A Compendium of 38 Selected Speeches On Developing The Nigerian Digital Economy (Vol.II)

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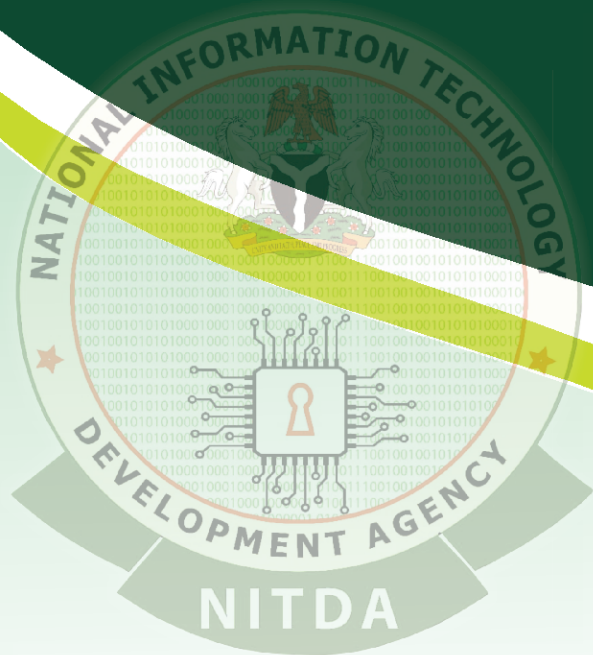**24** PUBLICATIONS **21** CITATIONS

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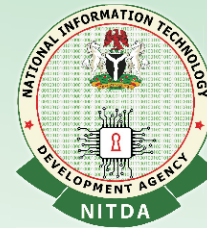Some of the authors of this publication are also working on these related projects:

CONVOCATION LECTURES View project

Internet of Things (IoT), Open Government Data View project

NATIONAL INFORMATION TECHNOLOGY DEVELOPMENT AGENCY

SELECTED SPEECHES ON DEVELOPING THE NIGERIAN ICT SECTOR

BY

ISA ALI IBRAHIM PANTAMI, PhD, FNCS, FBCS, FIIM

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SELECTED SPEECHES OF DEVELOPING THE NIGERIAN ICT SECTOR BY ISA ALI IBRAHIM PANTAMI, PhD, FNCS, FBCS, FIIM

TABLE OF CONTENTS

8.	Fifth Covenant University Conference on e-Governance in Nigeria	June 6, 2018	e-Government for National Democratic Consolidation and Transformation: Agenda Setting for the 2019 Election and Transparency in Governance	60
9.	Senior Course 40 Students and Staff of the Armed Forces Command and Staff College	June 7, 2018	Cyber Security Operations in Counter Terrorism and Counter Insurgency	67
10.	Stakeholders' Workshop On National Mobile Position Data Analytics Platform Strategy	25 June, 2018	Address	79
11.	2nd Cyber security Conference organized by the Senate Committee on ICT and Cybercrime	June 28, 2018	Keynote Speech on Cyberspace and National Development	88
12.	(Speech of Tour of the Silicon Valley)	July 9, 2018		96
13.	1ST Africa Information Communication Technology Alliance (AFICTA) e-Conference	July 19, 2018	Tackling Incessant ICT project failure through effective regulations	102
14.	Arewa Tech Talk	July 21, 2018	Emerging Fourth Industrial Revolution (4IR)	115
15.	The ICT Impact CEO Forum and Africa Digital Awards	July 27, 2018	The National IT Policy: The Role of the Private Sector, Government and Media	120

16.	2nd E-Government Capacity Building Program for CEOs Of MDAs	August 9, 2018	Opening Address	128
17.	58th Annual General Conference of The Nigerian Bar Association 2018	August 29, 2018	Technological Disruption	133
18.	2018 Nigeria Association of Computer Science Students (NACOSS) Northwest Zonal Conference	3 September, 2018	Information Technology and The Nation's Development: The Role of Youths	143
19.	Opening Ceremony of The International Conference on ICTA 2018	5 September, 2018	Goodwill Message	149
20.	Commissioning of The Digital Job Creation Centre At Voice Of Nigeria	6 September, 2018	Remarks	153
21.	10th Annual Conference of ISACA, Abuja Chapter	11 September, 2018	Security and Privacy: Towards The Development of A Vibrant National IT Governance Structure	157

22.	Effective Regulation for Investment In Nigeria's Thriving ICT Sector	12 September, 2018	Speech	167
23.	Invitation at Gombe Students Association [GOSSA] Ahmadu Bello University, Zaria	15 September, 2018	Prospects of ICT In Entrepreneurship and Youth Development	176
24.	Lecture Delivered To Participants Of The Senior Executive Course No. 40, 2018 At The Main Auditorium, National Institute For Policy And Strategic Studies, Kuru	Friday, 21st September, 2018	Strengthening Internal Security Framework And Community Policing In Nigeria: The Role Of Ict	182
25.	5th Edition of the Nigeria Mobile Economy Summit and Expo - NIMES 2018	11 October, 2018	Acceptance Speech and Goodwill Message	194
26.	2018 Edition of the Nigeria Tech Innovation & Telecom Awards (NTITA)	12 October, 2018	Acceptance Speech and Goodwill Message	198

27.	Africa Investment Forum at Dubai World Trade Centre	17, October, 2018	New And Evolving Opportunities In The Nigerian ICT Sector	201
28.	Inaugural Meeting of The Governing Council of The Nigeria E-Government Interoperability Framework (NE-GIF)	22 October, 2018	Welcome Address a nd Inaugural Speech	210
29.	Rfid & Wireless Iot Tomorrow 2018, Darmstadtium, Schlossgraben 1,64283, Darmstadt, Germany	31st October 2018	Developing An Rfid & Iot Ecosystem And Investment Opportunities In Nigeria	215
30.	The NITDA Press Conference 2018	1 November, 2018	Remarks	229
31.	eNigeria 2018	5, November, 2018	Welcome Address	252
32.	Africa Digital Economy and Technology Forum (ADETF)	14 November, 2018	Goodwill Message	260
33.	The Electronic Campaigns and Marketing Summit (eCAM 2018)	15-16 November, 2018	The Role of ICT in Electoral Process Management and Marketing Communications	265

34.	Nigeria Computer Society's 40th Anniversary and National Information Technology Merit Awards (NITMA)	16, November, 2018	Speech as a Special Guest of Honor	272
35.	First Develop Ondo Week, Akure	21 November, 2018	Keynote Speech delivered on behalf of the Vice President	282
36.	2018 SKICAN/KOICA Annual Gathering Event	22 November, 2018	A Goodwill Message	289
37.	The 10th Edition of Startup Friday-SUF Abuja.	4 December, 2018	Remarks	294
38.	The 2nd National Anti-Corruption Conference And Awards Organised By The Youth Development And Moral Rebirth Initiative At Arewa House, Ungwan Sarki, Kaduna	Saturday, 8th Of December, 2018	Paper Presentation	299

Nigeria's Digital Transformation Agenda: NITDA's Vision and Strategy

BEING KEYNOTE SPEECH

BY

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AT
THE 11TH INTERNATION CONFERENCE ON THEORY
AND PRACTICE OF ELECTRONIC GOVERNANCE
NATIONAL UNIVERSITY OF IRELAND, GALWAY,
IRELAND

WEDNESDAY, 04 APRIL 2018

May Peace, Mercy and Blessings be upon you all.

[Protocol].

