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Medallion has built technologically advanced and secure interconnect switching centers that enables the exchange of telecom traffic amongst these different operators. Medallion's platform can handle varied traffic types including voice, data (SMS, Fax) and video. Medallion's infrastructure is robust and protocol independent as it enables all classes of operators to interconnect seamlessly. We handle both TDM and IP based telecom operators as well as interface with major internet exchange points to ensure that local content



providers are adequately catered for.

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- Mast/Tower for radio installation

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Adoption of 5G Network will Transform the Nation's Economy

January 2021

ICT WATCH

Why data warehousing should be domesticated
-ATCON President

Inlaks have become dominant IT firm in Africa
-MD, Inlaks



It's futile to think anyone can stop cybercrime

- CTO, Digital Encode

COO, Digital Encode

The One-Stop Interconnect and Datacenter Company

- Datacenter
- Interconnection
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MEDALLION COMMUNICATIONS

Digital Encode is a leading consulting and integration firm founded in 2003 that specializes in the design, management, and security of business-critical networks, telecommunications environments and other Information Technology (IT) infrastructures. Recognized in the industry for its vendor independent perspective, the firm's expertise lies in solving multifaceted, complex enterprise network security and audit problems. At Digital Encode, technology serves two purposes: to save money and solve a problem.

Digital Encode also provides advisory services toward improvements in Information Security Management, Network Security, Vulnerability Management, Penetration Testing, Computer Forensics, Risk Management and Business Continuity Management. We strongly believe we can improve your organizations risk status, thereby "minimizing Risk, maximizing your ROI"

Digital Encode has an effective and successful methodology for achieving compliance to ISO 27001(IMS), ISO 20000 (ITIL), ISO 22301 (BCM), ISO 9001 (QMS) and several other international compliance standards such as COBIT and PCI DSS compliance. Digital Encode's unique methodology is rooted in the concept that a company should run its IT organization as a business. Throughout the well defined process,

Digital Encode translates strategic business objectives into sound, achievable technology solutions. This approach ensures that the technology ever obscures the business goals.

Digital Encode was appointed the only Technical Partners to the Central Bank of Nigeria (CBN) on Information Security and Electronic Fraud in March 2012 and retained yet again in March 2015.



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managing eSIM is available from the Google Play Store. Then, the iPhone XS came out, and it offered both a physical SIM card and an eSIM as a secondary, though

An e-SIM is an electronic, or embedded, SIM. Instead of a physical card, SIM technology is built right into a customer's phone. It's a small chip that's used to authenticate a customer's identity with his carrier. Already New phones like the Pixel 4, iPhone 11 Pro, and Motorola Razr boast of e-SIM support.

e-SIMs are embedded in smartphones, smart devices, and PCs so there's no physical card involved. A tiny chip is installed directly in the device system supported with embedded software.

For this reason, the software can only be activated remotely by a cellular network carrier, like telcos. Subscriber data, which is programmed into an e-SIM during the registration process, can be reprogrammed to another network provider later. This means roaming on a local network outside the country might no longer be necessary because switching networks will be easier.

With an e-SIM, a subscriber's phone has a few new settings devoted to his SIM card that allow him to switch between lines and carriers and manage accounts. The Google Pixel 2, for instance, was among the first phones to support e-SIM technology, and an app for

the e-SIM was only enabled later down the line through an iOS software update.

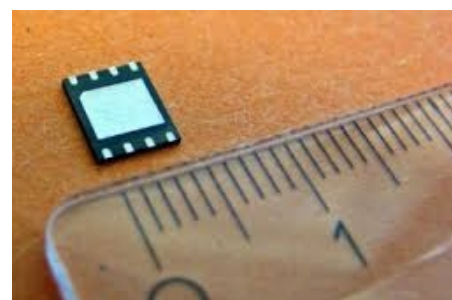
As technology advances, e-SIMs will likely find a home in a new generation of LTE-connected computers. Since the always-connected computers first emerged in 2018, the push to provide connectivity anywhere has kicked into overdrive. Given the trend toward anywhere connectivity, a customer should expect to see many more of the LTE-connected computers in the next few years.

Industry experts have observed that slowly but surely, it looks like e-SIMs will take over because they provide a new level of convenience and accessibility for everyone. As long as a carrier supports the e-SIMs and a customer's phone supports them, then that may be all a customer needs to start using the new technology today. To help bridge the gap, some phones with e-SIMs still have traditional SIM card slots, but it's a good bet that eventually, those trays could go away altogether.

Whether a customer is travelling, switching carriers, or upgrading his phone, an e-SIM sounds much easier to manage than any of the alternatives. Fortunately, technology is spreading faster than

consumers can keep up, and soon it'll be everywhere.

Speaking on the benefits of the technology during the announcement of the commencement of e-SIM trial by MTN Nigeria, the company's Chief Transformation Officer, Bayo Adekanmbi, noted that the e-SIM is eco-friendly. According to him, "previous SIM cards were generally made with some plastic which was of no use. Ideally, what makes the SIM card work is the chip and not the plastic. Customers embracing the eSIM would be reducing the use of plastic and thereby reducing the user's carbon footprint, which is good for the environment."



"Travelers, tourists or consumers relocating to other countries can easily switch operators from country to country without the need of getting a new device, another SIM card, or roaming their lines. Local customers also have the advantage of switching from one mobile carrier to another for reasons like a better deal or better network coverage in an area. This means less time speaking with carriers, and ordering and waiting for a new SIM; all of which can be done from your phone settings via the e-SIM software," he said.

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Publisher's note

The year 2020 came with all its challenges across the whole world. The high, the mighty, the underdeveloped and the developed country had their own shares of the challenges. Added to these was the misconception about 5G. Let me give you an insight into the common myth of 5G technology.

As 5G rolls into new markets – and the corresponding marketing megaphones get louder – the notion that 5G means faster smartphones may become the dominant misconception. It's more than that. The reality is that 5G will fundamentally transform networks and create opportunities for innovation across all industries. The chief information officers and business leaders need to take this seriously.

While 5G will be a major catalyst for the future of IoT, that doesn't mean you can't already get started with the IoT projects because not all the IoT use cases require the high processing capabilities and low latencies that 5G provides.

As the minimalist acronym suggests, 5G is part of a wireless lineage: the fifth generation of mobile networking technology, which follows the fourth, which followed the third... and so on. If you count it,

you will see the pattern.

That simplicity might suggest that the next generation will replace the previous, but that's not really going to happen anytime soon with 5G. Part of that is because 5G rollouts will take time and in all likelihood connects some speed bumps route to maturity. Until then, most people will continue living in a 4G world.

Another acronym – the "LTE" in 4G LTE – speaks to this: it stands for long-term evolution. The folks building the mobile networks knew well enough that getting to 5G was not going to be a quick job. It's also good news in terms of protecting existing IT investments from rapid obsolescence.

There is not some magical moment coming where 5G network coverage will become universal and uniform. 5G experience will vary based on a variety of factors, location prominently among them.

We have to remember that 5G is still a radio-based mechanism, based upon millimetre waves that have difficulty travelling long distances and fail to penetrate most building structures, to realize the capabilities of 5G successfully, not only coverage but depth of coverage is key.

editorial

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FAREWELL TO ONE OF OUR CONTRIBUTING EDITORS, MRS. FLORENCE MORIYIKE ADEWUSI (1972 - 2019)

SERVICE OF SONGS



Pastor Mayokun Oreofe, Chief Servant, Victorious Praying Women Ministry (VPWM).



Cross section of attendees at the service of songs at the VPWM in Alausa, Ikeja.



Emeka Oparah, VP CSR, Airtel Nigeria & other attendees at the event.



Cross section of VPWM leadership during the service.



Cross section of colleagues at the event.

WAKE KEEP



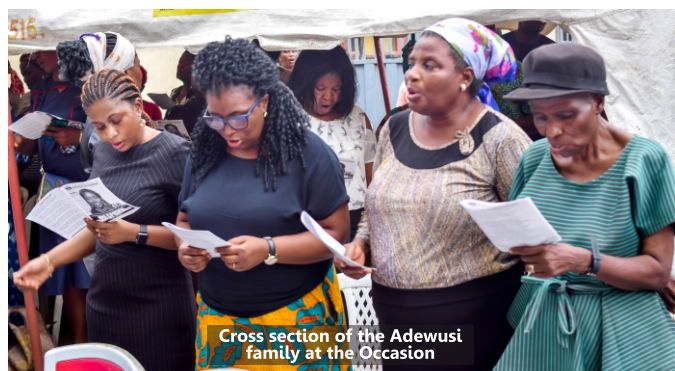
Bishop Folarin Obey & other ministers of God at the Wake Keep.



Cross section of the deceased family members husband, children among others.



Cross section of our in-laws & our family friend at the occasion.



Cross section of the Adewusi family at the occasion.



Her classmates in secondary school & friends after the wake keep.



Seun Adewusi responds during the event.

Nigeria's telecom industry breaks new ground with e-SIMs

Nigeria's telecom industry has broken new ground with the approval of e-SIM trial for two mobile network operators. The Nigerian Communications Commission [NCC] has launched the country into another phase of the telecoms revolution leveraging the latest technology.

This technology is expected to be the game-changer for telecoms consumers in the country.

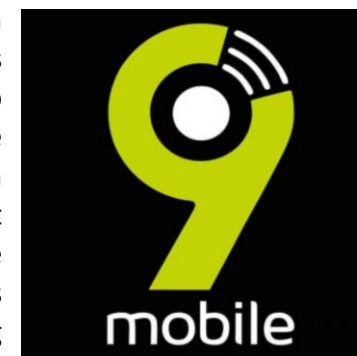
In its proactive regulatory approach, the Nigerian Communications Commission (NCC), recently granted approval for two mobile network operators (MNOs), MTN Nigeria and 9Mobile, to carry out a trial on the workability of embedded Subscriber Identification Modules (e-SIM) Service in Nigeria. This came as another bold step towards preparing the country for the adoption of the newest technologies such as the 5G, Internet of Things (IoT), Big Data, among others.

