on medicine, on education, on general efficiencies will be much. With the facilities we have here, we're able to also provide a local AI compute to meet those demands and we will see these changes over the next two to three years, progressively.

Where do you see OADC Nigeria in the next five years?

In the next five years, I see us having completed on a good trajectory to the 24 megawatt facility in Lekki. We will have other data centers in other locations across Nigeria, at least another three, to bring the edge into the country that enables more efficient delivery of data. In conjunction with my colleagues in the connectivity business, making sure that we drive much more comprehensive connectivity into our national long distance networks across Nigeria, that's the trajectory I see. Bringing in interconnected world class ecosystems, vibrant internet exchanges to drive efficiency in the whole delivery of converge digital services.

ATCON President Tony Emoekpere

government action to boost Nigerian telecoms sector



Tony Izuagbe Emoekpere, the Chief Executive Officer of Anchor Telecoms and President of the Association of Telecommunications Companies of Nigeria (ATCON), shares with *IT Edge News* the challenges and opportunities in Nigeria's telecoms sector. Despite its vibrancy, the sector faces significant headwinds. Emoekpere emphasizes the need for government intervention to address the infrastructure deficit and provide indigenous telecom enterprises with access to low-interest funding to foster growth and sustainability in the industry.

How does ATCON assess the current state of the telecom industry in Nigeria concerning issues like multiple taxation, exorbitant right of way charges, frequent cut of terrestrial fiber cables, undersea cable cuts and how regulation impact on the entire ecosystem?

Okay, first, there is no doubt that the industry is facing a lot of challenges and the sad thing is that most of these are issues that have been lingering for the past couple of years, especially when you mentioned multiple taxation and the likes. But I'll first want to address the issue of the submarine Fibre cut, it was actually the first major issue. So it's not like it's a routine or it's a normal occurrence. Nigeria was even fortunate to have multiple connectivity to the country so we didn't have as much

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Access to low interest funding will allow small players to always deploy services at will. Funding and infrastructure are where government still needs to continue to invest in to support local players

adverse effects as had happened to other countries on the continent. Now, as regards the other challenges you mentioned: fiber cuts, multiple taxation, we still see that these are challenges bordering on policy implementation. I think we're encouraged that the current government is looking into all these issues and beginning to proffer solutions to them. We hope it will be fast enough, but as per the status of the industry, it's been seriously challenging and has a lot of headwinds facing it.

ATCON had an event recently that focused on how fiber undersea and terrestrial fiber cuts. What was the objective for that gathering?

The breakfast meeting is a new initiative to encourage dialogues among different agencies, key decision makers on issues bothering on our industry. For the first

events, we chose this subject of metro terrestrial and submarine fiber cuts, how to address them. We were able to get key stakeholders from the government side to begin to have a critical dialogue on addressing very important issues in the telecom ecosystem. We had a representatives from the NCC and other agencies. The outcome of it was a communique, which we're sharing with all the stakeholders. We discussed and proffered solutions for the industry in terms of major issues identified during the course of the dialogue. We identified that majorly road construction works contributes almost 80% to potential fiber cuts meaning that there is need for engagement between the construction companies and the regulator, federal and state ministries to have preemptive steps taken while these road constructions are being undertaken. Why don't we, for example, make it a standard whereby building of ducts are actually factored into the cost of deploying these roads rather than people reinstalling them.

As the CEO of Anchor Telecoms, what are the most significant challenges you are currently facing in the telecom sector and how do these impact on Anchor's capacity to provide quality services to its client?

I will start by introducing Anchor Telecoms. In summary, we are actually an infrastructure solution provider. Anchor provides services that are required to plan, install, construct and maintain communication infrastructure. That is our primary business. We do all the engineering work that is required to provide these services and solutions so basically, almost every player in the sector is our client. We provide services within the entire spectrum of the industry so we are at an advantage point to serve different clients including the OEMs not just in Nigeria, but also in Ghana, Cameroon, and South Africa. We have carried out projects in Benin Republic, Côte d'Ivoire, Liberia, Equatorial Guinea, and yeah, I think that's it.