I am very pleased to welcome you to the ICEGOV 2018 and I am highly delighted, humbled and honoured to be here to deliver a keynote speech on "***Nigeria's Digital Transformation Agenda: NITDA's Vision and Strategy***". NITDA was established in 2001 to implement National Information Technology Policy, give effect to provisions of the NITDA Act, 2007 and coordinate general IT development and regulation in the country. Furthermore, NITDA is mandated to serve as the clearing house for all IT projects and infrastructure in the public sector. It is the prime Agency for e-Government implementation, Internet governance and general IT development in Nigeria. The opportunity given to me at this conference presents me with a unique opportunity to tell our story as a country both in terms of achievements, challenges and the journey towards government digital transformation. At this digital age with increasing proliferation of new technologies, going digital for any government is the optimal route to attain Sustainable Development Goals (SDGs). This is the more reason why all countries across the world including African countries have started to incorporate digital technologies in their

governance strategies for effective delivery of mandates. As a result, there has been tremendous shift in the way governments conduct businesses and interact with people.

This justifies the global trends in governments in the last two decades where there has been increasing application and integration of ICT into governance reforms. This concept is basically termed e-Government. e-Government is central and fundamental to our government digital transformation agenda. e-Government has been recognized as a major driver of government transformation in all aspects. Much progressive results about the role of ICT for development are evident from clear indication of ICT's impact on OECD countries and some dramatic results from few pilot projects in developing countries. The 2016 United Nations' e-Government Development Index (EGDI) report recognized e-Government as a development resource and a tool to achieve sustainable development goals. The correlation between the economy of a nation and ICT or e-Government development is evident in the report. The United Kingdom, Australia, Republic of Korea, Singapore and Finland are the top five. Nigeria is ranked 143rd. Gone are the days when a nation's development is determined by the number of its natural resources. Natural resources are no longer sustainable as a means of economic and sustainable

development for a country. Corruption, over-dependence on oil for long time and negligence of sectors of the economy caused Nigeria a painful experience of economic recession in 2015-2016. The federal Government of Nigeria realized this fact and came up with the Economic Recovery and Growth Plan (ERGP) with ICT as a major enabler. Therefore, there is no better time to diversify the economy than now and use ICT to drive every other sector of the Nigerian economy including governance.

It is a known fact that e-Government and ICT tools can among other things, reduce corruption and cut down the cost of governance; enhance access to quality of service; improve government policies' performance; reduce the burden of regulatory compliance; render public agencies more transparent and accountable; increase public service productivity and transform government. Nigeria as a developing country has her own share of good experience of e-Government or ICT adoption to streamline and improve government business activities. Such good experience where Nigeria has recorded success in using ICT to drive government policies can be found in Treasury Single Account (TSA), Integrated Personnel Payroll Information System (IPPIS), Government Information Financial Management Information System (GIFMIS), Bank

Verification Number (BVN), e-Taxation, e-passport, e-wallet for farmers, business name registration automation by Corporate Affairs Commission CAC among others. Presently, ICT contributes over 10% of the nation's Gross Domestic Product (GDP). The implementation of TSA and IPPIS/BVN saves Nigeria $11.3M and $56.3M respectively every month. The Nigerian government is becoming more complex and wide-reaching than ever before and citizens believe and expect that public services must be delivered effectively and at speed. Therefore Government Digital transformation is strategic to sustainability of the country.

The good experiences mentioned earlier are part of the few successful silo e-Government initiatives in the country. Digitally developing and transforming government as a whole is not an easy task knowing fully our peculiarity as a country. Implementation of e-Government must be holistic and integrated before government digital transformation can be experienced. However, e-Government adoption and implementation in Nigeria naturally faces a lot of challenges ranging from inadequate basic infrastructures such as electricity, broadband and other digital technologies to insufficient human capital and the required skills to effectively implement and utilize e-Government solutions; inadequate and unenforceable regulations and lack of e-

Government laws to unsuitable and weak institutions; poor coordination of government policies, programs and services to inadequate finance for e-Government projects as a result of competing investment demands; silo deployment of IT systems and lack of government-wide shared infrastructure and services are among others. These challenges must be tackled creatively.

Having realized the opportunities e-Governance could afford our development strides especially our sustainable development and the challenges e-Government implementation could face as a country; something must be done to ensure we fundamentally change our approach and have a rethink of e-Governance implementation. ICT needs to be integrated into all development and transformation options, reforms and plans. This necessitates THINKING GLOBALLY and ACTING LOCALLY attitude. These opportunities and challenges have necessitated NITDA under my leadership to refocus based on a new strategic roadmap with the following key priority areas:

1. Government Digital Services Promotion
2. Regulation
3. Capacity Building
4. Digital Job Creation
5. Local Content Development

6. Cybersecurity
7. Digital Inclusion

Five of these focus areas are geared towards government digital transformation. They are capacity building, government digital services promotion, cybersecurity, IT regulation and local content development and promotion. This led to the creation of the e-Government Development and Regulation department in NITDA to champion the implementation of the shared vision in collaboration with our stakeholders. My vision in NITDA is to facilitate and lead government digital transformation and ensure NITDA plays a critical role in building a digitally transformed government. We want to create enabling environment through programs and initiatives that would facilitate the full adoption of ICT for effective governing processes, policies and services integration to ensure better service delivery. We are committed to ensuring the required ICT skills are developed in the public service, government digital services are promoted and IT procurement and deployment in public sector are properly coordinated and regulated. Furthermore, our strategy in collaboration with relevant stakeholders is targeted at ensuring silos are broken in our government IT systems; laying a foundation for an agile, citizen-centric, smart, innovative and collaborative government. We are

ready to facilitate a transparent, accountable, engaged, locally responsive and globally competitive government through the adoption of ICT in governance; ensure result-oriented public-people-private partnership for digital services; build an inclusive information society and knowledge-based digital economy. What might interest you, distinguished ladies and gentlemen, is how we intend to achieve this.

We are aware, the vision might be difficult to achieve, but we strongly believe it is attainable by doing the right thing and doing things right, through collective determination and commitment, strong political and leadership will. We believe the transformation is a process and we have strategically positioned ourselves for this change. We have started by building a strong foundation through IT regulations. We are developing IT standards, guidelines and frameworks to be leveraged upon for building a highly integrated, efficient whole-of-government. We are developing investors' friendly initiatives and regulatory frameworks to create an enabling environment and open up market for IT procurement in the Ministries, Departments and Agencies of government. We are entering into strategic partnerships to build efficient and sustainable IT infrastructure across government and deliver services across multiple channels for service takers.

To thinking globally as mentioned earlier, we realized that the government must build what is called foundation for execution which is the IT infrastructure and digitized business processes automating the government core capabilities to digitally transform itself for effective service delivery. The foundation for execution has three components which any government must learn. First of these is the government operating model which articulates how the government is going to adapt and use IT to drive its businesses and different sectors of the economy. Second, government enterprise architecture which ensures people, processes, technology and other resources are better aligned as we build IT infrastructure through standardized and consolidated technology platforms for digital transformation. Government enterprise architecture should encourage shared IT infrastructure, service reusability but discourage duplication. Finally, an IT engagement model that governs IT behaviour in order to ensure IT projects achieve their objectives. It also entails effective e-Government project management. Effective foundation for execution is targeted at ensuring reduction in the cost of IT investment with better return on investments; responsive and efficient service delivery; and ultimately ensure IT helps build capabilities to be leveraged to drive innovation in different sectors of the economy.