With several innovations such as the eSIMs being pushed by the telecoms regulator, the country's telecommunications has been one of the most active sectors and arguably the most vibrant of the country's economy. Aside from the rising figures of subscriptions for voice and data, the economic impacts of the sector have been rising steadily.

however, the trial for MTN and 9mobile, which is approved to run

for a period of one year, will involve testing 5,000 e-SIMs by the two networks, subject to compliance with a number of regulatory conditions.

These conditions include full compliance by the MNOs with the Registration of Telecoms Subscribers Regulations 2011; the Mobile Number Portability Regulations and Business Rules 2015; Guidelines on SIM



Replacement 2017; and non-degradation of the Quality of Service (QoS) being experienced by users of e-SIMs.

Speaking in a statement issued recently by the Commission, the Executive Vice Chairman of NCC, Prof. Umar Garba Danbatta, said the primary objective of the e-SIM trial is to assess the technical performance of the e-SIM on telecoms service providers' network towards eventual rollout, if satisfactory.

An e-SIM is a small chip that is embedded on a mobile phone or smart devices. It is designed for convenience, flexibility and simplicity. The e-SIM makes it easier for subscribers to choose a pre-paid plan provider and switch between network operators. The information on the e-SIM is rewritable by operators and the identification information can be updated over time.

The EVC said that the e-SIMs is a technology that will eliminate the need for physical SIM card slots on mobile devices in the near future, adding that the trial is in line with the Commission's forward-looking regulatory

approach to ensure Nigeria's telecoms ecosystem is in tandem with global best practices.

A SIM, which stands for "subscriber identity module," basically contains the information that authenticates your identity to a carrier. In other words, the SIM card is what tells a carrier that a customer is who he or she is — and without it, carriers wouldn't know that customers are subscribed to their network, and thus wouldn't let them use their cell towers.



week? The answer is no. When you dig into the project, you will observe that much money has gone down the conduit pipe of the corruption process. Do we need foreigners to do it? The answer is no. Is it a rocket science? The answer is no. Is it difficult to do? The answer is no. The problem we have is that we cannot easily register our people and create a database of address systems for them to locate their activities in the country.

Are tech hubs set up by government agencies helping the industry?

That's a big question. I don't want to say what motivated the establishment of some of the hubs, and the things that are happening in the industry. We have been talking about different hubs for so many years now. How I wish the government would be serious to set up within ourselves an audit of the money spent? Let's measure them with the output so it is very difficult to say how they

are affecting the industry.

I expect the spending agencies to change their methodology and in doing that, they should work through the existing companies and the institution. They will get more results that way when they set up all these hubs. Out of the hubs, maybe in a year, we are able to get one or two projects. These projects will survive with government support, otherwise, after one or two years the projects fizzle out.

But I believe that if government reviews its strategy and work through existing companies that have sustained and maintained operations for a number of years, and work through the institutions, then, government could say we are providing sponsorship for the company. Government can list the area it wants to focus and train a certain number of the youths, guide them to deliver. That way you have already tie a project to the value of money you are spending and the Nigerian youths who will benefit from that

project.

But what we have is a contractor who sets up the hubs and buys equipment. Most of the hubs in Yaba are not working. But if we review the strategy and get the Nigerian youths from university, attach them to a company, a project, then, development will be easier. But I must say again, we must discourage foreigners from developing things for us. We must do things for ourselves. That's the only way to go.

Does your industry have a rapport with the present government?

There is no human being or agency that is thinking about development in Nigeria. It is what is in it for them and that is why we are where we are today. It has been like that for a long while. The professional does not have a say in any agency. They can speak their grammar. They can do their recommendation. They can write their report. But if the agency refuses to listen, what can the professionals do? If you don't take time, those in government will call you noise maker.

They have the voice. They have the power. If I am to go to Abuja to make noise, how long will I survive? I am using my hard earned small resources to have a space in the Nigerian economy. So the power is in the hands of the government. The knife is in their hands. The yam is in their hands.

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BURIAL SERVICE



Bishop Folarin Obey praying for the family during the Service.



Cross section of family members & congregation during the Service.



Cross section of her friends & the congregation



Bishop Folarin Obey & Gbenga Adeyinka 1st GCON after the Service.



Tayo Adewusi & Mrs. Remi Laguda.



Mr. & Mrs. Wole Adewusi & Congregation during the service.



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OF THE YEAR



2018 & 2017
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PROVIDER
OF THE YEAR



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TOP 20 CEO OF THE DECADE - EXCLUSIVE

"We must Discourage Foreigners from Developing our System"

-Olorogun James Emadoye, MD/CEO, BSSL Technologies

In this exclusive interview with one of the TOP 20 CEO's this decade, Olorogun James Emadoye, MD/CEO, BSSL Technologies shared his thoughts on ways to improve the ecosystem and move the industry to the desired height. Excerpts.

How is the software industry responding to the Covid-19 outbreak?

We are lucky that Nigeria has automated its financial and related industry. If not for that fact, the cashless adoption would not have gone substantially well. We would have drastically suffered the effects of Covid-19. The way the industry has raised to the challenge of Covid 19 seemed to have helped us to rise above the pandemic. It is left for our leaders to learn from what has happened because nobody knew that Covid-19 could happen, even the world powers could not predict the pandemic. We are only powerful if we know our enemies; Covid-19 is an enemy we don't know.

In Nigeria, we are lucky that there are so many things helping us. Whether we like it or not, we are not carrying out sufficient Covid 19 tests to ascertain the number of infected persons. If the story is not about people who need to be tested, it is about those who need to be isolated. These stories are unpalatable. But we are generally lucky that our environment has helped us to reduce the real effect of Covid 19 but we need to think about this.



cloud software that could cope within that period. Some of our clients don't have problems because they've provided for that uncertainty.

It is said that software will change the way we work. We have a huge youthful population within the ages of 15 and 35. For them, it is the age to learn and emerge. It is for our government to look for everything that we need. If we need to build a bridge and your own people can't build the bridge, you don't need the bridge. The same applies to software. The more you challenge us the more output we will get.

Our government ought to have put together the traditional and medical doctors to come up with vaccines to solve the pandemic but it seems we are still looking to the Western world for supports, for vaccines that are being developed in Oxford.

Are ISPON members seizing the opportunities embedded in the Covid-19?

The opportunities are there without any doubt. Between March and May, virtually all the offices were closed. It is those companies that have done a bit of

Nigeria is far more developed in terms of fintech than most other countries. With my phone, I can transfer N1 million. But in the USA, I cannot transfer \$10,000. To do that in the USA, you will go through stress. Our problem is in security, profiling and identification. These are problems around technology that the country must solve. In 2020, how possible is it to use people's names to locate their addresses? Our address system must be worked on.

Our NIN system is still a problem. Can you easily register for NIN today and get your number next

been investing in infrastructural expansion.

Would you consider co-location service as an option?

Co-locating is the way to go. Even to co-locate, you must take the active element up to the towers in order to get those active elements. You will need to import them with FX and this has been the challenge. We need the federal government to ease off on telecom equipment. The business environment is not encouraging for smaller players to expand now, if you don't have access to FX. You know, our watchword is quality. We have subscribed to the ISO 9001, which is the quality management process. We have also subscribed to the ISO 2001, which is the IT service management standards. To protecting the quality of our service has been our watchword and to be able to do this, there are many other factors that come into play. We are also protecting the quality of our service.

What are the elements involved with regards to quality of service?

There are certain fundamental things that bring quality of service. You must have ubiquitous coverage. You must be able to manage the density - how many people are getting on to the base station at a time and you must ensure that you are able to watch congestion for each base station and ensure that it's still within the threshold of the quality design. These are the things that we watch. From the user's perspective, some of the things we sell are usually indoors and limited

mobility, the WIFI and other things.

Due to coverage, we apply some of these things where there are needs to educate the users. Operators like us sell access. That is when you have sold access through your customer's premises equipment. I have seen some very big homes - maybe three floors - they will buy one customer premises equipment (CPE) network. The tenant expects it to be accessed in every room. That's not the quality of service for the operator. It happens to be the quality that WIFI can distribute within our work of service. Sometimes such customers need a bit of education to be able to do redistribution. They may need to reposition the WIFI access point to a certain spot. We watch the quality of service that we provide and pay attention to customers' complaints to improve our services.

If the network penetration has increased, don't you expect a vertical drop in the cost?

We should take it from the macro level. It's not just about coverage. The coverage is at a cost and the cost has a huge FX component. The cost of broadband has come down between January and now. If you use a standard index, not just the Naira because the Naira itself is pitched against international currency. There is a drop value of up to 40 - 50% and the telcos have not increased their prices. All the components are dollarised. All businesses are there to make profit, not for consumption, but to make profit you must provide

better services. Otherwise, the customers will complain about the cost of service because companies will not have fund to replace the equipment.

They must cover replacement cost. They need to cover their operations expenses also. Most of these things that are in the environment were imported. Even if the price comes down, the cost of submarine cable in the component of providing service is at the maximum of 15%. Even if the component drops, the equipment replacement cost has not dropped. The cost of broadband is low, but if you look at it from the providers' point of view you will see that truly the value they got last year is not the same value this year. Another thing that cut down costs is competition. Different players want to outdo each other. Once the issue of quality is settled with time the price will come down. But there are certain levels we must not go below or else we will be injuring ourselves.

What is new with your CRM?

It's about holding the customers as kings. We have a process that we have created to make customers happy. It is embedded in our vision and mission. From the lowest rank staff to the top, we are all working for the good of the customers. When I talk about ISO 2001, there are processes that are in alignments to check effective customer service. We have a lot of data that helps us to serve customers better. We also educate our staff on best practices. It's more like it's in our fabric and process.

The Impact CEO Forum

...foremost meeting of great minds



Tayo Adewusi, Coordinator



Seun Jewel, Compere



Engr. Ike Nnamani, President, Medallion Comms, with his award.