In terms of the challenges that affect us. Human capital is one of the key issues. How do we grow and retain talent. In

the last couple of years, we've had a lot of brain drain and we lost a lot of our key personnel to the 'Japa' syndrome so to speak. Another key area that affects our ability to operate is that most of the costs of doing businesses are increasingly going high. Some of the things that we're required to deploy to provide the services are actually being priced out of our hands. For example, the equipment we need to import and these are extremely expensive tools. We need to utilize them and by the time you try to amortize them over the course of the projects we execute, it becomes a difficult challenge to do. The quality of the deployments is also a big issue. This stems from the quality of the tools and quality of the personnel. But if you don't deploy the infrastructure in a standard manner, it will also be prone to fiber cuts. The trenches for the fiber is supposed to be dealt with at a particular depth and there are tools that are required to do that. We don't really have them in the country. You cannot dig manually in some legislatures. You have to use the standard equipment to do those digging. We don't have them in the country. In Ghana, you cannot manually dig, it's almost like a rule there. You have to use equipment to do those digging if you want to dig across roads. If you want to run a cable across the road, you're not allowed to do it manually. You must use the standard equipment. A horizontal directional drilling equipment is a standard in Ghana. But we don't have those kinds of rules here perhaps because it's difficult to enforce those kinds of rules as it's extremely expensive to import those kind of equipment. These are the challenges we're facing and we will continue to strive to address them.

How can governments support indigenous private telecom businesses like yours - what are the policies or initiatives to best foster growth for indigenous telecom firms?

One of the things I think will be very key is enforcing local content policies in our sector. If you look at the oil and gas sector, they have gone extremely far in ensuring that there's indigenisation of a lot of oil services to local companies. The same approach should be done in our own sector as well. There is no reason why any in-country service should not be given to the de facto local companies. You should only outsource to foreign companies when you cannot find a local company to provide those in-country services. Policies like these

will help because once you support local businesses and the volume of business increases, there'll be incentive to invest. The reason why sometimes some local companies are a bit reluctant to invest in acquiring some of this equipment is because if you invest in a tool, for example, and then the volume of business you have is not there for you to amortize, it discourages you from procuring the tool in the first place. In-country services should strictly be local; that is local by default. Foreign players should be an option if you can't get a local company to provide the service or you have exhausted all local companies. Implementation of local content policy, ensuring that it works is key. I always draw again from our experience in Ghana because we also operate in Ghana. There are some government contracts in Ghana, if you don't have a Ghanaian on your board, or you are not a Ghanaian company, you are totally excluded from those contracts. Those that want the government contracts, in the telecom space, either have Ghanaians on their board, or it's a Ghanaian company. Any other company is excluded from those kinds of contracts. These are things that we can also do here in Nigeria to make sure that the industry is vibrant for local players.

Are you worried that government is not supporting indigenous entrepreneurs enough so much so that market advances made by foreign companies like Elon Musk' Starlink may wipe off local ISPs?

I didn't mention also that at Anchor Telecoms, we actually have a subsidiary company called MangoNet, which is actually fiber to the home and wireless internet service provider. The threat of Starlink affects us directly. We also have a new venture we're going to launch which we call Anchor Telecom Infrastructure Solutions where we're providing smart solutions to the industry.

Now, in terms of Starlink, there are two issues here. One, technology is always continuously evolving so we cannot stem the tide of technology. How then do we approach the industry?