In building foundation for execution, we have initiated a process of developing Government Enterprise Architecture (GEA) with the involvement of IT decision makers, top government officials and major stakeholders. Digital transformation involves back-end office re-engineering, IT infrastructure standardization, consolidation and integration of business processes and data across government agencies to enable delivery of effective and consolidated services through the front-end offices at an affordable cost to the citizens. The GEA will articulate how IT is going to deliver these promises efficiently. Furthermore, we have initiated Federal Government IT projects' clearance initiative for proper IT engagement and coordination to reduce duplication of efforts and cost of IT investment in governance, ensure interoperability of e-Government systems, facilitate and enable shared and standardized IT infrastructure, encourage sharing of experience and learning across MDAs among other things. Ultimately, the efforts will spur innovation, enhance MDAs responsiveness to their obligations even in the face of new regulations and policies as well as ensure IT becomes a major driver of economic growth.

To act locally, we are supporting local content development in ICT. NITDA established the Office for Nigerian Content

Development in ICT to enforce guideline for Nigerian Content Development in ICT by ensuring ICT products and services procurement is 100% sourced locally in partnership with foreign counterparts except where such products or services are not available. This office also ensures indigenous ICT companies provide high quality of service. We are enforcing this guideline through MDAs IT clearance initiative. For any IT project to be cleared, one of the criteria is the conformance to the guideline for Nigerian Content Development in ICT. Human capital and the required skills to effectively implement and utilize e-Government necessitated various partnerships on capacity building. One example of such is the partnership with the South Korean Government through Korea International Cooperation Agency (KOICA) to build capacity for e-Government in Nigeria. The partnership entails three components: e-Government Master Plan, e-Government capacity building for civil servants (22,625 to be trained) and establishment of e-Government training centre in Nigeria.

We have also created a special office known as the Office for ICT Innovation and Entrepreneurship (OIIE) to spearhead ICT's contribution to our GDP through "techpreneurs". We are also establishing technology hubs in various geopolitical zones to boost innovations. We encourage start-ups to

develop solutions that can be used as substitutes for government manual processes, enhance delivery of services, reduce capital flight on software and create digital jobs for the teeming youths.

The issue of identity management in the public sector is also a major factor towards the journey of public service digital transformation. We have engineered processes to quickly establish and implement the National Public Key Infrastructure (PKI). PKI is the backbone of national identity management to ensure a rapid digital transformation in in the country. Implementation of PKI will generate a lot of new applications and digital services. We want to earn the trust and confidence of our people and the international community in using our cyberspace and digital services.

Nigeria has joined Open Government partnership (OGP) in 2016. We believe Open Government Data (OGD) as an extension of e-Government is critical to government transparency, accountability and value creation for innovation. We believe opening up quality and non-sensitive government data to start-ups and software developers in standard formats that encourage reuse by applications will speed up digital transformation in Nigeria. NITDA is a co-chair for technology and innovation working group of the

Nigerian OGP. We are playing critical role at implementing OGP commitments as technology and innovation cuts across all the thematic areas. We have come up with a paper on model and architecture for sustainable Open Government Data Portal which is to be presented here tomorrow on paper session 9.

To increase the tempo and ensure balance in supply and demand for technology adoption, we have intensified tailored awareness and sensitization programmes through press releases, capacity building, workshops, seminars and conferences in different areas of technology usage targeting various categories of stakeholders and service users. We are also building strong public-private partnerships (PPP) that is based on win-win business and outsourcing models and ensuring e-Government services are citizen-focused and less transfer of transaction cost on citizens.

My dream again as the country's Chief Information Technology Officer is to lay the foundation for digitally transformed government by ensuring application of ICT turns our financial constraints to financial freedom; poor public services to improved and satisfactory services; widespread of corruption to transparent and accountable government; and information poverty to knowledge-based

economy. Government transformation is a must, it however requires concerted efforts. We can't do it alone; we have been seeking the support and cooperation of MDAs, IT industry, local and international development partners, National Assembly, technology giants like Microsoft, Google, Oracle, Samsung, Nokia, CISCO, etc. Nigeria with about 180 million people is full of opportunities yet untapped. We are sure that these opportunities will be more revealed if the government digital transformation strategy is implemented.

I will like to stop at this here and I hope the keynote will avail us the opportunity to share ideas with our colleagues on the next panel discussion.

I thank you for your attention.

Isa Ali Ibrahim Pantami, PhD, FBCS, FIIM
4th April, 2018

ADDRESS

BY **ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM**

DIRECTOR GENERAL/CEO

NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)
AT

THE e-GOVERNMENT CAPACITY BUILDING
PROGRAM FOR CEOs of MDAs

Date: 17th April, 2018

Venue: International Conference Centre

PROTOCOL

It is my pleasure to welcome you all to this Strategic e-Government Capacity Building Workshop for CEOs of MDAs. The aim of the workshop is to support executives in reducing the rate of failure for ICT projects and sensitize participants on the Nigerian e-Government Agenda which seeks to enhance the transparency, efficiency and quality of government services. As Executives in our various institutions, we are constantly challenged to deliver better government services in the midst of shrinking resources. The success of the current administration depends a lot on how well we are able to deliver government services that are efficient, transparent and convenient to the citizens, businesses and other government institutions we serve. We are responsible collectively for improving the economy and making Nigeria globally competitive with sustainable growth and greater social inclusion. We are challenged to increase access, scale, coverage and convenience of our services. The resources available are overburdened and hence we must consider the transformative potential of ICT. It is imperative for Nigeria to be transformed, citizens to be engaged, rights to be protected and institutions strengthened through the use of information and communications technology. Through electronic governance we can

transform internal and external public sector interaction, create new channels to deliver value while keeping all stakeholders informed on institutional roles and responsibilities. Ladies and gentlemen, the goal is to use ICT to enable your organisations to succeed. We are not just pushing for the adoption of technology. This workshop was organized to enable us to share common vision and be able to collaborate in this strategic initiative. The specific objectives of this are as follows: 1. Effectively utilize ICT to improve the quality of service rendered to citizens, businesses and other governmental institutions; 2. Monitor, manage and successfully deploy ICT projects within their respective MDAs; 3. Ensure efficiency in the delivery of government services to citizens, businesses and other governmental institutions; and 4. Effectively reduce the volumes of failed ICT projects within their organization and the country. We are all aware of the key role ICT is playing in supporting the current administration's change agenda especially in fighting corruption, improving security and economic transformation through diversification. Nigeria has recorded success in using ICT to drive government policies as evident in the Treasury Single Account (TSA), Integrated Personnel Payroll Information System (IPPIS), Government Information Financial Management Information System (GIFMIS), Bank Verification Number

(BVN), e-Taxation, epassport, e-wallet for farmers, business name registration automation by Corporate Affairs Commission CAC among others. Presently, ICT contributes over 10% of the nation's Gross Domestic Product (GDP). The implementation of TSA and IPPIS/BVN saves Nigeria $11.3M and $56.3M respectively every month. The Nigerian government is becoming more complex and widereaching than ever before and citizens believe and expect that public services must be delivered effectively and at speed. Therefore Government Digital transformation is strategic to the sustainability of the country. The National Information Technology Development Agency through its mandate seeks to promote e-government initiatives for improving National competitiveness, openness, collaboration and resource sharing. NITDA's mandated to: 1. Design and develop standards, policies and guidelines on various aspects related to e-government 2. Encourage and facilitate the formulation of new ICT legislations as well as amendment of existing laws and regulatory framework. 3. Provide advisory services to Agencies of government regarding ICT 4. Play the role of an anchor across various ICT initiatives in different sectors to enable overall development. At NITDA we have identified 7 key priority areas of focus to support President Muhammadu Buhari's change mantra. These include Capacity Building, Local

Content Development, Digital Job Creation, Government Digital Service Promotion, Cyber Security, and Revenue Generation. Various initiatives are currently on-going to achieve these thematic pillars. The Capacity Building Program is one of these numerous initiatives. In conclusion, I wish to express our appreciation to all invited guests who have created the time to be present at this event. I also wish to specially thank our Resource Persons for honouring our invitation. Thank you for your attention.