Engr. Femi Adeoti, MD/CEO, Inlaks with his award.



Engr. Lekan Balogun, Former MD of Bitflux Comms, flanked by the Coordinator & Chidi Okpala of Galaxy Backbone.



Engr. Babagana Digima rep. Of EVC of NCC being flanked by the Coordinator & Engr. Tjant Entola of Bertz Projects Nigeria.



Malam Yusuf Kazaure, MD/CEO of Galaxy Backbone is rep by Abdul Malik Suleiman, GM/Group Head Business Dev, with his award.



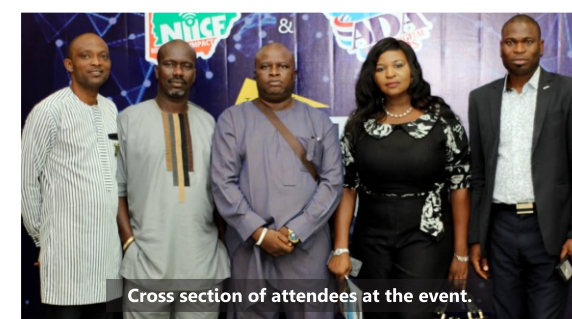
Banji Soledayo of Eset Nigeria receiving his award from the representative of Digital Encode.



Chima Akwaja of Leadership Newspaper receiving his award being flanked by the Coordinator & Engr. Femi Adeoti.



A representative of MTN receiving their award being flanked by the Coordinator & Sayo Aluko of Rugged Boots.



Cross section of attendees at the event.



Cross section of the Panelist at the event.



Ajele, comedian of the day.



Demilade, Saxophonist of the day.



Cross section of the participants at the event.

Communiqué issued at the end of the 2020 Nigeria ICT Impact CEO Forum (NIICF)

The 2020 edition of the Nigeria ICT Impact CEO Forum (NIICF) themed '5G: The Future is Here' was held at the Oriental Hotel, Lekki, on November 27, 2020.

The forum had representations from the regulators including the Nigerian Communications Commission (NCC); National Information Technology Development Agency (NITDA), Nigeria Communication Satellite Company (NIGCOMSAT), and Galaxy Backbone. Also in attendance were the telcos, OTT players, CEO of ICT companies, and other industry stakeholders.

In his welcome remarks at the forum, the convener and Editor-in-Chief of ICT Watch Magazine, Mr. Tayo Adewusi, highlighted the global impact of 5G technology, with a call on the experts to use the forum to discuss the expected impacts of the technology on Nigeria.

A keynote by the Executive Vice Chairman of the NCC, Prof. Umar Danbatta, delved into the core of the 5G agenda for Nigeria. Four other lead papers were presented. The focus was on the impacts, benefits, and strategies as the country embark upon the 5G journey.

At the forum, the following were the consensus:

- That the successful and timely deployment of 5G is crucial to the country's economy, as it is also in line with the strategy of the Federal Government for the acceleration of the National Digital Economy for a Digital Nigeria, the positioning of Nigeria as an early adopter of the technology and a

major participant in the growing global digital economy.

- That securing the spectrum for 5G is an antecedent for any operator to invest in 5G infrastructure. It is therefore imperative for the spectrum allocation and assignment process to be concluded as early as possible.

- That the Federal Government would provide an enabling environment for the deployment of 5G while the MNOs would determine their deployment strategies subject to alignment to the approved policies and other regulatory instruments in force.

- That infrastructure sharing is key to the success of 5G rollout as no operator can go it alone. Besides, no company has enough resources to single-handedly deploy 5G.

- That the current challenge of infrastructure must be addressed to realise the full potentials of 5G.

- That the country needs more data centres, more metro fibres, and high capacity wireless access network, which are essential for 5G success.

- That 5G can lead to growth in healthcare, transportation, retail, agriculture, manufacturing, logistics among others.

- That the increased bandwidth of 5G will invariably help financial services (among other industries) to further step up their game.

- That 5G will facilitate several emerging technologies, generate innovative use cases, spur significant socio-economic growth, and create jobs.

- That 5G's full socio-economic impact is dependent on access to a variety of spectrum resources, including millimetre-wave bands between 24 GHz and 86 GHz.

- That the regulators, civil society organisations, development partners, private businesses, and other stakeholders must collaborate in order to contribute to Nigeria's digital transformation journey.

At the end of the forum, deserving ICT stakeholders were presented with the prestigious Africa Digital Award for their outstanding contributions to the growth of the industry.

With Covid-19, our macro-economic system has gone upside down

-Engr. Abiodun Omoniyi, MD/CEO, VDT

Can you share your company's journey with respect to 4G Long Term Evolution?

It's been a very interesting journey. It's very expensive. We have been in existence for about 20 years and the quest to go into the venture has taken a better part of us. The last year have been an interesting journey. We got a load of learning in operations, marketing and sales, but things are picking up. We are getting hands-on on how to do it and we are ready for more challenges.

What is the influence of Covid-19 on your network expansion?

The year has been very challenging. The challenge of Covid-19 is high on our business because our cost of doing business has increased. It wasn't that the revenue was very huge. Although it called for different ways of doing things. There is no way to maintain a down site without our engineers visiting the site and it is not cheap to traverse state capitals or a cities. Those are the things that have brought about high cost. However, we are now at the expansion stage. This stage needs a lot of capital. We know with the Covid-19, our macro-economic system has gone upside down. Inflation has gone up.

The exchange rates and access to



fund are major challenges. All these have made it quite challenging. Our plans for 2020 is to do a lot of things. But these have not materialized. Despite the opportunities, the challenges are still prevalent. We are entirely an indigenous company. We don't get funding from any foreign donor

body. We rely on our local transactions. Telecom does not qualified for FX for now and that has been quite challenging. We couldn't expand but we have brought more sales. We have also tried to manage our network. We have continued to deploy quality services to our clients. We've not

NigComSat Hosts Nigeria Edition of Actinspace Innovation Competition

The Nigeria Communications Satellite (NIGCOMSAT) will host the Nigeria edition of Actinspace, an international competition for students of tertiary institutions, IT startups and entrepreneurs to create new applications using technologies, satellite data and/or licenses.



A statement signed by the General Manager, Corporate Affairs of NIGCOMSAT, Adamu Idris said the competition will be co-hosted with the Federal Ministry of Communications and Digital Economy, African Aeronautics & Space Organization (AASO), CNES (the National Centre for Space Studies-France), European Space Agency (ESA), and Airbus.

"Applicants from the ages of 18 to 35 years are expected to come up with solutions that are space-related for submission for the contest. The contest categories are new space player, everyday life, business and space for earth and humans," he said.

The chairperson for the local organizing committee for Actinspace Nigeria, Mrs Alma Okpalefe, said participants are expected to devise solutions that could help to run their businesses, support humanitarian causes and develop applications based on space technology.

She stated that the second phase of the competition will be the hackathon "where selected applicants will present their business ideas to judges and mentors over a two-day period.

"We are expecting to see Nigeria win at the global technology innovation challenge. To achieve

that however, we must showcase the best of what we have to offer," she said.

The finalists and runners up will emerge at the end of the hackathon while the first place winner will represent the country in Paris in 2021.

"Entries are accepted only through the NIGCOMSAT official website www.nigcomsat.gov.ng and will end on October 8, 2020", Idris said.

Adoption of 5G Network will Transform the Nation's Economy

The adoption of the fifth generation [5G] technology will help to transform the nation's economy and give birth to smart city, smart transportation, efficiency in medicine as well as a lot of automation in respect of appliances and devices with respect to Internet of Things (IoT).

This was disclosed in a communique issued by the Computer Professionals (Registration Council of Nigeria-CPN) after its 2020 virtual IT assembly themed Adoption Of 5G in Nigeria: The Technological and Regulatory Challenges held recently.

In its recommendations, the CPN urged the federal government to ensure that the cost of 5G compatible devices is affordable to "Nigerian so that the citizens can benefit from the new technology".

Signed by its president, Prof. Charles Uwadia and Registrar, Allwell Achumba, the CPN stated in the communiqué that the deployment of 5G is capable of fast tracking the economic growth and migrating the country into a digital economy.

"The deployment of 5G in Nigeria has "numerous advantages which include faster internet connection, smoother user experience and huge deployment of IT to drive growth and development of industries.

"CPN is now recommending the adoption of 5G network to Government at all levels because Nigeria will derive huge socio-

economic benefits from commercial deployment of the fifth generation (5G) networks. The new networks will come with great potentials that will boost the entire spectrum of Nigeria's socio economic ecosystem.



"The country will also benefit immensely from the adoption of the network in terms of faster speed, high latency and high capacity that will transform consumer and business experiences because the difference between all other existing generations of technologies such as 2G, 3G and 4G lies in speed and data capacity".

The body added that the provision of good and adequate supply of power will enable Nigerians to enjoy the benefits of 5G network and derive huge socio-economic benefits from its commercial deployment.

It therefore urged the federal government to intensify efforts in addressing the power challenges in the country and to declare IT and telecommunications as a critical national infrastructure to facilitate the success of the national broadband strategy.

"Governments at all levels should also intensify efforts to embrace IT with its attendant potentials of facilitating governance and eradicating corruption in the country", it stated.

The Council emphasized that the complete adoption of IT and migration of government operations from the manual mode to digital platform will make the country to conform to the benchmark of government operations in the 21st century

The annual CPN assembly is a yearly gathering of IT practitioners in Nigeria and the diaspora with the objective of discussing and strategizing on emergent issues in Information Technology in order to come out with recommendations and decisions that will impact positively on the industry and the nation. The Keynote was delivered by Engr. Deus Osuji, General Manager, Network Services at MTN Nigeria.



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MTN Nigeria Introduced Visitor SIM for Travellers to make Connections Much Easier

MTN Nigeria has introduced Visitor SIM designed for guests who are travelling into the country in order to make connections easier for them.

The Visitor SIM comes pre-loaded with an appealing package that includes local and international call and data bundles. This package will enable people visiting from other countries to stay connected with their friends, family and business associates on MTN's super-fast network.