I remember having a focused group discussion with my ISP team, and severally, they have said that actually Starlink is not a total threat to us, in the sense that the services they provide, if you look at where their footprints are,

where the subscribers are really based, they're actually more in the rural and semi-rural areas. But in terms of the core city, where our price points are, we are actually far better than Starlink. We have had situations where we have clients who had actually initially gone to Starlink and after a while came back to our service. But the challenge that local players have is actually just funding, which is where we think that the government can come in. Don't forget like you rightly mentioned, Starlink is more or less an OTT ISP, if you look at it in the scheme of things, and because they don't have any major footprints here in Nigeria, they are working basically remotely. We don't even know whether the government is even able to collect enough taxes from them. I agree that it's something that the government needs to look at. But for local players, it is funding, I know that there is an Infrastructure Fund, if local players can access those funds, that'd be very helpful. We need single digit interest rate funds, and then if there are criteria that players need to meet, I'm sure we can all meet those criteria and then seek those funding so we can deploy effectively in areas where we can compete competitively with these providers. Access to low interest funding will allow small players to always deploy services at will. Funding and infrastructure are where government still needs to continue to invest in to support local players. Even in the UK, the UK Government just recently rolled out fiber optic cables to support the 5G deployments there and that is supposed to be a country that's already well advanced. Once you give the local companies access to adequate funding, based on criteria that has been set and can be met, I think we will give them a run for their money. Don't forget, Starlink is not only Nigeria, it's across the world and you cannot inhibit technology from coming in. I think the only issue a lot of people have is that when you compare the criteria with which they use to enter into the country. I mean, if you have an ordinary ISP license, and you can provide that kind of blanket nationwide service, it's a bit skewed. So I think the regulator needs to look at that, why should somebody have an ordinary ISP license and be able to provide that kind of nationwide service and then, doesn't have local presence and things of that nature, whereas your local players who are paying your taxes, you know, having to compete with such a large entity.

FiberOne CEO Lanre Ore

on tackling fiber challenges and how government can boost Nigeria's infrastructure



In an exclusive interview with *IT Edge News*, Lanre Ore, CEO of FiberOne Broadband, delves into the significant challenges of providing fiber infrastructure in Nigeria. He emphasizes how the government can play a crucial role in achieving the national goal of connectivity for every Nigerian. According to Ore, the government can foster innovation, competition, and investment in the telecommunications sector, thereby driving economic growth and bridging the digital divide in Nigeria. Key measures include encouraging infrastructure sharing, establishing a robust regulatory framework, providing tax incentives and grants, facilitating access to financing, supporting local content and talent development, fostering innovation and entrepreneurship, and implementing advanced

network policies that promote fiber optic deployment.

What regulatory challenges do you currently face and how do these impact your operations and growth prospects?

As a leading broadband telecom services provider in Nigeria, we face significant regulatory challenges that impact our operations and growth. The most prominent challenges include multiple taxation and constant regulatory changes, which directly affect our business and indirectly impact our customers.

Multiple Taxation: We are obligated to pay the annual operating levy to the Nigerian Communications Commission (NCC) and other fees for signage, advertisement, changes in service prices, and plan modifications. Additionally, we must pay fees to various federal and state agencies such

as the Federal Inland Revenue Service (FIRS), Lagos State Internal Revenue Service (LIRS), Federal Roads Maintenance Agency (FERMA), and Lagos State Infrastructure Maintenance and Regulatory Agency (LASIMRA). These multiple taxations significantly impact our revenue and operational costs, making it challenging to meet user expectations. This also discourages new business growth and limits internet service expansion, especially in remote areas.

How does FiberOne prioritize customer satisfaction?

At FiberOne, innovation is at the core of our operations. We are pioneers in customer experience within Nigeria's challenging economic and service delivery landscape. Over the past year, we have embarked on a transformative digital journey, enhancing our services with cutting-edge solutions such as our FOB APP

V2.0. This app includes features like the Lost Days counter, which compensates customers for service interruptions, and PCC technology for last-mile installations, minimizing link disruptions. During recent submarine cable disruptions, our proactive approach to capacity and upgrades allowed us to minimize the impact on our customers. Despite operational challenges like road construction, we remain dedicated to improving customer experience through continuous innovation and exploring new solutions.