GOVERNMENT AGENCY OF THE YEAR AND PUBLIC SECTOR CEO OF THE YEAR ACCEPTANCE SPEECH

BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT THE EKO HOTELS AND SUITES

ON

SATURDAY, 28 APRIL 2018

All protocols duly observed.

May Peace, Mercy and Blessings be upon you!

It is my singular honour and privilege to be in your midst today at the Nigeria Communications Week. I am highly delighted about this effort by the Management of Communication Week Media Limited in organizing such an important event to identify and celebrate some of the achievements in the Information and Communication Technology (ICT) sector of our nation.

I feel greatly honoured for my Agency to be awarded the **Government Agency of the year** Award and I am equally elated to be awarded the **Public Sector CEO of the Year**. At NITDA, our vision is to be the prime Agency and catalyst for transforming Nigeria into a knowledge-based and IT-driven economy.

The process of developing the ICT sector as diverse and complex as ours is quite daunting. However, the potential benefits of developing such a critical sector would result in benefits that far outweigh the challenges. A well-developed ICT sector will significantly improve any economy. It will reduce capital flight, create jobs, generate revenue and help to position Africa as a producer of world-class ICT products

and not just consumer of such products.

On assumption of office at NITDA, my team and I identified some key areas that would assist us in developing and regulating the Nigerian ICT sector. These are the 7 key areas that we focused on in 2017:

1. Regulation
2. Capacity Building
3. Local Content Development
4. Job Creation
5. E-Governance
6. Cyber Security
7. Digital Inclusion

Proper regulation makes development easier to achieve. As such, we renewed our emphasis on regulation and developed standards and guidelines for different aspects of the ICT sector. In addition to this, we have put the necessary machinery in place to ensure compliance. Ministries, Departments and Agencies of the Nigerian government now come to us for the clearance of their ICT projects. We do this to ensure that there is no duplication, there is value for money and that the projects are sustainable. This has saved the Federal Government billions of Naira.

The need for effective capacity building efforts cannot be over emphasized. We have trained thousands of our youth in leading areas of ICT and have helped them to develop their entrepreneurial skills using ICT. Our scholarship programme has given our best and brightest a chance to pursue a postgraduate degree in ICT.

NITDA has taken the issue of local content very seriously and it was the theme of E-Nigeria 2017- our annual international ICT Conference and Exhibition. Our commitment to the development of local content in ICT received an endorsement from the highest office in the land and we had the rare opportunity of having President Muhammadu Buhari, GCFR as our Special Guest of Honour at E-Nigeria 2017. We have continued to encourage, celebrate and patronize Made-in-Nigeria solutions but have also ensured that such products meet strict quality standards.

We are tackling the high unemployment rate in the country through the creative use of ICT and are deploying Digital Job Creation Centres across the country. We are working hard to make e-government the preferred platform for government-citizen interaction and we are in the process of implementing the National e-government masterplan to make this happen.

There have been many stories on foreign news channels about how a number of countries unwittingly fall victim to espionage as a result of the ICT products and services that they utilize. We want to ensure that this does not happen in Nigeria and we intend to achieve this by strengthening our capacity to respond to cyber threats. We were proactive in securing the Nigerian Cyberspace and this ensured that the Wannacry Ransomware and similar global threats did not affect us in Nigeria.

We have also taken deliberate steps to ensure that ICT development benefits all categories of Nigerians, regardless of their economic or social status.

I see this Award as a challenge to do more and I am committed to redoubling my effort and that of my team to ensure that we further develop the ICT sector in 2018.

I wish to end these few remarks by thanking you once more for the Awards.

LEVERAGING ICT FOR BUILDING INSTITUTIONS

BEING AN KEYNOTE ADDRESS

BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR-GENERAL/CEO
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT THE BEACON OF ICT AWARDS EVENT

AT
EKO HOTEL AND SUITES, VICTORIA ISLAND,
LAGOS

ON

SATURDAY, 28 APRIL 2018

Protocols and Greetings.

May Peace, Mercy and Blessings be upon you all.
It gives me great pleasure to deliver a keynote address to an august audience at this very important event- the 9th edition of the Beacon of ICT Awards.

Over the years these Awards have celebrated the leading lights in the various spheres of the Nigerian ICT sector. They have also served as an inspiration to both the awardees and the general populace. I use this opportunity to salute the foresight and commitment of the organizers

The theme of this year's award, *Leveraging ICT Value for Building Institutions*, aligns well with the growing movement to use ICT to foster sustainable development in institutions.   This theme is echoed in both the United Nations Sustainable Development Goals (SDGs) and the Economic Recovery and Growth Plan (ERGP) of the Federal Government.

Accountable, inclusive, effective and smart institutions are necessary to achieve the SDGs, whether the goal is quality education, zero hunger, improved healthcare, economic growth or innovation. All the goals are to be driven by

institutions and ICT provides a ready tool to attain these goals.

Earlier this month the Federal Government identified 59 projects under the ERGP and these projects will be executed by selected institutions. The success of these projects depends on the capacity of the institutions and it is important to leverage ICT to strengthen these institutions in order to achieve the broad objectives of the ERGP which are to restore growth, invest in the Nigerian people, and build a globally competitive economy.

ICTs can have a significant impact on the success of individuals, institutions and countries. For example, in the recently published Forbes List of the World's Richest People, 44.52% of the $744.6billion attributed to the top 10 of the world's richest people were acquired through ICT-based businesses. The businesses that account for the other 55.48% also rely heavily on ICTs to drive their business and increase their revenue.

Several countries have leveraged ICTs to transform their economies and have created wealth, employment and opportunities in the process. For example, the *Asian Tigers* (Hong Kong, Singapore, South Korea and Taiwan) are not

really endowed with natural resources but they have compensated for this by using ICT to power their economies. It is interesting to note that in the 1960s many of these economies were comparable to the poorest economies around the world. However, they are now considered to be leading economies in the world and boast of an average per capita GDP of over $50,000.

Our people, institutions and indeed our nation can experience a high level of sustainable development through the effective use of ICT. It is often said that data is the new oil and organizations can now use data to create wealth. Today, an average smartphone can have as many as 10 sensors. We have about 144 million active mobile lines in Nigeria, a sizable portion of which are smartphones, potentially giving us access to large volumes of data. With Artificial Intelligence and Big Data Analytics, such data can be translated into actionable insights for that would lead to sustainable development in the country.

At the National Information Technology Development Agency (NITDA), we recently developed a Roadmap for Developing the ICT sector of the country. The roadmap is based on the following 7 pillars:

1.   Regulation
2.   Capacity Building
3.   Local Content Development
4.   Digital Job Creation
5.   E-Governance
6.   Cyber Security
7.   Digital Inclusion

I will briefly discuss some of the ways that a few of these pillars can enhance our capacity to build institutions that will lead to sustainable development.

On face value the terms regulation and development do not seem to go together. However, in order to truly develop the ICT sector, or any other sector for that matter, it is necessary to have a robust regulatory environment that provides a level playing field for everyone to thrive in the sector. At NITDA we have redoubled our efforts in the area of regulation to ensure that we are deploying solutions that will stand the test of time. The Federal Government has given us the mandate to serve as the clearing house for all ICT projects in the government.