According to a statement from the company and signed by the acting Public Relations Manager, Lakinbofa Goodluck, MTN

Visitor SIMs are easy for inbound international visitors to acquire, activate and use, in addition to which they offer far better value than any roaming tariff.

Not available from any other operator, the service is poised to deliver convenience and the best-in-class customer experience in line with MTN's brand promise.

According to Adekunle Adebisi, Chief Sales and Distribution Officer, MTN Nigeria, "The new Visitor SIMs will ensure that before

They are valid for 14 days, which can be extended up to 30 days via MTN's self-service menus or USSD.



MTN Nigeria is one of Africa's largest providers of communications services, connecting over 71 million people in communities across the country with each other and the world. Guided by a vision to lead the delivery of a bold new digital world, MTN Nigeria's leadership position in

setting foot outside the airport, people visiting Nigeria can plug in, reconnect - to loved ones, associates, tools and information, and begin sharing their remarkable experiences, with no concern about roaming charges."

MTN Visitor SIMs are available in the arrival halls of international airports and other ports of entry.

coverage, capacity and innovation has remained constant, since its launch in 2001.

MTN Nigeria is part of the MTN Group - a leading emerging market operator, connecting more than 250 million subscribers in 21 countries in Africa and the Middle East.

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Why data warehousing should be domesticated...ATCON President, Engineer Ikechukwu Nnamani

The President of the Association of Telecommunication Companies of Nigeria [ATCON] Engineer Ike Nnamani in this exclusive interview explained the implications of hosting local data locally and why the data centres in Nigeria are underutilized. Excerpts....

Do you think data warehousing should be domesticated?

We must look at it from two perspectives. It is good where there is an official directory for something that is good for the country. The question is why should we monopolize your data? If you understand that question, then you will understand why the federal government wants to domesticate data. Domestication of data has a lot of value to the country. It is in the area of cybersecurity, securing the data and ensuring the third-party countries, especially, if it's national data that is related to the citizens' and government's affairs. You can't accurately guarantee that when the data is hosted in a foreign land and the hosting company is sited abroad. But if it's in the host country, at least you are guaranteed that things will be better for the country. If the data is not close enough, and you have to go far to retrieve it, it affects the cost because you have to pay the hosting company.

Another factor is that hosting data outside the country affects the quality of the data in terms of latency. If the quality of your

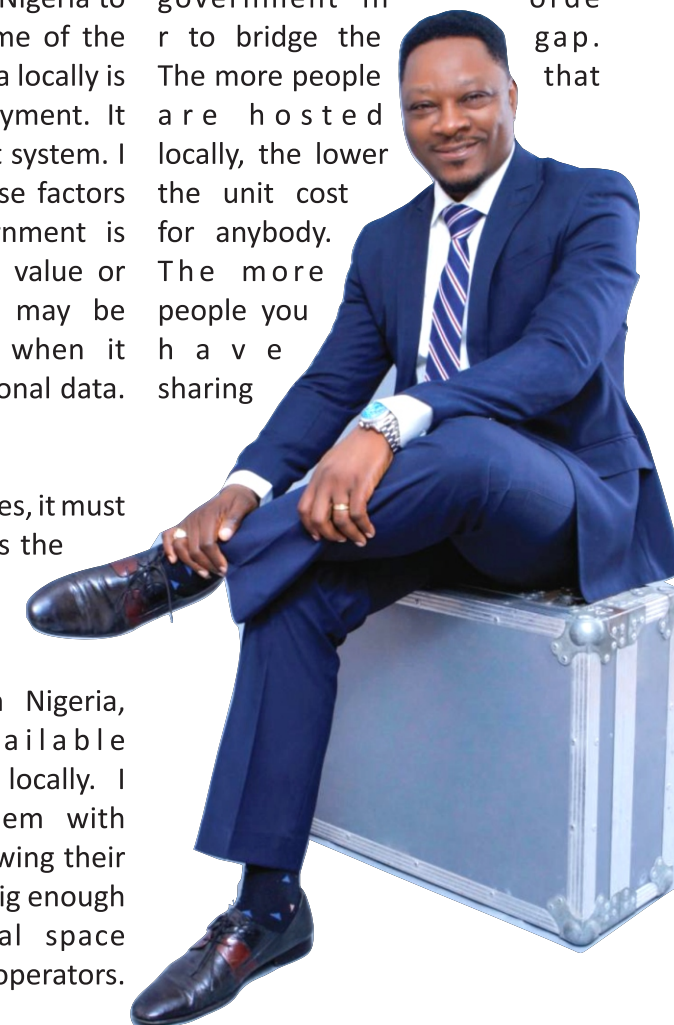
connectivity is not strong, then you run the risk of getting an inefficient service. So from the financial standpoint and quality of service, there is a value in localizing your data and hosting it locally. The other part is economic in nature. You pay to access wherever the data is sited. So if the data is hosted in Nigeria, it means other countries will pay Nigeria to access it. These are some of the reasons why hosting data locally is good. It creates employment. It leads to a more efficient system. I think it is based on these factors that the federal government is saying, if some doesn't value or appreciate it, then it may be mandatory, especially when it comes to sovereign national data. That is not an option.

For national security issues, it must be hosted locally. That is the key point. So in terms of compliance, it's a catch 22. When there was no standard datacenter in Nigeria, there was no available infrastructure to host locally. I don't have any problem with Nigerian companies growing their businesses and getting big enough to play in the global space including data centre operators.

But that is different from hosting local data outside the country.

Why do you think Nigerians host data outside Nigeria?

The reason people outside the country is because it is cheaper to host. This is something that must be addressed by the federal government in order to bridge the gap. The more people are hosted locally, the lower the unit cost for anybody. The more people you have sharing



the same infrastructure, the lower the unit cost for each person.

Can you shed light on why the cost of the data centre is higher in Nigeria?

It is because the volume of the usage is low. A company like Web4Africa that has a local infrastructure, host locally. I know a lot of companies have their platforms hosted and the quality of service they render is not different from the likes of Google, AWS and others but why will Web4Africa have only 20 clients when their foreign counterparts have over 1 million clients and they both invested \$1 million to provide the infrastructure. So they will charge more to recover the investment over a particular period of time. There must be an enabling environment to encourage the uptake in terms of the user base because the moment we do that, sharing the same infrastructure, the unit cost will come down. The same thing applies to the bandwidth. The less number of people who are using the bandwidth the higher the cost. The higher the number of people who are using the bandwidth, the lower the cost.

How does Medallion Data Centre play in this game?

This goes back to data hosting and the fact that if data is not localized you would run into problems. In the current class of service being rolled out to subscribers, it has been said that the communication between the machines will be more than communication with women in terms of data generated

and used. All these are happening because of the Internet of Things [IoT] and the future is here. Nigeria is not excluded in all these developments. If you check the case of Nigeria today in terms of infrastructure, we have about five active submarine cables with several others coming in the next few years. Even with the existing ones, the statistics show that some of them are under 20% utilization. So there is a disconnect between having available capacity at the shores in Lagos where all of them are located with the rest of the country - where the bigger population is located.

One of the goals that come into the national broadband plan which wants to extend connectivity across the country is to have content closer to the users. Then we can create a regional data centre from there you create an edge data centre. That is what drives the main connectivity and runs most connectivity between the users and the location of the infrastructure. What we are trying to do is to build infrastructure for Nigeria and that's why we are trying to expand data centres across the country. The services will be affordable to subscribers and it will be a qualitative service.

How does this tie with the digital economy?

The current programme from the Ministry of Digital Economy and Communication as well as the regulators such as Nigeria Communications Commission [NCC], National Information Technology Development Agency [NITDA] et al, if you partner with

what the private sector is planning to do, I believe it can be achieved. If the current broadband plan that has been implemented this year, then we can achieve things. We live in a data-driven world. There is going to be a demand that will drive the adoption of data. It is just that the infrastructure can catch up with it, but for infrastructure to catch up with it, we need a lot of things to be put in place. Funding is needed. If we don't have the fund, we are not going to achieve it.

This has to be addressed. We must address the issues of multiple taxations that have made it difficult to roll out services. We must address the issues about not having the right approval whether the right of way to lay fibre infrastructure or securing existing infrastructure in some part of the country. There is a demand to make it happen if the infrastructures are in place.

What did you do right during the lockdown?

The lockdown gave me the opportunity to spend more time with the family and on the other hand, because we know that lives and families and other businesses are dependent on our business, we have to keep working during the lockdown. We worked through even during the restriction of movement our operation continued during the period. At Medallion, we have processes to handle situations like this, so it was just the case of ensuring that the process works to deliver efficient services to the people.

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in Nigeria. This landmark project was implemented under the auspices of the National Association of Microfinance Banks Unified IT Platform (NAMBUIT) in July 2017.

Over the past decade Inlaks has remained committed to designing and deploying solutions that will deepen financial inclusion. We will continue work towards driving the financial inclusion in Nigeria using our expertise and the latest technology.

The ICT industry has performed well in spite of the Covid-19 Pandemic, especially in the financial and nonfinancial sectors. What trigger this phenomenon spike and how can this be sustained?

The COVID-19 didn't just disrupt the normal way of life for people all over the world, but has also transformed the way we interact with loved ones, do business, shop, travel, get medical care, and conduct many of the routine transactions of life. These changes have accelerated the adoption of

digital technologies at an alarming scale and speed across the different sectors of the economy.

The COVID-19 necessitated the isolation and social distancing as the most effective way to slow the spread of the virus until a vaccine is found. As a result, businesses that rely on human-to-human contact to operate are now at risk.

Digitization has stepped in to bridge the gaps left by mandated shutdowns and social distancing measures. Without digital tools and technologies, we would have no way to work, shop, and learn. To deal with the crisis and its outcome, some companies that are yet to fully adopt digital needed to quickly adapt their organizations to new operating models and deliver their services to customers and employees at scale.