How do you believe the government could support companies like FiberOne to overcome challenges and thrive in the Nigerian market?

To better support companies like FiberOne Broadband, the government should adopt a multifaceted approach that addresses the complexities of Nigeria's telecommunications landscape. This includes:

- Encouraging Infrastructure Sharing: Reducing costs and improving network quality through collaboration.
- Robust Regulatory Framework: Promoting competition, innovation, and consumer protection.
- Investing in Digital Literacy: Promoting broadband service adoption, particularly in underserved areas.
- Providing Tax Incentives and Grants: Supporting research and development to keep companies competitive.
- Facilitating Access to Financing: Helping smaller and local players expand and upgrade networks.
- Promoting Public-Private Partnerships: Driving infrastructure development and service quality improvement.
- Supporting Local Content and Talent Development: Fostering innovation and entrepreneurship.
- Implementing Advanced Network Policies: Promoting fiber optic deployment and

other infrastructures to support broadband growth.

By adopting this comprehensive and forward-thinking approach, the government can foster innovation, competition, and investment in the telecommunications sector, driving economic growth and bridging the digital divide in Nigeria.

Why should operators deem cybersecurity awareness as essential for business sustainability?

Operators must prioritize cybersecurity awareness to ensure business sustainability. This involves protecting customer data to maintain trust and comply with legal obligations, preventing financial losses from cyberattacks, adhering to regulatory requirements, preserving business reputation, and demonstrating strong cybersecurity practices as a competitive advantage. At FiberOne Broadband, we mitigate cybersecurity risks through:

- Employee Training and Awareness: Regular training sessions and workshops on cybersecurity threats and best practices.
- Advanced Security Technologies: Using firewalls, IDS/IPS, and antivirus software to protect our network.
- Proactive Vulnerability Management: Identifying and patching vulnerabilities to prevent breaches.
- Comprehensive Incident Response: Quick and effective response to cyber incidents with defined roles and procedures.
- Adherence to Best Practices and Regulations: Regularly updating policies and procedures to remain compliant with standards.

By implementing these measures, we ensure robust protection against cybersecurity threats, maintaining customer trust and business sustainability.

How do you envisage growth for FiberOne in the next five years with the adoption of 5G?

The next five years will be

transformative for FiberOne Broadband as we leverage Fiber technology to revolutionize connectivity. Our fiber-optic network will provide the necessary speed, reliability, and security. We are investing in technologies like edge computing, artificial intelligence, and IoT to deliver unprecedented services.

The adoption of Fiber will spur innovation, allowing us to expand network coverage and enhance high-speed connectivity. Our customers will benefit from seamless, ultra-low latency experiences, whether streaming, gaming, or working remotely. We aim to lead smart city initiatives, improving urban infrastructure for safer, more efficient, and sustainable living.

The next five years will see significant growth and transformation for FiberOne Broadband as we continue to push the boundaries of high-speed connectivity and innovative services. We are ready to lead this change and invite our customers, partners, and competitors to join us on this exciting journey.



GOVERNMENT CAN FOSTER INVESTMENT IN THE TELECOMMUNICATIONS SECTOR AND BRIDGE THE DIGITAL DIVIDE [BY] ROBUST REGULATORY FRAMEWORK; TAX INCENTIVES AND FACILITATING ACCESS TO FINANCING; SUPPORTING LOCAL CONTENT AND TALENT DEVELOPMENT."



BCN CEO Ibrahim Dikko

on the power of partnerships in Nigeria's digital growth



In this chat with *IT Edge News*, Ibrahim Dikko, Managing Director and CEO of Backbone Connectivity Network (BCN), emphasized the importance of a collaborative ecosystem in the telecommunications industry. Dikko highlighted that no company can thrive in isolation and that partnerships are essential for delivering effective and efficient services to clients. He outlined how BCN's core services underpin Nigeria's digital ambitions, significantly contributing to the nation's GDP and facilitating a range of digital services across various sectors.