We have a team that handles this mandate with a view to ensuring that every ICT project funded by the government has value for money, is not duplicated, is interoperable with

other relevant projects and is sustainable. We are also developing standards, guidelines and frameworks that will govern how ICT in deployed across the country.

The Federal Executive Council's approval of the National IT Policy led to the establishment of NITDA in 2001. We believe that a well-thought-out Policy can also lead to the development of the ICT sector at the State level. To this end, we have supported several states in the development of their own ICT Policies to enable them regulate and develop their ICT sectors.

The capacity and effectiveness of any institution is inextricably tied to the capacity of the individuals in that institution. As such, the need for a robust capacity building plan is a key requirement for building institutions in the ICT sector. The importance of a digitally literate society cannot be overemphasized as it provides the foundation upon which we can build an ICT-driven economy.

India's elaborate ICT training programme played an important role in not only making them a global ICT hub but also making them a top employment source for global ICT jobs. Today, global tech giants Microsoft and Google have CEOs with Indian origins and, according to the Ministry of

Overseas Indian Affairs, the 25million Indians in Diaspora remitted $72.2billion back home in 2015. I believe that we have the opportunity to create a similar story.

ICTs have transformed the way we learn; we no longer need to subject employees to the traditional learning options within the 4 walls of a school and which cater to a general audience. Today we can provide personalized e-learning and Virtual Reality solutions that are more effective and which have a more detailed feedback mechanism.

Disruption has become a buzz word in the industry and the ICT Startup Ecosystem in Nigeria has significantly grown in the last 3 years. We have a subsidiary known as the Office for ICT innovation and Entrepreneurship that supports these startups. We also encourage innovation in the academia and have supported Nigerians from all the States of the Federation to pursue postgraduate degrees in ICT. I encourage you all, captains of the ICT industry, to support ICT capacity building efforts both within your institutions and within the ICT Startup ecosystem. The future of the ICT industry depends on it.

His Excellency, President Muhammadu Buhari, GCFR, would always say that it is his administration's desire that we

"grow what we eat and produce what we consume". This statement cuts across all sectors of the Nigerian economy, including the ICT sector. This informed the decision of the Presidency to issue two executive orders that focus on the area of Local Content Development and Promotion.

As a country we expend vast sums to deploy ICT solutions both in the public and the private sectors but some of these projects are not sustainable because the main parts of the project are deployed and sustained by foreign partners. The Executive Orders #3 and #5 and the NITDA Local Content Guidelines aim to check this. It is important that the ICT industry supports the implementation of these Orders and Guidelines as they are the surest way of building our institutions and developing the ICT sector of our dear nation. For want of time I will stop at these 3 pillars. Once again I congratulate the Nigerian Communication Week on this event and also extend my felicitations to all the Awardees. Long live the Nigerian ICT Industry and long live the Federal Republic of Nigeria! Thank you for your kind attention.

AN ADDRESS

BY
DR ISA ALI IBRAHIM PANTAMI *FBCS*
DIRECTOR-GENERAL/CEO,

NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT THE
STAKEHOLDERS' ENGAGEMENT AND PORTAL
SENSITISATION WORKSHOP FOR INFORMATION
TECHNOLOGY (IT) PROJECTS CLEARANCE

8th MAY, 2018

PROTOCOLS

Our distinguished guests, members of the press, NITDA management staff here present, my dear colleagues   May Peace, Mercy and Blessings be upon you all.

It is with great pleasure and honour that I welcome you all to this August gathering, the stakeholder engagement and sensitization workshop on IT Project clearance Portal and draft guidelines.

The National Information Technology Development Agency (NITDA), is mandated by law to regulate and develop Information Technology (IT) in Nigeria. Under section 6 a, f, I, l and n of the NITDA Act 2007 the Agency is powered to undertake IT project clearance for MDAs. This is not new to you as the federal government has issued circulars in 2006 and 2012 to reiterate the NITDA's mandate as the clearance house for all IT projects in MDAs.

In view of the above, I believe our efforts to reinvigorate this mandate will not catch you off the guard. The current administration of the Agency under the leadership of Dr Isa Ali Ibrahim Pantami has identified IT clearance as one of its strategic tools to promote government digital services in Nigeria. Promotion of government digital services is part of

the Agency's continuous efforts aimed at supporting the Economic Recovery and Growth Plan (ERGP) of the administration of President Muhammadu Buhari, GCFR.

You may recall that the ERGP has three broad objectives - restoring growth, investing in the Nigerian people, and building a globally competitive economy. We strongly believe that enforcing our mandate not only IT project clearance will help the federal government to easily achieve these objectives. Our refilled project clearance process is aimed to achieve 4 objectives;

1. Shared services among MDAs – we need to view government as an entity while MDAs are components that are wired together to deliver value to citizens. In Nigeria government operations are dominantly manual. However, we are in 21st century where computer systems are programmed to replace this manual process. Therefore, there is a need to centrally coordinate the building of these computer systems. Because if we continue to build in silos at our MDA's level we always have to rework and retrofit to fit into the wider government digital services.

2. Support presidential executive order on local content – Early this year, to be precise in February, the president signed executive order 005 to improve

local content in public procurement with science, engineering and technology components.

3. ensure value for money – it's obvious that more than 80% of IT projects fail to deliver expected value. Due to lack of end-to-end coordination of project delivery, from conceptualization to actualization.

4. eliminate duplication of IT projects – it's glaring IT projects are duplicated in MDAs. In some MDAs same project appears in budget every year.

Delivering on this objectives is critical to the actualisation of a greater and better Nigeria. NITDA has therefore emphasised the need to properly regulate and transform the IT sector in order for the country to effectively benefit from the full potentials offered by ICT. We believe in the near future ICT will replace oil as the major source of revenue in this country.

It may interest you to know that about 720 Billion Naira is being budgeted on IT projects annually. But surprisingly, there is insignificant increase in digitization of government services. This irreconcilable difference between our increasing budgetary allocation to IT projects and insignificant increase in value we see is a call for concern. Therefore, the need for proper co-ordination can never be

over-emphasised. A major step at properly addressing this is the IT Projects Clearance initiative. Our initial finding shows that many IT projects are:

I. Poorly conceptualised and lack clear sustainability plans;

ii. Deployed in silos, thereby leading to duplication, retrofitting and rework;

iii. Vendors sweettalked us to invest on what we don't need; and/or

iv. Projects were bogus and vague or just conceptualised to siphon public money.

All these and more, led to the creation of a standing committee on IT projects clearance in NITDA. This Committee comprises of professionals from all relevant walks of life. Various MDAs have testified to this by writing or verbally expressing their appreciation of the Committee's inputs to making their projects more successful. Our goal at NITDA is to use the IT Projects Clearance process to correct the ills identified above and to further entrench IT sector in Nigeria.

I am delighted to share with you that our collaboration with relevant government organisations on this initiative is already yielding positive results. For instance, the Office for

the Auditor General of the Federation now issues audit queries to MDAs who refuse to get NITDA clearance before embarking on their IT projects while The Economic and Financial Crime Commission (EFCC) is partnering with us to investigate government agencies that breach our guidelines and policies. We also have a firm understanding with the Bureau for Public Procurement (BPP) such that NITDA clearance is now a prerequisite for issuance of Certificates of No Objection on IT projects. In terms of adding value to the procurement process, the Agency has helped the Federal Government to save over N6 billion naira on IT projects within a year. This is apart from the advisory and support services we give to MDAs at no cost to them.

This workshop is one of the series of stakeholders' engagements and sensitisations we planned to carry out this year. It is aims to get inputs from you in our quest to further enrich the draft guidelines. We had earlier engaged the CEOs of MDAs last month on the need to improve e-Governance and digitisation of government services, this event is targeted at the mid-level management and professionals in the MDAs. We would continue these engagements in the coming days.