The rapid adoption of digital can be attributed to the fact we now live in a contactless world, brought about by this pandemic. What this means is that the interactions with customers and employees must

occur virtually and businesses will have to find ways to operate remotely, while providing value to their customers. Companies that would usually require physical presence and interaction would have to operate digitally to stay in business. Today's businesses have only two options; to either go digital or die. Digital is the new normal.

While certain industry suffered and has continued to suffer during this Pandemic, the ICT industry continues to thrive. Companies such as Amazon, Netflix, Microsoft and other tech giants continued to thrive amid the pandemic. This has established the fact that business must adopt technology at the core to survive in today's business environment.

This pandemic sparked creativity in doing business and various innovation across all sectors of the economy. It is, therefore, a chance for businesses to rethink how they operate and use this opportunity to transform, while adopting to new realities.

There is no doubt that business leaders will face some fundamental challenges, one of which is the change in consumer behavior and patterns. The only way for businesses to survive in this times would be to analyze their customer demands and refocus their digital efforts to reflect changing customer expectations.

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people use their mobile apps to carry out all forms of the transaction without the need to visit any bank branch. Social media platforms also became a dominant force in this past decade, with the launch of Facebook, Instagram, Twitter, Snapchat etc. All these platforms have redefined the way people connect and collaborate and has greatly influenced the way business reach and interact with their customers, as well as their target audience. The rise of social media has also greatly impacted the media and news industry, as information are readily available and accessible on the internet.

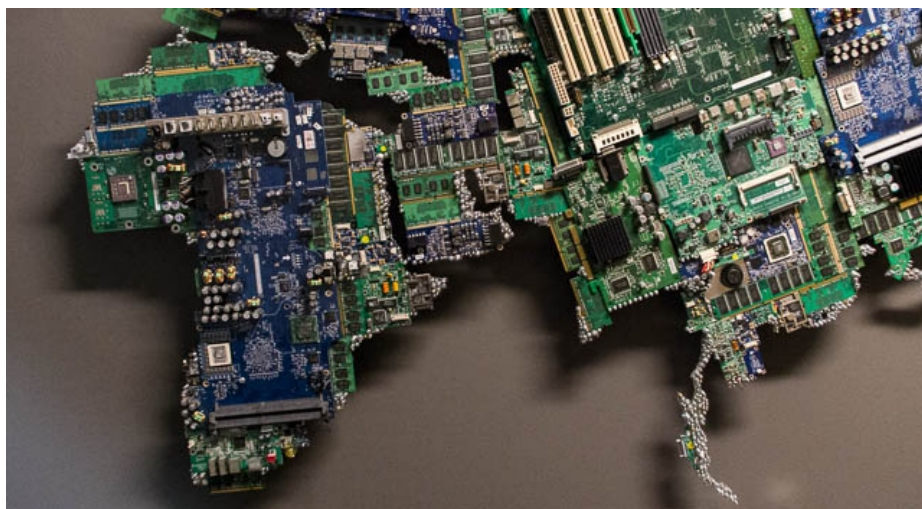
Other technological advances of the past decade include Artificial intelligence, internet of things and cloud computing, all of which have radically revolutionized our day-to-day lives. Technology is moving at the speed of light, and I am looking forward to seeing what happens in the next decade.

How would you describe the growth of Inlaks in the last decade?

The past decade has indeed been transformational for our business. We have continued to strive to remain the notable ICT and infrastructure solutions provider in the country through our strategic response to the changes in our business environment. It hasn't been a seamless process, but we are glad we decided to turn and find our way back to growth and success.

Within the past decade, Inlaks has

transitioned from being a reseller of computer accessories to become a leading IT systems integrator in Nigeria and Africa serving over six Central Banks, 18 commercial banks and microfinance banks in Nigeria and Africa. We have become the dominant information technology company in the African region, providing core banking, ATMs, agency banking, fraud management, cybersecurity, cloud, data centre, enterprise risk management and software solutions.



Inlaks represents Nautilus Hyosung Inc, a South Korea Original Equipment Manufacturer, as the only authorized partner in West and some other parts of Africa. As at the end of 2012, Inlaks had less than 300 Hyosung ATMs deployed in two Nigeria banks representing 2% market share. However, in 2013, we changed our sales and service strategy for the self-service and ATM line of business by relying on unique business acumen to demonstrate better insight into ATM business issues and industry trends that are relevant to the customers.

Furthermore, over the recent years, we have gained and maximized competitive advantages by effectively and ethically distinguishing Hyosung ATMs and some Value-Added Services from those of competitors. The ATM business has been the promising products for the company in the last decade having sold and deployed more than 6,000 units to 19 commercial banks and numerous Microfinance Banks. The ATM business creates a long-term value to our business,

and it's progressively becoming the cash cow with possible market saturation in years to come.

Our strategy is to continually boost this product by appropriate investments to monitor the growth and maintain a position of strength in the ATM market in Nigeria. Inlaks also represent Temenos, one of the leading Fintech solution in the Nigerian banking sector. Within this past decade, Inlaks partnered with the Central Bank of Nigeria (CBN) to deploy the Temenos' core and agent banking solution for almost 1000 Microfinance Banks (MFBs)

NCC Counts Gains of MTN Listing in Capital Market

influencing the listing of MTN, one of the telecom giants in the country on the stock market has become the yardstick for the Nigerian Communications Commission (NCC).

The regulatory action was taken by the NCC to facilitate the listing of MTN Nigeria on the country's stock exchange market has continued to bring economic gains to Nigeria and Nigerians in terms of boosting market capitalisation and yielding dividends to shareholders.

The Executive Vice Chairman (EVC) of the Commission, Prof. Umar Danbatta has pointed at the gains of the achievement.

regulatory posture, which served as a tonic for other telcos such as Airtel to follow the same direction.

As the country's independent telecoms regulatory authority, the NCC, working with the Central Bank of Nigeria (CBN), facilitated the landmark listing of the country's largest telecommunications operator on the bourse.

"This is in line with its mandate to

has been created in the history of the telecommunications industry in Nigeria.

"That important regulatory action enabled Nigerians, consistent with the Nigerian Communications Act (NCA) 2003, to partly, own, manage and control MTN. This bold and courageous regulatory action is now transforming lives and boosting the economy," the EVC stated.



Market analysts report that MTN investors have raked in approximately N1 trillion in price appreciation and dividends since April 2020. The listing of MTN was as a result of NCC's effective regulatory action taken during the mobile network operator's fine settlement agreement in 2016, which compelled the telco to, among other things, list on the Nigerian Stock Exchange (NSE). The listing was one of the outcomes of the NCC's stringent

promote investment, create a level-playing field for all licensees, ensure compliance to existing telecoms laws and facilitate delivery of top-notch quality of service (QoS) to consumers," said the Executive Vice Chairman of NCC, Prof. Umar Garba Danbatta.

According to Danbatta, through this proactive regulation and timely intervention by the NCC, which lead to the listing of MTN on the NSE, a new vista of opportunity

Danbatta also stated that the listing has helped to translate into action, an important the objective of the Commission, which is to promote local investment and ownership in the telecom sector.

"With MTN shares available in the capital market, it is expected that Nigerians will buy shares and by purchasing the shares of MTN, they will be financially empowered and be socially transformed," he said.



“Also, one of the benefits of listing on the NSE is that telcos have enormous opportunity for raising more capital for network expansion, which will, in turn, bring about improvement in the quality of service delivery and quality of experience for telecom consumers,” he said.

The EVC further stated that “today, the capital market regulator and shareholder bodies have commended the effort of the NCC in making the capital market more resilient through the Commission’s regulatory action in facilitating telcos listing.”

He noted that the listing in the stock exchange will promote



liquidity amongst operators, enhance their value as well as promote transparency.

“The Commission is committed, through its regulatory policies and

actions, to creating the right environment to attract both Foreign Direct Investment (FDIs) and local investment into the telecom industry for increased economic prosperity for Nigerians,” the EVC said.

Stating that telecom is a capital-intensive industry that requires continuous investment, Danbatta said the listing will enable the telecoms companies to raise capital for the expansion of their networks.

Inlaks have become dominant IT firm in Africa

- MD/CEO, African Operations, Femi Adeoti

One of the ICT firms that have contributed to the development of the industry is Inlaks. Femi Adeoti, MD and CEO of the firm spoke on how the company have metamorphosed from a reseller of computer accessories to a leading IT systems integrator in Nigeria and Africa serving over six Central Banks, 18 commercial banks and microfinance banks. Except.

Let's look at the ICT industry in the last decade. How has it fared?

The world is undoubtedly in a different place today than it was a decade ago, and changes in technology have had an enormous impact on every facet of our lives. We may not have achieved the most remarkable technology feat yet, but there's no doubt that the past decade brought many exciting technological advancements.

The last decade saw a significant advancement in technology including; mobile phone, social media, and cloud. Almost every part of our lives have been deeply transformed by these technologies, as they became so quickly entrenched in our day to day lives; from the way we shop, bank, learn and collaborate.

The advent of mobile technology is one of the biggest moments in IT from the last decade. Even though the original iPhone was released in 2007, smartphone became truly ubiquitous in the 2010s, improving and affecting every areas of our lives. The mobility and flexibility of the mobile phones greatly influenced our day to day activities -from banking, shopping, learning,



gaming, entertainment and collaboration with friends and family.

Beyond the high rise of eCommerce platforms like Amazon, Alibaba, Jumia and Konga, all types of purchases, from travel arrangements to payment of utility bills can be done anywhere and anytime from the mobile phone. This technology facilitated the birth of new businesses like

platform business models Uber, Airbnb, Netflix, etc. Netflix, for instance, was launched in 2007 but only took off fully within the last decade. Uber launched its mobile app in 2011, disrupting the taxi industry, Airbnb, which also launched in 2008, boomed within this past decade disrupting the hospitality industry.

This past decade also saw the rise of mobile banking. Today most

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communications and Digital Economy. Having said that, out of the 8 pillars NIGCOMSAT Limited will be very relevant in 3 pillars which are;

- Pillar 2: Service infrastructure; to provide government digital services through a robust satellite link in order to drive the digital economy.