As the CEO of Backbone Connectivity Network (BCN), how do you perceive the impact of broadband services in Nigeria's digital economy and what role does the BCN play in enhancing connectivity across the country, particularly in the north?

Digital economy is underpinned by broadband infrastructure, right. And this is everywhere. When they say the

Fourth Industrial Revolution, it is underpinned by broadband internet infrastructure so you can't have a digital economy without the underlying broadband infrastructure. BCN has been creating infrastructure for the past 20 years. We have been visionary in our aspirations to have this critical infrastructure all over Nigeria and that's what we've been doing for the last twenty years. We see ourselves as a key enabler of Nigeria's digital economy. We're the largest operator in the north. We have services and deployed infrastructure all over the north. We have also deployed infrastructure in the south. We see us growing to be a national company that supports Nigeria's aspiration towards moving into a digital economy, right and we are well positioned to play a strong role. We are proud of the fact that our core infrastructure and our core services constitute some of the pillars that drive Nigeria's digital aspirations in a way that has contributed to increase its GDP. When you deploy support digital infrastructure, the GDP of that area increases. This shows the importance in

creating wealth for the society, enabling various digital services in health, education, agriculture. So, we're part of the journey to improve the wellbeing and the wealth of our country and we look forward to the better part in the future.

Nigeria faces challenges such as Right of Way issues, frequent cases of fiber cuts and infrastructure gaps. How does BCN navigate these challenges to ensure the efficient delivery of network infrastructure services?

The issue of Right of Way (RoW) has been an issue we've been associated with in the rollout of broadband infrastructure for 20 years so we've got a considerable experience in both national and sub-national levels. Government graciously, at that time, passed the resolution of a national benchmark for RoW charge of N145.00 per linear metre of fibre. We worked with the government stakeholders, especially at the sub-national level, we met severally at national forum and also regional governors' forum, right, in order to advocate the acceptance and adoption by the sub-nationals of N145 per linear meter. I think that you know, those steps and that advocacy has encouraged a lot of states in Nigeria to either adopt the N145 per linear meter right or even something lower. In the north, we worked with a shareholder of ours, New Nigeria Development Company (NNDC), the investment arm of the Northern Governors Forum under the leadership of Senator Kashim Shettima, now the Vice President of Nigeria to secure the right of way for the whole of 19 northern states. BCN has worked extensively on the issues of right of way. Willful vandalisation of fiber cables undermine delivery of broadband infrastructure, right. I think that this is really driven by the lack of education by the people that vandalize copper cables. We have been working with a lot of stakeholders including the current Minister of Communications, Innovation and Digital Economy, Dr. 'Bosun Tijani to further advocate and get cables to be more secured. Tremendous progress has been done. The Challenge has been that when you

lay fiber, you know, we have had several incidents of damages as a result of construction works. To help mitigate some of these challenges, we have been advocating at the ministry, NCC and ATCON levels that a couple of things need to be done. Number one is that when they build some of this road infrastructure, they build ducts so as to help protect some of the telecoms infrastructure being laid in the future. Number two, is that we've also partnered with ATCON, the NCC and the Minister of Communications to sensitize the stakeholders across communities around the net effects of vandalizing this infrastructure. We are also working with the Office of the NSA to ensure that this infrastructure is deemed to be critical national asset so those people who willfully damage fiber can face criminal charges for some of these activities.

What is the BCN doing to address cybersecurity threats and protect its network infrastructure and clients' data?

Two things are at the heart of this: Trust, trust and trust and the way to get trust is to protect, rights? We have partners from Lithuania, NRD Cyber Security and also who are one of the world's foremost cybersecurity firms well known for cybersecurity solutions. There is also Sophos. Our partners not only deploy within the organisation but we also provide solutions for them to deploy to protect their own network. You are only as strong as your weakest link within the entire team, right. So first step is that we absolutely ensure we deploy the best of breed solutions right

across our systems to ensure that we are fully secure and we provide this best of breed solutions to our team.