Our immediate plan is to automate the IT clearance process

to make it more robust and efficient. The IT Clearance Portal is a state-of-the-art portal with intelligent and analytics capabilities that would make the clearance process more evidence based and transparent. I implore you to support us on this, as we strive to make IT investment more valuable to the citizens.

I must put it on record that NITDA is highly encouraged by the support and encouragement from the Presidency. President Muhammad Buhari, GCFR who at the last e-Nigeria Conference commended the IT Projects Clearance initiative and gave his full support to the process. The Vice President, Professor Yemi Osinbajo, GCON has not only supported, but he has directed that IT projects under his purview must have NITDA clearance before implementation.

Furthermore, the validations we have received from agencies such as CBN, EFCC, Petroleum Equalisation Fund (PEF), and BPP among many others who have undergone the clearance process has reassured us, that we are on the right track to address the huge challenges facing the IT sector and public sector investment in Information Technology.

I therefore look forward to your active participation, contributions and advice on how to improve the draft IT Projects Clearance Guidelines and Portal.

I wish you all a very successful workshop.

WELCOME AND PROGRAMME OVERVIEW

BY

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DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA), NIGERIA

AT THE
STAKEHOLDERS' ENGAGEMENT ON NIGERIA e-
GOVERNMENT INTEROPERABILITY FRAMEWORK
(Ne-GIF), ABUJA

TUESDAY, 22 MAY 2018

May Peace, Mercy and Blessings be upon you all.

[Protocol].

I am very pleased to welcome you all to the stakeholders' engagement on Nigeria e-Government Interoperability Framework (Ne-GIF). It is an obvious fact that applying information technology (IT) for governance holds tremendous potential to improve the way governments deliver public services. It is worthy to note that seamless exchange of Information between various MDAs' IT infrastructure and applications is critical to cross-portfolio service delivery and public service transformation. NITDA is committed to change the narrative by working closely with stakeholders to remove existing barriers caused by silo deployment of IT solutions. The barriers have made information sharing a nightmare among MDAs.

NITDA was established in 2001 to implement National Information Technology Policy, give effect to provisions of the NITDA Act, 2007 and coordinate general IT development and regulation in the country. Furthermore, NITDA is mandated to serve as the clearing house for all IT projects and infrastructure in the public sector and the prime Agency for e-Government implementation, Internet

governance and general IT development in Nigeria. Precisely, section 6c of the NITDA Act, 2007 states that the Agency shall develop guidelines for electronic governance and monitor the use of electronic data interchange and other forms of electronic communication transactions as an alternative to paper-based methods in all sectors of the economy where the use of electronic communication may improve the exchange of data and information.

We recognize the enormity of the responsibilities placed on the Agency as well as the possibilities of IT or e-Government as a development resource for achieving socio-economic transformation. e-Government and ICT tools can among other things, cut down the cost of governance, improve national economic growth; enhance access and quality of services as well as render public agencies more transparent and accountable. Accordingly, at this information age, going digital for any government is the optimal route to attain Sustainable Development Goals (SDGs).

Nigeria as a developing country has her own share of good experience of e-Government or ICT adoption for streamlining and improving governance. Such good initiatives where Nigeria has recorded success in using ICT to drive government policies include Treasury Single

Account (TSA), Integrated Personnel Payroll Information System (IPPIS), Government Information Financial Management Information System (GIFMIS), Bank Verification Number (BVN), e-Taxation, e-passport, e-wallet for farmers among others. The implementation of TSA and IPPIS/BVN saves Nigeria N4.7 Billion and N20 Billion respectively every month and assist in the elimination of ghost workers in various MDAs.

However, the Nigerian government is becoming more complex and wide-reaching than ever before and citizens believe and expect that public services must be delivered effectively and at speed. Silo e-Government systems would not help Government deliver public services efficiently. Advanced phases of service innovation cannot be achieved without integrating many back-office functions. For instance, registering a Limited by Guarantee Company in Nigeria requires visit to at least three institutions: CAC, FIRS, and Attorney General of the Federation physically and/or through their portals. This is inefficient, inconvenient, time consuming and makes citizens pay more. Through robust e-Government applications, I t is possible to make the transactions and get the service delivered on a single portal. Citizen-centered service delivery involves breaking up silos, integrating across agencies, innovating

new ways of doing business, and creating a service-focused culture.

It has been proven that one of the strategic directions for e-government is to adopt a Whole-of-Government (WoG) approach for deriving expected value from IT. WoG involves back-end offices re-engineering, consolidation and integration of business processes across government agencies to deliver effective and consolidated services through the front-end offices at an affordable cost. WoG is a deliberate path to attain Government Digital Transformation (GDT) we desire. GDT views Government as an entity by promoting the idea of ONE GOVERNMENT but still respect individual MDA's mandates while providing government digital services.

Fundamentally, e-Government or digital service delivery has three models or approaches: Government-to-Government (G2G), Government-to-Business (G2B) and Government-to-Citizens (G2C). Transforming G2G is the foundation for providing efficient digital services. It enables and drives the other delivery models. However, the workability of any G2G is determined by the level of IT systems integration and standardization considering the social, institutional, legal, economic and political systems of

a particular country. The main difficulty in achieving advanced G2G is the interoperability requirements of IT systems of various government agencies. For instance, compliance with Executive Order 001 requires advanced G2G. A provision in the Executive Order 001 stipulates that "an MDA that requires input documentation, requirements or conditions from another MDA in order to deliver products and services on applications within the originating MDA's remit or mandate, including permits, licenses, waivers, tax documentation, filings and approvals shall only request a photocopy or other prima facie proof from the applicant. It shall be the responsibility of the originating MDA to seek verification or certification directly from the issuing MDA". How can this happen seamlessly when information is not digitally shared in an efficient manner between MDAs that are involved. This requires advanced G2G to provide the needed services to businesses and citizens.

The Government Digital Transformation Agenda led the Management under my leadership to come up with a Strategic Road Map based on seven-point focus areas: Capacity Building, IT Regulation, Digital Job Creation, Government Digital Service Promotion, Local Content Development and Promotion, Cyber Security and Digital Inclusion. At least five of these focus areas are geared

towards Government Digital Transformation. They are capacity building, government digital services promotion, cybersecurity, IT regulation and local content development and promotion.

Specifically, Government Digital Service Promotion and IT Regulation are targeted at transforming the way government provides digital services thereby making GDT a reality. This has informed our decision to set up a dedicated department-e-Government Development and Regulation to champion the cause of Government Digital Transformation. The department has an endorsed Strategy as a guide and template towards achieving the desired GDT. The Strategy is a by-product of the Agency's Strategic Road Map and Ne-GIF is a critical component of GDT agenda.

Our national peculiarities in terms of multi-tribal society, population, huge demand for accessible public services, new challenges of agitations, security and terrorism among others demand integrated services and collaborative governance. Moreover, the legitimacy of any government, in this age of knowledge economy and information society, requires full-scale inclusion, participation and co-creation of customized and personalized services for citizens. All these necessitate the shift from a silo-based to a cross-

portfolio service delivery approach by Ministries, Departments and Agencies (MDAs). The shift necessitates integrated policies and programs, collaborative and collective responses to social problems, promotion of shared infrastructure and applications as well as the need to leverage on comparative advantages of various agencies in order to maximize value from e-Government investments.