- Pillar 3: Solid infrastructure pillar: to provide satellite infrastructure platform to deepen the broadband penetration especially in the rural and underserved areas in Nigeria.

- Pillar 5: Digital Service Development and Promotion; to develop and provide a digital satellite ecosystem that support artificial intelligent and innovation driven enterprise.

How is the replacement Satellite (NIGCOMSAT-1R) doing commercially & is there any update on the possibility of a backup satellite capacity?

Thank God, NIGCOMSAT-1R is performing optimally in orbit, the satellite is almost 9 years in orbit based on the launch date which was December 2011. In term of commercial viability, I can tell you that we are competitive enough and the satellite remain a good platform to deliver innovative digital services. Yes, backup satellite is key to the National Broadband Infrastructure Development. Thus, we are working with the Honourable Minister of Communications and Digital Economy Dr. Isa Ali Ibrahim (Pantami) towards acquiring additional satellites and Nigerians will get to know of this soonest.

Recently, with the approval of the Hon Min of Communications and

Digital Economy, two subsidiaries were created from NIGCOMSAT. What they are & what are we expected to see from these new companies?

Once again, thanks to the Honourable Minister of Communications and Digital Economy Dr. Isa Ali Ibrahim (Pantami) who understands the vision and mission of NIGCOMSAT gave approval to create two subsidiary companies (SUBCOs) namely; Satellite Infrastructure Company (SIC) & Satellite Broadband and Broadcasting Company (SBBC) in its bid to achieve its ambition to be the leading satellite communication solutions provider in Nigeria and Africa.

The two subsidiaries are established to carry-out commercial businesses on behalf of NIGCOMSAT Limited with strategic and project implementation partners from private sector and expand its business operations in the information communications technology.

Can you tell us about the regional offices and their objectives in line with the vision and mission of NIGCOMSAT?

Regional offices are to provide services for the inter-land to promote digital and financial inclusion of all Nigerians irrespective of location. Having said that, the regional offices objectives are to promulgate the NIGCOMSAT's mission and vision which is "to provide seamless connectivity and satellite communication through innovation" and "to be the leading satellite communications

solutions provider in Nigeria and Africa.

How has NIGCOMSAT fared in this period of Covid-19?

COVID 19 pandemic became a major disruption and new reality in our world, we adapted and took in the opportunity that came with the new normal. Some of non-essential operations became flexible and virtual. We also supported our sister agencies with broadband coverage. Obviously, The digital ecosystem has come to stay because people now know that communication is critical during this crisis. And in order to prepare for the future, We had enhance digital tools at our disposal to boost performance and operations to serve our customers better.

As the only woman heading an Agency in the Communications & Digital Economy Ministry, you have been nominated as one of the TOP 20 CEO's this decade, how do you react to this rare feat?

Globally, some industries are gender free, one of such industry is Space industry and having been supervised by the Federal Ministry of Communications and Digital Economy, I believe that being the only woman heading an agency under Ministry of Communications and Digital Economy is a sign that women are participating in scarce skills sectors in this country.

On the nomination, I give thanks to the Almighty GOD that I have been found worthy for this excellent recognition of top 20 CEO in this decade, I also thank ICT Watch Magazine.

Technology as a tool in the education of our kids

The Co-founder of 9IJAKIDS, Engineer Titi Adewusi is a trained mechanical engineer in this exclusive interview she talks about revolutionizing the learning of kids through play, repetition and practise using learning games. Excerpts....

How much of an impact do you think that the pandemic has had on the EdTech industry?

Titi Adewusi: Honestly, I would say it is the best thing since slice bread. It has been totally fantastic. Before the pandemic, EdTech was a nice to have, something to be considered for the future, something you put on the back burner. Then suddenly COVID happened and EdTech moved from the ignored child to the favourite child.

COVID-19 and the lockdown, has created an enabling environment for technology enables businesses. EdTech is no longer a nice to have, EdTech is now a must. Not only for the education space but also for corporate learning/training space. It was not only schools that transitioned online but various corporate trainings - all leveraging on technology to move online.

Now a lot of players are exploring EdTech solutions and new players are entering the space. Remote learning is here to stay and EdTech is helping to power it.

What do you think are some of the challenges that pertains to the usage of technology in the educational industry in the country or globally?

Titi Adewusi: Well, let me start with our country because our challenges are a bit interesting. Technology and EdTech requires three key basic



factors; first is that you have a device (smartphone, tablet, computers), the second is that you have power (electricity) and the third is the that you have data/connectivity).

In a lot of countries, the major challenge is just the device. Do all the kids have devices? But in Nigeria those three factors are challenges. Data is currently not affordable to most people. I look at the Indian EdTech market, which is one of the biggest because data is cheap and affordable. You find it out even when using Whatsapp, Zoom are people are so conscious of data cost. Any app that uses a lot of data doesn't get significant users. There are a lot more people on Facebook because of their "offline" features. During school closures due to the lockdown, a lot of schools were using WhatsApp voice for remote learning due to data cost.

Another major challenge is power. I had my staff working remotely and sometimes they tell me they haven't had light for a few hours, they're

waiting for them to put on the gen so they can charge their laptop. Smart devices use electricity either direct or through batteries and those batteries need electricity.

It is the same thing with my children doing online classes and then in the middle the teacher is off because they have taken light in her place. So, light is the major challenge. If we are to leverage on EdTech on a large scale in Nigeria, we will need to address the power issue.

Smart phone penetration in Nigeria is estimated at 13% while personal computers is 4%. Most people don't have access to a smart device needed for EdTech. We need affordable smartphone/smart devices to help people get online.

If we can solve these three issues, we will see a major explosion of technology in Nigeria

Remote learning is creating a lot of excitement, but it has a greater disadvantage. The less privileged kids who can't access remote learning, what should we do about that?

Titi Adewusi: Those are the people that are most impacted. I must commend the government for some of the things they have been doing. They have used radio, tv and it's not just in Nigeria all over the world. I do not know any country that have all the children using devices or doing 100% online learning. A lot of them

have children in various communities that do not have devices or access to the internet.

The government has used radios, TV, WhatsApp group, little clusters, providing worksheets, anything they can do depending on the peculiarities of the area some.

In the short to medium term, we must see how to create clusters whereby people can have access to devices, we can provide solar panels for them so that they can have access to light to charge their device and local area network because it does not have to be data, you can use raspberry, PI, create a local

In the short to medium term, we must see how to create clusters whereby people can have access to devices, we can provide solar panels for them so that they can have access to light to charge their device and local area network because it does not have to be data, you can use raspberry, PI, create a local network number 20, 50, 100 devices can connect to.

Govt needs to give internet Service Providers the needed incentive to drive this not just in the urban areas but especially in the rural areas.

Access to fast, affordable broadband is mission critical. There are a lot of things we can do through widespread affordable broadband. It is so critical to drive remote/online learning as well as support EdTech. With fast affordable broadband, people can access world class education that will improve productivity of the labour force and drive economic growth. It will also create new businesses and allow

We need to have a vision and a detailed plan to achieve this. The government working with various individuals and corporates can help make this become a reality faster.

What is next for your EdTech start-up?

Titi Adewusi: It has been an exciting time for our business post lockdown. We have seen more

corporate partnership to help drive providing our educational content to children both home and abroad. Also, we recently partnered with Google on its Read Along App which allows us tell African stories to children all over the world.

With more school embracing online learning and blended learning, we have seen an increase in demand for online/digital education content which is the space where 9ijakids operates.

Our focus is how to expand and take our content to other African countries and indeed the world. We are increasing exploring various partnerships with other Edtech organisations and Corporates to continue to deliver world class educational content that will equip the African child with 21st Century skills needed to be successful leaders, entrepreneurs and game changers in the 4th Industrial revolution.

TITI'S PROFILE
Titi, Co-Founder, 9IJAKIDS. ; an EduTech company founded by three Nigerian sisters, all passionate about revolutionizing the learning experience of kids, through play, repetition, and practice using fun learning games. 9ijakids has developed an online and mobile platform that helps children ages 3-13 years understand and retain knowledge as well as excel in their academics using interactive fun games. 9IJAKIDS is passionate about revolutionizing the learning experience of kids, using fun learning games. Through its learning games, it is bringing digitization and learning to the African child worldwide.

Recently, 9ijakids partnered with Google to help more kids learn through Google's Read Along app. 9ijakids was among the top 10 finalists at the Union Bank Edtech Challenge 2019.

In 2019, Titi was a finalist at the Africa-UK Tech Female Founders organized by the UK government. Titi was also selected as one of the Leading Ladies Africa 100 inspiring women in 2020.

Titi has a BSc in Mechanical Engineering and is an

experienced business and management consultant, with over 18 years experience. Titi started her career working in the banking sector before she joined multinational audit and consulting firm, KPMG. There, she spent over 11 years, rising to the position of Senior Manager leading business advisory & solutions with clients across several industries. Titi then spent 6 years building a multi million-dollar hospitality, & fast-food restaurant as a member of the Executive Management team, and a key leader in the multiple success stories of the franchise.

Titi has been a volunteer teacher for over 15 years and is currently the Chairperson of Bethesda Child Support Agency, an NGO that provides free education to children across poor & undeserved communities across sub Saharan Nigeria. She also sits on the board of ROWAA an NGO that empowers widows.

Titi is a contributor to BusinessDay Weekender a weekly business news newspaper in Lagos where she shares on education, family and entrepreneurship.

Nigcomsat has contributed to the broadband penetration, to drive digital transformation'

- MD/CEO, NIGCOMSAT, Dr. Abimbola Alale

In this exclusive interview with one of the TOP 20 CEO's this decade, Dr Abimbola Alale, MD/CEO, NIGCOMSAT shared her thoughts on ways to improve the broadband penetration and her priority in driving the digital transformation. Excerpts.

Congratulations on your 2nd term as MD/CE, can you give us an insight into your 1st term achievements?