Managed security services (MSS) and unified communication, are growing trends in the telecom industry. How

does BCM envision the future of MSS and unified communication in Nigeria?

We already appreciate in those areas for quite a while now that clients are not just about connectivity but also managing internal networks. So we go to clients and see how we can offer more than just connectivity including cloud, right. We are a partner of Microsoft Web to leverage this offering to the benefits of our clients. Cybersecurity solutions are largely cloud based. We are in the process of setting up our security operation and we also anticipate that in the very near future, right, we'll also create our own private cloud that will offer service to clients. As you know, a lot of enterprises are moving to the cloud. We're supporting them right now. We provide them with the competitive value propositions in terms of the kind of services and solutions that will support them in growing their businesses. This is an integral part and we've been on this now for the past five years so we are already an established market presence, and we see this as a future growth area for us.

They say collaboration and partnerships are essential for driving innovation and sustainability in the telecom sector. How does the BCN foster collaboration with government agencies, with industry stakeholders and international partners to improve infrastructure and good services?

BCN has always believed in a greater ecosystem in all our activities. Whether it is in the delivery of our services, or whether it is in advocacy or whether it's in partnering, to have solutions or

services that are relevant to both our corporate aspirations and even our national aspirations.

At the heart of it, is obviously collaboration and partnership. Right from our inception, we've always believed in collaboration and

partnerships. This can be seen in our networks. A lot of carriers, ISPs, content providers are on our network to deliver their services. We in turn, also use other partner networks to deliver our services. There's no company that is an island in the telco space. You have to do partnerships and collaborations in order to deliver effective and efficient services to your clients. In the same way, you know, some of the challenges that we've spoken about, if you want to advocate, you must partner with people to advocate. You must have those shared values, and shared vision. So, we're constantly in search of people who share our values, who share our vision for a digital future for the final frontier, and we'll collaborate with them to move the needle in a positive manner towards both our national and our corporate and also our societal aspirations. We think that one cannot emphasize enough the need for collaboration and partnership to build ecosystems whether it is just from a solution perspective, which is why we always search and get the best of breed solutions. Through those partnerships, we bring them whether they're local or international, we bring them into the market to support our people. We have such solutions that have been deployed not in Nigeria, but even across Africa, in agriculture, in education, in health and in financial inclusion. For us, these are core areas that not only impact society and lift up performance from a national economic aspiration but are critical to the growth and deployment of digital economy. So, we have brought best of breed solutions into these sectors and we're working with both national and sub-nationals and also enterprises to build the ecosystem and to deliver these solutions.

Where do you envision BCN to be in the next five years?

Our aspiration is to be the premier digital service provider in Nigeria. Having a national footprint also providing products and solutions that deliver compelling value to drive various clients and various verticals both in the public and private sectors, enterprises and even as a retailer to households. We have seen that Nigeria is at the cusp of transformation with the largest number of undersea cables landing in Africa. We are going to see a new boom in internet penetration and we are proud to be part of all of that journey, a real service-based economy.

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ICSL CEO Yemi Oshodi highlights power challenges and the future of ICT industry collaboration

In a recent interview with *IT Edge News*, Yemi Oshodi, CEO of Information Connectivity Solutions Limited (ICSL), discussed the critical challenges facing the ICT industry. He identified power issues as the most significant obstacle, affecting delivery times and increasing service costs. Oshodi emphasized the enduring market opportunities for both LEO and GEO satellite providers, noting that neither will eliminate the demand for fiber optics. Instead, the future of the industry lies in collaborative efforts to deliver hybrid services to end users. He also stressed the importance of capacity building to ensure a steady supply of qualified professionals, which is crucial for sustainable growth in the sector.

What are the most significant challenges ICSL faces in delivering broadband network infrastructure and connectivity solutions across Nigeria?