As mentioned earlier, Ne-GIF is a critical enabler for cross-portfolio services, WoG and GDT agenda. To achieve the needed integration preached by WoG principles, there is a need for a framework that guarantees interoperability of IT infrastructure and applications. Regrettably, Nigeria, with all her efforts at deploying IT infrastructure and/or e-Government systems, is yet to develop one. Therefore, the National Information Technology Development Agency (NITDA) whose primary mandate is to regulate and develop IT in the country as stipulated in the NITDA Act of 2007, has developed the draft Nigeria e-Government Interoperability Framework (Ne-GIF) to close the identified gap. The Agency is presenting the draft Framework before you as our major stakeholders for inputs, comments and corrections. Most importantly, we implore you to own the Framework and ensure its smooth implementation and compliance. Developing the Framework is one thing, compliance and

implementation is another. If we all believe that Interoperability Framework is essential for Government Digital Transformation in Nigeria, I implore us to put resources together for its implementation. It requires strong political and leadership will by MDAs and collective commitment by all stakeholders in the Public and Private sectors.

The Ne-GIF provides tools, specifications and recommendations that are based on Standards for supporting MDAs in undertaking interoperability of e-government solutions for the provision of cross-portfolio services.

My vision in NITDA is to facilitate and lead government digital transformation and ensure NITDA plays a critical role in building a digitally transformed government.

Leveraging on ICT to ensure seamless information exchange is a prerequisite to achieving ERGP objectives, Sustainable Development Goals by United Nations and attaining our desired Government Digital Transformation Agenda. We need to build capacity and ensure the right leadership is provided across MDAs.

Recently, we have been engaging MDAs and other stakeholders on different fronts. It, however, requires concerted efforts. We can't do it alone; we need the support and cooperation of MDAs, IT sector players, the National Assembly and other stakeholders.

I, therefore, look forward to your active participation, contributions and advice on how to improve the draft Framework. I wish you all a very successful workshop.

WELCOME ADDRESS

BY

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DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA), NIGERIA

AT THE

STAKEHOLDERS WORKSHOP ON .GOV.NG
DOMAIN AND RELATED POLICIES.

May 31, 2018

NiRA OFFICE, LAGOS

[Protocol].

It is my pleasure to welcome you all to this Stakeholders Workshop on .GOV.NG and related policies, the first of its kind. It is important to note that the ICT space is a dynamic and fast changing in nature. This has necessitated the need to have laws that are upto date in the management of key areas thereby contributing to the growth of the economy.

Without doubt, we all know that the application of information technology (IT) to governance will go a long way in revolutionize our nation and the way government businesses are conducted. This will also save time spent in taking decisions. However, these must be guided by appropriate policies and framework that will ensure the proper conduct of these businesses.

The National Information Technology Development Agency, NITDA, was established in 2001 to implement National Information Technology Policy, give effect to provisions of the NITDA Act, 2007 and coordinate general IT development and regulation in the country. In line with its mandate of NITDA, Section 6(m) and the Second Schedule of its enabling Act, which states that;

1. The Agency shall advise the Federal Government generally on matters and issues that are related to the management and administration of Nigeria's country code top level domain (.ng).

2. The Agency shall have supervisory authority over any organization incorporated under the laws of Nigeria to manage and administer Nigeria's country code top level domain (.ng) including but not limited to the following:….

3. The Agency shall ensure that the activities of the organization comply with international best practice in the administration of country code top level domains (CCTLD).

Furthermore, mandate No 024 of NITDA "To ensure Internet governance and supervision of the management of the country code top-level domain (cctld.ng) on behalf of all Nigerians".

As a follow-up to the Executive Order E001 on Ease of Doing Business in Nigeria, NITDA in 2017 carried out an independent survey and discovered that a huge number of government agencies are running on non .gov.ng domains. In a bid to ensure that government business are transacted on government domains and to bring sanity to the domain administration, three (3) different phases of .gov.ng drives

where initiated and we are happy that this has yielded results and in the long run contribute positively to the ease of doing business in Nigeria. This we believe can only be achieved when domains and websites of Ministries, Department and Agencies, (MDAs) provide information on the .gov.ng platform.

I welcome you all to this stakeholders meeting which is geared toward the review of the exiting policy relating to the government domains in Nigeria. While we continue to ensure that "Ease of Doing Business" thrives in the country by ensuring that every MDA runs on the Country Code Top Level Domain (CCTLD), it must however conform with the present day realities and in line the vision of the present leadership of NITDA to facilitate and lead government digital transformation and ensure NITDA plays a critical role in building a digitally transformed government.

I, therefore, look forward to your active participation, constructive criticism, contributions and advice towards providing a document that will serve as reliable tool in the administration of Government domain. I wish you all a very fruitful successful stakeholders workshop.
Thank You.

E-GOVERNANCE FOR NATIONAL DEMOCRATIC CONSOLIDATION AND TRANSFORMATION: AGENDA SETTING FOR THE 2019 GENERAL ELECTIONS AND TRANSPARENCY IN GOVERNANCE

BEING A SPECIAL GUEST SPEECH

BY

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DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
*DEVELOPMENT AGENCY **(NITDA), NIGERIA***

AT THE
FIFTH COVENANT UNIVERSITY CONFERENCE ON
e-GOVERNANCE IN NIGERIA

THURSDAY, 06 JUNE 2018

May Peace, Mercy and Blessings be upon you all.

[Protocol].

I am very pleased to welcome you to the fifth Covenant University Conference on e-Governance in Nigeria. I am highly delighted, humbled and honored to be here as special guest speaker to deliver speech on "e-Governance for National Democratic Consolidation and Transformation: Agenda Setting for the 2019 General Elections and Transparency in Governance". This is a call to service that cannot be rejected as the Chief Information Technology Officer of the country.

NITDA was established in 2001 to implement National Information Technology Policy, give effect to provisions of the NITDA Act, 2007 and coordinate general IT development and regulation in the country. It is the prime Agency for e-Government implementation and Internet governance in Nigeria. The opportunity given to me at this conference presents me with a unique opportunity to tell our story as a country both in terms of achievements, challenges and the journey towards government digital transformation. Dissecting the theme of the conference, we would realize that there is close relationship between e-Governance and democratic transformation. One of the new global trends in

governments in the last two decades is the application and integration of ICT into governance reforms. This concept is basically termed e-Government. For the purpose of this discussion, e-government and e-governance will be interchangeably used. However, e-Governance is broader and it encompasses a series of necessary steps by government agencies to ensure successful implementation of e-government services to the public at large. So, these concepts are beyond just putting services online but a whole of activities to transform government in its entirety using ICT. One of the objectives of e-Governance is to digitally transform electoral and democratic processes

E-Government has become a global phenomenon and an essential required feature of all governments in both the developed and developing societies. E-government holds tremendous potential to improve the way our governments would deliver public services and enhance broad stakeholders' involvement in governance. Before now, e-Government objective was to ensure efficiency and transparency in governance. Beyond this, e-Government has been recognized as a major driver of government transformation in all aspects. Much progressive results about the role of ICT for development are evident from clear indication of ICT's impact on OECD countries and some dramatic results from few pilot projects in developing

countries

At a global level, ICT is changing political and democratic processes, enabling transparency and accountability in governance. The Information Technology revolution is enabling new forms of democratic input and participatory governance and e-Government is enabling a more honest dialog with the governed. This is evident in the electioneering and democratic processes of developed countries especially the OECD countries and some other developing countries in Asia and Africa. At the shore of our country, we had an ice bag of the experienced in 2011 and 2015 elections respectively. There was tremendous improvement from 2011 to 2015 elections.