Thank you for your thoughtfulness as I give thanks to Almighty GOD for his supports and the opportunity that was bestowed on me to serve my country in this

capacity. Gratitude to Mr President, President Muhammadu Buhari and the Honourable Minister of Communications and Digital Economy Dr. Isa Ali Ibrahim (Pantami) FNCS, FBCS, FIIM.

Back to your question, I can tell you that NIGCOMSAT's achievements during my first term in office is actually within the yearly budget and IGR of the company. Nevertheless, the

organization was able to acquire the latest hub facilities in the industry, provide services to many schools across the nation, provide digital media platform that support digital TV broadcasting, served as spectrum manager to belintersat (Belarus satellite), supports many private companies

in the delivery of turnkey satellite based internet solutions, there are other achievements that are classified based on national security, thereby saving the federal government's from capital flight.

What will be the focus for your 2nd term in office?

infrastructure and satellite backbone infrastructure that the national broadband roadmap can ride on.

The Hon. minister has changed the name of the ministry to what is acceptable and in line with the global practice to suit the trends of the ITU, to Communications and

Digital Economy. He came up with national digital economy policies and national data economy and has continued to push for broadband penetration to accelerate growth and social inclusion. Everything we provide now aligns with those policies. We are continually improving our services. What we are doing now is to improve business processes.



Well, my focus in this second term is to position the company to provide unparallel quality and affordable services that can support the digital economy policy of the federal government of Nigeria, and also to push for additional satellites for NIGCOMSAT Limited with the latest ground control

Can you elaborate on the role NIGCOMSAT plays in the Digital Economy policy of the Federal Ministry of Communications and Digital Economy?

The National Digital Economy Policy comprises of 8 pillars as stated in the policy document by the federal Ministry of

have massive youth unemployment that must be engaged. Government services must be moved from filing cabinets to e-government platforms in the cloud. We have also learnt that for us to have meaningful contribution to wider digital global world, we need STEM - science, technology, engineering and mathematics taught at primary, secondary and tertiary institutions. This is necessary.

The issue of RoW won't go away. Have you addressed this with the state governors? Will high cost of RoW result in high cost of data?

The issue of open access was a very important issue in our industry. The success of voice technology has created fortresses. You have your network. I have my network. You don't share a base station. I have built my based station. You have built your own based station. You don't share. That's unsustainable. It does not make sense.

We have built an industry that was built on success. But we have forgotten that its foundation was weak. Why is it that we have networks and we have ISP, vast operators who are trying to compete in the same market who cannot access the same networks? If we are not careful we will go back to square one. We will have another version of NITEL.

What preempted the issue around open access was the story of the bottlenecks those operators that don't own the middle man infrastructure are experiencing when they want to build their own network. This arose because others will not want them to have access to their networks. It is not the right thing to do.

However, let's address the issue of the Right of Way [RoW]. We will come back to multiple taxes but RoW was arbitrary. Who suffers? The consumers! Because that person was able to negotiate the RoW at a high price and passed the cost to the consumers and at the same time, there is no competitive force that is competing to ensure that the price goes down.

At the National Executive Council meeting in 2013, which ATCON members had with the minister of communication then, we told the governors that we need a harmonised rate. The evidence was provided that if we task infrastructure upfront, investors will not come into the country. Because if I'm bringing a certain amount of fund to invest and more than 50% of the fund has gone into administration, where is the fund to build infrastructure?

We are talking about equipment and not cement business, which you can add sand to get concrete. You can't connect fibre cable to a base station because the rate of RoW is exorbitant. Without realization, the idea of Infocus was built. It further opened access forum on the proviso that Internet Service Providers [ISPs] are able to access the middle man with capacity and then translate the lower price to the consumers.

That battle has taken us to 2020. Now the current Minister of Communications and Digital Economy and a member of ATCON, who was the chairperson for the Nigerian Broadband Plan 2020/2025, with the Executive Vice Chairman of Nigeria Communications Commission [NCC] had to visit the Nigerian Governors Forum [NGF] and

pleaded the case. With that move to the NGF, they could refer to the 2013 meeting where the current chairman of NGF attended seven years ago.

What has happened after the initial meeting?

Seven years later, that same person is now NGF chairman. He saw the merit back then and we commended his leadership and others that have followed. Even better, the 145/linear metre, and in one case the N1 per kilometre, we didn't ask for. He asked for a metre. But he gave N1 per kilometer. Anambra and Kaduna States waived the tariff. We commended the states because if it wasn't for the move by Ekiti State Governor Kayode Fayemi, now NGF chairman, we will still be discussing the issue of RoW.

For us, as a body, we are concerned because our members are licensed owners who are seeking RoW at abnormal rates. Now the pressure is on them because in some of the regions, some governors have been moving in. Imo States, for instance, have been moved. We are happy. We'll like others to follow suit. But I'm sure that some governors are aware of their colleagues' moves.

And if there is a business plan or a case presented, or if it is demonstrated, that dropping of RoW doesn't use internally generated revenue [IGR] or taxes or use them in employment. I am sure any meaningful governor will also adopt the harmonised RoW of N145 per millimetre for digital infrastructure deployment which is much needed right now.

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FG Approves Virtual Engagements for MDAs, parastatals and government-owned companies

The Federal Government at its Executive Council meeting has approved the policy on virtual engagements for the public service. The approval was made at its meeting on October 14, 2020.

A statement signed by the Dr Folashade Yemi-Esan stated that the COVID-19 pandemic has led to a sudden migration of official meetings from the conventional physical meeting format to virtual platforms.

“Much as these changes were welcome, provision was not made for such meetings in the public service rules.

“This policy on virtual engagements for the public service was therefore developed to legalize as well as provide the framework and standards within which Ministries, Departments, Agencies (MDAs), Parastatals and Government-owned companies can use virtual engagements as an administrative procedure in the Public Service”.

The policy would institutionalize the use of virtual platforms for effective and efficient service

delivery and encourage remote collaboration among stakeholders, including the private/public sector, individuals and international

Therefore, the Minister of Communications and Digital Economy, Prof Isa Pantami has urged all MDAs, parastatals and government-owned companies to familiarize themselves with the provisions of the Policy and ensure full compliance. To ensure the interoperability of technologies adopted for inter-governmental meetings, government institutions at

organizations.

Aside from this, the statement said the policy would also effectively adopt and deploy digital technology for virtual engagements in order to improve service delivery in the public sector and enhance learning and manpower development across the various Ministries, Departments and Agencies (MDAs) in order to create a smart workforce among others..

the State and local government levels are encouraged to adopt the policy.

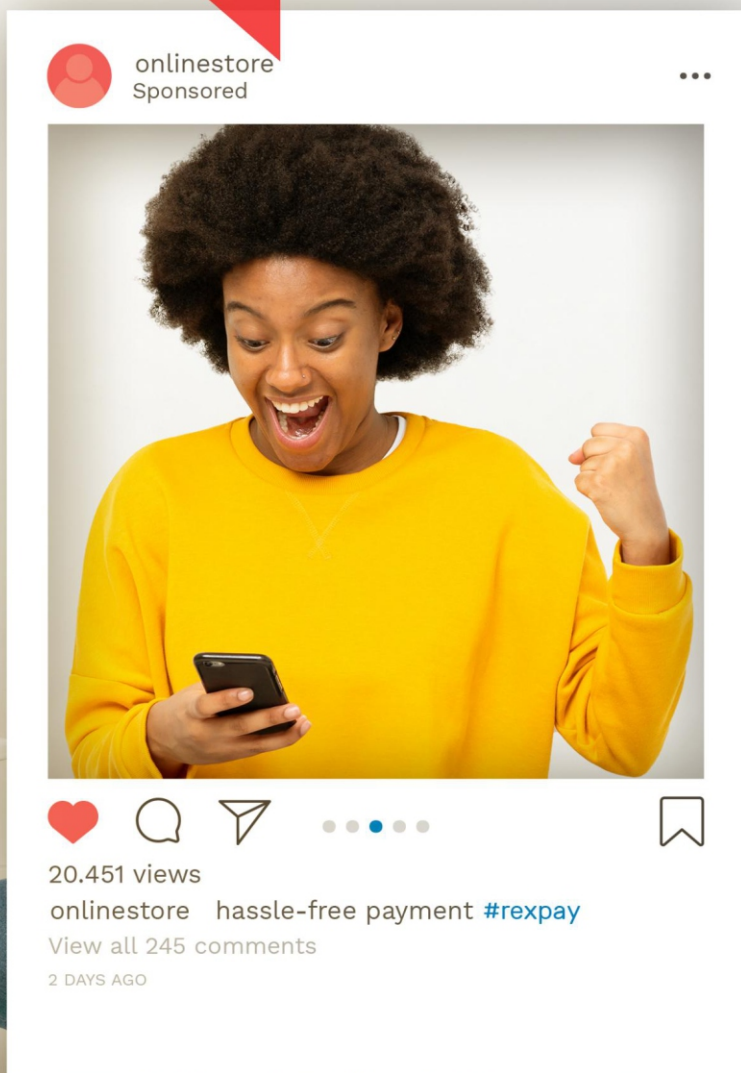
“The implementation of the policy will improve service delivery in the country and will support in the implementation of the National Digital Economy Policy and Strategy for a Digital Nigeria and will be supported by subsidiary legislation from our regulatory parastatals supervised by the Ministry”, she said



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Why Telecoms Pay about 39 Different Levies and Fees in Nigeria

- Engr. Olusola Teniola, Immediate Past President of ATCON

In this exclusive interview with one of the TOP 20 CEO's this decade, Engr, Olusola Teniola, Immediate past president of the Association of Telecom Companies of Nigeria (ATCON) shared his thoughts on ways to improve the broadband penetration in Nigeria. Excerpts.

As the President of the umbrella body of telecoms in Nigeria, how do you rate the industry? (President till Summer of 2020)

The telecom industry did not start in 2001 when GSM license was given out as Digital Mobile Licenses (DML). To assume so will be missing the importance and contributions of those that came before the GSM licensing was awarded. I am going to say that if it wasn't for the feats of ATCON's past presidents, there would not have been a regular term in the NCC. So, that was the first task.