Power is the most challenging. Everything else is sort of normal business exigencies. The power situation is something that poses quite a bit of a challenge for us. When you go to certain parts of the country where there's adverse weather, there'll be you know, heavy rain, there'll be lightning, we can mitigate against all that. But when the power goes off, and then comes back with a surge, and it blows your equipment, you know, because sometimes you have surge protectors but if it damages a surge protector, then it's going to damage your equipment. I don't need to tell you that equipment nowadays is incredibly expensive. Even aside from the cost, network service to your customer is down. You have to rush back to the site to go fix it, you test the power at the site, and you'll see that the power is not clean and is fluctuating. You are now at a dilemma. Do I put another piece of equipment there and just let it blow within a week? Or do I call the customer and say, look, the power at your site is not good and I have to wait two days for them to fix their power and then I put my equipment back. You can see the challenges we face with power. Something that should be a three-hour job can take you three days, four days sometimes. So that, to me, is the biggest challenge. Everything else



you can resolve. For example, if the roads are bad, I have a four-wheel drive Toyota Hilux that can move my guys around. So that's not an issue. We hire local engineers in areas with issues of banditry so that is really not an issue. Our guys on site know the layout and how to navigate it. For example, I'm from Lagos. If I'm going to install in Ajegunle I know how to prepare myself. When it comes to personal safety. Yeah, we can sort of mitigate against that, if the area is hot, we can tell the client, look, the area is hot, we won't go this week, we'll go tomorrow or we'll go next week, you know, but that power, there's nothing you can do. You know whatever you're putting up there when something happens, your equipment gets damaged, it could take three, four days to replace the equipment.

With the emergence of low Earth orbit (LEO) constellations like Starlink and the anticipated widespread adoption of 5G, how do you see the future of Very Small Aperture Terminal (VSAT) technology in Nigeria? Will it continue to play a critical role, or do you foresee a shift towards these newer technologies?

You know, when the richest man in the world decides to compete against you, it doesn't really matter what he's selling, you've got a problem. Even if it's pure water he's selling. He's the richest man in the world. He can absorb mind-bending losses. I mean, if he loses five billion dollars it's not a big deal. He's worth maybe what? USD\$220? The entire market cap of Intelsat is not USD\$5 billion. So, when a guy like that shows up to compete against you, it's a problem. However, having said that, the GEOs and the LEOs, they will always have a place in this market. I want to take you back to maybe 10 years ago, when fiber was being rolled out throughout Nigeria, you know, everybody said the satellite was dead. People got rid of their hubs, virtually every operator in Nigeria got rid of their hubs, and then the naira weakened, and then you had, you know, the satellite guys were charging in dollars, and Nigerians couldn't pay. The whole thing was a mess. Now, we're saying what's the future for VSAT because the richest guy in the world is selling services here. He was selling in dollars, at first, but now he has changed to naira when he experienced his growth. As you can see,

Nigerians are basically looking for service. Wherever they get service, they will go. The point I'm trying to make is that, yes, constellation of LEO satellites are formidable competitors. Because the richest man in the world has come to compete against you, that's no ordinary competition. But hey, the second richest man in the world is about to compete against the richest man in the world so when elephants are fighting, I don't know who the grass is. Jeff Bezos, who's going to be rolling out Kuiper I think later this year. Elon Musk has rolled out Starlink. OneWeb [by Eutelsat] is also trying to roll out. So there's obviously something here. But having said that, we have actually tested the product. And there are some things Starlink cannot do and you still have to have GEO satellites for those functions. Also, there are still some software, I mean, a LEO is still going to give you latency of 100 or 150. There are still some software that can't tolerate LEOs as they need that latency to be way below a 100. There are software solutions that also don't work on GEOs because you know, the GEO latency is 550 to 700 milliseconds; that doesn't work for some software, and there will be certain things you want to do where you don't need the capacity that the LEO offers. We run on a GEO satellite here, it is a high throughput satellite. But our uptime is 99.95. Now, I don't know what the uptime on the LEOs is. But I will tell you that from what we have seen, they are also susceptible to weather. You know, they have weather issues. So if you're running something critical that doesn't need low latency, you're going to go with the GEO. I mean, yeah, the LEO works. But if you're on an offshore platform, and in adverse weather, you can shut down and wait until the weather clears, then fine, you can use the LEO. But if you're in a situation where you're in a remote area, and uptime is more important to you, because there's no way you're going to be going back and forth and you also have inclement weather, you got to go with the GEO. The point I'm making is that every product is still going to have its place.