So, as a body, we did well in the early beginning. We were quick to realize that the regulatory directives of Ofcom in the UK were very unique to our situation in Nigeria. Again, we commenced our regulations then. Those that were part of it joined the NCC Act 2003 because it created a voice revolution. The voice revolution impacted our society tremendously in no small way.

It's easy now to say that the mobile device in the hands of many people is one of the most important appendages to the human body, which was the case in 2001. Nigeria started with 500,000 fixed line subscribers. We now have 188 million subscribers. It has meant

that the creation of the financial services industry relied on our platform. It has changed the way youths and grandparents communicate.

You don't think the coronavirus pandemic has got something to do with it?

Covid-19 has also demonstrated



the importance of this infrastructure that was built on the voice revolution. Because in the last three months we have been on lockdown and people are still able to carry out some form of business transactions, and young people have started using e-learning to engage with the teachers. I think the industry deserves a huge round

of applause for not experiencing any outage during this period. There are other institutions that had different outages then.

Secondly, we have also ensured that our members were able to give palliatives. We have built isolation centres in conjunction with the Nigeria Centre for Disease Control [NCDC] and give millions of citizen free SMS and special numbers and ensure that the prioritization of government's request to reach the poorest got the deserved attention.

What did ATCON members do differently during this period?

We have also learnt that our networks need to be built differently in preparation for the future. What is the future? It is the digital economy. I am proud that we as an industry, despite the challenges, were able to demonstrate that with all the obstacles that are prominent in our society in terms of doing business, we were able to render services to the vast majority of Nigerians.

We have learnt that we need to bring the internet to every Nigerian. We also understand that implementation of Nigeria broadband plan on 2020/2025 must be expedient because we



financial system is a messaging system, whether it is a switch, MasterCard or visa.

But when you use the Blockchain, do you know what it means to move a virtual asset that leaves your phone? If I take your picture and send it to your phone, I will still have that picture on my phone. If I send music to you, I will still have a

file copy of the music on my phone. But it is not like that for money. Someone created a virtual technology where value can be moved. If you think about technology, you would find a use for blockchain technology. We engage in knowledge sharing and awareness sessions for clients. We can also use it to vote during an election. But such things can never



fly in Nigeria because it cannot be rigged. Even the person who set it up doesn't have the final say on the system.

Digital Encode's CTO and COO have been nominated as Outstanding Cyber Security Experts. What does this mean to the company?

Dr Obadare - When we receive an award, it authenticates our core values. It tells us that society is experiencing our impact. It places more responsibility on us. If our core value is appreciated, it means that we have to do more. We know we want to be the number one technology company in Africa. This mandate is motivating us. All the glory goes to the almighty God. What this award is telling us is that we have conquered this decade. And we are fully prepared by the grace of God to face the next decade through offering total quality services to the clients we serve.

Dr Seyi - When we set up the business years ago, we didn't know that we are going to be celebrated like this. To whom much is given, much is expected.

It's futile to think anyone can stop cybercrime - Digital Encode Directors

We had an exclusive interview with the duo of Dr Adewale Obadare (Chief Operating Officer) and Dr Oluseyi Akindeinde (Chief Technology Officer) of Digital Encode. The directors explained that no one can stop cybercrime, as it is a \$5 trillion worth industry. Excerpt.

The climate has changed with the coronavirus pandemic. How has Digital Encode fared?

Dr Obadare - The coronavirus is a disruption to businesses. The reason we are still here is because we have a founding principle, which we have stuck to since we commenced business. We have over 20 staff. The principle is that every year, we attend a strategy retreat and at the session, we plan for the New Year.

Dr Seyi - When we started, we agreed we will take care of our staff. Some quoted companies think about the shareholders first. We take care of our staff first. They have also been taking care of our business as well.



Digital Encode has the Data Protection Compliance certification. What does it mean?

Dr Obadare - The apex body that is responsible for the regulation of data protection and privacy, National Information Technology Development Agency [NITDA], required that specialized organisations that have the knowledge of data protection and privacy should undergo rigorous requirements under NITDA before becoming a Data Protection Compliance [DPCO]. It means as a business you are responsible to work with organisations and help them to put in place process, structure and procedure around data protection and privacy. Right now, we are working with many organisations to prepare them for the data protection and privacy protocol.

What is the compliance level of Nigerian business with the Data Protection and Privacy?

Dr Obadare - Data protection and privacy are still nascent in Nigeria. Look at the financial sector, the banks have grown. They have done so much in cybersecurity. Data privacy is the legal part. The



protection is the technical part. That is what all the banks are doing. The privacy part means that any data that I share with any institution must be used for its purpose. That institution is obligated to protect my data when using it for obligated purposes. It is a dual responsibility for both organizations. There are many things for companies to do to be compliant through NITDA. NITDA has given the deadline, which is July. Organisations are responding and working with Data Compliance Organisations [DCOs] in the country to ensure that things work well. We need to be careful. What most companies are doing is filing. It is not the same thing as compliance. You need to look at



our environment to make sure that we have all the requirements. As a company, before you engage a DPCO you need to check your data privacy and protection. You must engage in a data readiness assessment. During that period you will know where you are. Are you good or average? This helps you to know where to improve. It is beyond documentation. Check your environment. Ensure that you are doing the right thing. Put in place the culture of data privacy and protection.

Dr Seyi - Social media is here to stay. Every time there is a disruptive system, others must build on it. So, we have the internet. Social media is built on the internet. It is taking many people out of circulation. It is also bringing others into circulation. Many politicians are using social media to send information. This interview could have been held via Zoom or another platform. The business dynamics has changed. As a B2B firm, we leverage the power of social media. It is easy to reach many people. In 2003, when we started the business, our marketing was done via the traditional method. We used

newspapers, radio and fliers. A handbill's reach cannot be measured. You don't know how many people read the message. You cannot tell if the handbills were distributed or not.

On the other hand, on LinkedIn, we know the demography of those who viewed our posts. Businesses can tailor their marketing efforts, business development strategy and service offerings through social media. Now, we use social media for staff recruitment. We no longer place traditional advertisements. Social media is helping some experts to make money. The payment companies also employ social media influencers to engage customers and attract patronage. Technology is here to stay. We have to use it effectively in a positive way. Anyway, people are using technology for different reasons. Some people use it to clone different social media accounts. The truth is that technology and social media will not defraud people. It is people that will defraud people.

How can the federal government strengthen existing cyber laws?

Dr Obadare – As a company, we have created institutional awareness for the Nigerian environment in the past years. There is a proliferation of the internet. The next buzz is digitization and automation. Many people and businesses are embracing the digital space. This will attract cybersecurity challenges. Technology enables every aspect of our life. As you leverage the power of technology, it comes with risks. You need safety measures when using technology.

The internet is a public place. Protect yourself. Install antivirus in your gadgets. Install a licensed antivirus to protect those gadgets. Do not install antivirus downloaded from the internet. A licensed antivirus will protect your gadgets. Cybersecurity is a big subject. It can be seen from different perspectives. It affects an individual, a business and the nation. On an individual level, protect your internet protocol. In terms of technology, there are specifics. A verified account does not mean it is authenticated. The verification means it is Barack Obama's account. It is his identification. This is different from authentication. Beyond identifying yourself, without a verified account, you need a two-factor-authentication. It is something you know, something that you have and something you have had together.

You have a password. You have a token. They are on all social media accounts. Build immunity around yourself in the public space. If you are working from home because of the Covid-19, work through the

Virtual Private Network. These are technical controls that are part of cyber hygiene. Nobody can stop cybercrime. It's an exercise in futility to think that you can stop cybercrime. There is a report that says that by 2025, the industry will be around \$5 trillion. The hackers know where the money is. What happened in Dubai concerning Hushpuppy is an example. The youth now have a sense of entitlement. They do not believe in the concept of hard work. What to do is to create measures and controls to curb cybercrime.



Before now, Nigeria had no cyber law. But now we have a cyber-law. There is a need for massive capacity development among the lawyers and judges. If a scammer steals \$40 million a judge sentences him to a three month imprisonment, it motivates the youth to commit worse cyber-crime. The judges need to consider the impact of the cyber-crime. People are dying because they have been fleeced. Cybercrime is a matter of life and death. We need to enforce the law. To enforce the law, enforcement agents need more training and capacity building on cybercrime.

Blockchain technology has become a buzzword. Please shed light on this technology?

Dr Seyi - Blockchain technology has not been adopted because people don't understand it. It's not a virtual currency. It is not a cryptocurrency. It is analogous to the internet. At the advent of the internet, people did not understand it. Even till now some people still don't understand what the internet does. The man who built the Blockchain knew it would not work unless they lay

because they think it will take away their jobs. During this pandemic, MasterCard, PayPal, Visa and Microsoft are now enabling Blockchain technology because you cannot argue with a fact. You can only argue with beliefs and opinions. Nigerian institutions should first disrupt themselves. There are some Nigerian banks that are still thinking about Blockchain technology. Even the Central Bank of Nigeria [CBN] has not taken a decision on it. When the internet came to Nigeria, it took many companies time before they plugged into it. They wondered why they place their server on the internet. But it is not about placing your server on the internet. It is about placing your business on the internet.

Technology will make you money. It will save you money. It will give you a competitive advantage. If it is not doing any of those things, you can't call it technology. How can you detect a drug is fake? If it has the National Agency for Food, Drug, Administration and Control [NAFDAC] number on its package. But NAFDAC, as an organisation, can adopt technology, which the drug manufacturers would adopt. Conducting an internet banking transaction is like sending an email. You have not moved value. You have only sent a message. Mobile banking is like a messaging system just like an email. An email can boomerang. Also, banking transactions can fail. That is why when the protocol of the Nigerian Inter-Bank Settlement System [NIBSS] is down, you cannot activate any transaction because you are not moving value; you are pushing messages. So, the