The LEO is disruption at its best right now but over time, all the different products will find their space and they will all learn to coexist the same way VSAT has coexisted with Fibre. The same way Fibre has coexisted with radio, the same way machine to machine solutions are taking over and you know, in some locations, you are running internet or 4G networks, 4G LTE networks, all these technologies will have their own place. And you can

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use them as a conglomerate of solutions. You also have these new software defined boxes where you can plug everything into. For example, you get the software defined box, you plug in an APN link, you plug in a radio link, you plug in a LEO, you plug in a fiber link and you plug in a GEO, you will effectively guarantee yourself virtually 100% uptime, because the minute one goes down, it will just flip over to the next one. There are organisations like Amazon, Netflix, they can't afford downtime, there's no such thing as downtime in their business so they use multiple links.

Do you envision the interplay of collaboration and competition, shaping the satellite broadband sector?

You already have that because I believe OneWeb is sponsored by Eutelsat. The industry is already being defined by M&A, a lot of mergers and acquisitions so to a certain extent, you already have that collaboration, so to speak. But what you're going to see more of is guys like me, forcing the collaboration ourselves. And because I'm agnostic, right, I will use whatever means possible to satisfy my customer. So basically, the example I gave you, you know, we're in the middle of the bush, and my customer is there, he needs service, and he needs service

that is up 24/7 it cannot go down, I will offer him GEO, LEO and whatever else I can offer him that will keep him up through bad weather. So you're on an island in Bayelsa, and there is no fibre, no towers, there's nothing and my customer for some reason has a facility there and he needs let's say live CCTV at certain times of the day. Okay, we'll use the LEO because that has big capacity. But then if he's got like internet of things (IoT) type solutions, let's assume he has a very large farm and he's doing IoT type solutions, then you can mix that with a GEO. ISPs on the ground are basically doing that already. Now, will the larger players collaborate? I'm not really sure of the LEO guys right now. We're waiting to see what Kuiper does. Jeff Bezos is no slouch. This is not a guy that runs away from competition. Here is a guy that opened a bookstore when there were bookstores all over the place, and decided to sell books and became the richest man in the world in the process, going against the guy who woke up one day and decided he was going to take on Mercedes Benz, Volkswagen, Porsche, BMW, General Motors, and he took on all of them with his EV cars, and now he's the richest man in the world. These are two people that are not afraid to mix things up. In terms of collaboration, I think, the bigger players are going to need to collaborate at some point but basically the business models are different. The LEO guys have a business modelled to offer low-cost internet that is available anywhere in the world, which is not what the GEO guys are doing. It is like Elon Musk collaborating with Volkswagen or Porsche. He is not going to do it because one is a gasoline engine car while his own is electric. I don't see the collaboration happening. We are the ones that are going to go to customers and say hey you have a location over here that can do this. You know, we can use this product in this location. If I go to a customer like a large bank with 200 branches, for some reason, maybe the regulators tell him hey, look, you can't just do business in large cities like Lagos, Abuja and Port Harcourt you have to go to the smaller towns all over Nigeria, and there's no fiber, there's, you know, there's nothing there. But the bank wants to put smart ATM machines where you're going to open accounts and you can transfer money and things like that so the bank needs a link, then you're gonna use a LEO. But in situations where for some reason over there, let's say it's like a cash center, and the bank needs a very steady link, you can use a GEO easily, because whatever they do there, it's not latency tolerant.



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