ICT has played a big role in the last democratic processes and the role to be played is tremendous if there is enabling institutional and political wills.

e-Governance for National Democratic Consolidation and Transformation: Agenda Setting for the 2019 General Elections and Transparency in Governance

Introduction (Creating the scene)

e-Governance as a development resource and possibilities of ICT for National democratic consolidation and

transformation (My Projects and other papers).
-in retrospect or retrospective (2015 election- the role of ICT)

Agenda Setting for the 2019 General Elections and Transparency in Governance

Given the critical role ICT played in 2015 democratic processes and the general elections as well as the need for the adoption of e-Governance to consolidate on the previous efforts and improve the electioneering processes in anticipation of 2019 general elections; the theme of the 2018 conference is apt and presented NITDA as the ICT regulator in the country, the opportunities to make its positions known on this development process

Let us again take ourselves to a memory lane, the role social media played in 2015 election. It played a critical role in bringing political change, brought about electioneering innovation and deepened government-citizen engagement. Social Media platforms were used for opinion polls, circulating election results before final results were released by INEC. Social media bridged the gap between the North and the South, as the messages shared had no boundaries or religion.

-the recent development (Electoral reforms and)

-What to expect and how NITDA is responding (NITDA's road map: Capacity building-training of women in ICT, creating enabling environment through regulation, cyber security- awareness in all the geo-political zones, promoting local content- electoral equipment etc.)

-Advice to electoral umpire, the National Assembly and the citizens

-NITDA as the co-Chair on Open Government Partnership (Technology, particularly ICT has moved far and the world is also changing fast. Now, the new trend is the extension of e-Government called Open Government and/or Open Government Data. Open Government Data is an extension of e-Government.)

Engaging stakeholders, building reform coalitions, and reaching more citizens by partnering with media are among the necessary measures to translate the enabling potential of ICT into improvements in governance and participatory and democracy.

CYBERSECURITY OPERATIONS IN COUNTER TERRORISM AND COUNTER INSURGENCY, A LECTURE PRESENTED

BY

DR. ISA ALI IBRAHIM PANTAMI, FBCS, FIIM,
DIRECTOR GENERAL,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA),

TO SENIOR COURSE 40 STUDENTS AND STAFF OF THE ARMED FORCES COMMAND AND STAFF COLLEGE, JAJI

ON

7TH JUNE, 2018.

I consider this a rare privilege to stimulate pertinent discourse in cybersecurity, counter terrorism and counter insurgency; concepts that could have colossal impact on national sovereignty. The primary focus is to explore global trends in cybersecurity investment, strategic collaborations and political colourations involved in transitioning from traditional defense operations to that of cyber technology, and propose solutions to raise preparedness in Nigeria. I feel strongly officers and men who are my audience today will be engendered to think strategically and act to reposition our military operations and architecture.

Cybersecurity is the process of applying policy, legislation, development and use of tools and technologies to ensure that Confidentiality, Integrity and Accessibility of information is preserved. Cyberspace is the virtual space where information technology gadgets, devices, networks, interrelate to ensure gains of interconnectedness in promoting business, good and effective governance and leisure are realised. However, knowing that cyberspace is non-discriminatory, non-regulated gives State-actors and terror groups equal opportunity to foment trouble, requires nation-states raise their preparedness to forestall imminent attacks.

Terrorism is the strategic coordinated unleashing of terror on a people with the intent of forcing certain ideologies on the people. Insurgency on the other hand is the coordinated disruption of normalcy to gain either political or sectorial relevance. What obviously separates the two is ultimate objective and the devastation of operations. Nigeria, a relatively peaceful nation, has lately endured insurgency and terrorism, with devastating casualties and criminal disruption to the nation's source of livelihood. The military has been called to duty with mixed results, owing possibly to use of traditional military mechanisms, thus the need to exploit contemporary technology in the war against insurgency and terrorism.

The traditional Armed Forces and paramilitary organizations are tactically segmented into aerial, land, sea, space operations with enduring structure, hardware, and capacity, to deliver their mandate of securing the territorial boundaries of the nation. However, with the expected catastrophic potency of cyber warfare, cyberspace is introduced as the new defence frontier. So the question is "How developed and institutionalised is our cybersecurity to help in counter terrorism and insurgency and perhaps cyber warfare?

FROM COLD WAR TO CODE WAR

The idea that eventually resulted in the Internet was initially promoted, in part, as a measure to create a decentralized, distributed communication network capable of surviving a nuclear attack. It started as a military experiment at the Department of Defense, called American Research Project Agency Network (ARPANET) on October 29, 1969. Like all good intentions, many attacks today, take advantage of the very decentralized nature of the Internet, as individuals, businesses and governments take advantage of the unprecedented opportunities offered by the Internet. In the inset are a few State-actor fingered attacks:

A shadowy group linked to the Iranian government attached Saudi Aramco, the world's largest energy, most valuable company, on Wednesday, August 15, 2012. The computer virus, named Shamoon and Dist-track by the attackers, quickly spread through Saudi Aramco's corporate network across Saudi Arabia, the Netherlands and United States. The attack, designed to completely wipe out the computer memory, caused the company's operations to be temporarily shut down for two weeks. At the end, 30,000 computers were damages and replaced. Shamoon and Dist-track also attacked RasGas, a joint venture between Qatari Petroleum and ExxonMobil. Like the Nigeria National Petroleum

Corporation (NNPC), the \$2 trillion valued Saudi Aramco is responsible for 90 percent of the revenue of the government of Saudi Arabia. Type of attack: Integrity.

The 2013 attack on US retailer Target in which credit and debit card numbers of 40 million customers were accessed and stolen, was an attack on the Confidentiality of the network. Target was to lose 49% of its profits in the fourth quarter of 2013.

Attacks on a network's availability also known as Denial of Service (DOS) or Distributed Denial of Service (DDOS) typically causes disruption through amplified requests. DDOS involved the use of several hundreds of systems ostensibly to conceal the origin or identity of the attackers. Typical targets are governments. Long before the ouster of former Ukrainian president Viktor Yanukovych and the invasion of the Cremea by Russian soldiers, another type of attack had been taken by the Putin government through the cyber espionage package *Ouroboros*, named after the Greek serpent. Ouroboros enabled its developers the backdoor to surveil and obtain information from the Ukrainian Command Centre.

# GLOBAL TRENDS ON DEVELOPING CYBERSECURITY MIGHT FOR MILITARY OPERATIONS

Nations are strategically planning and restructuring their military operations to cater for eventualities in cyberspace. The following table shows some nations' recent strategy on cyber operations:

S/N	COUNTRY	CYBER DEVELOPMENT	REMARKS
1	USA	Cyber Command (pooled from National Security Adviser) is placed on same pedestrian as the Special Operations and Strategic Operations	President Trump captured the ultimate goal as being able to assure allies and deter adversaries
2	China	Created the Strategic Support Force, using private companies to perpetrate cyber-attacks and espionage, with an estimated 100,000 cyber soldiers	Striving to leapfrog frontier nations
3	Japan	Created the Cyber Defence Unit and intends to increase its force from 110 to 1000, using private sector organizations	Playing catch-up but with unrivalled determination
4	Canada	Earmarked a billion dollars to enhance cyber capacity by outsourcing to private sector to sustain and retain local force	To maintain a stream of next-generation cyber professionals
5	North Korea	Fingered for a number of cyber-attacks on nations across the world, alleged funding its nuclear programmes from such proceeds (eg the Bangladesh's Central Bank attack).	WannaCry and Sony hacks and many more
6	Russia	Considered highly advanced, using an assertive whole of government posture for disinformation, espionage, economic, political subversion, to deter adversaries	Manifest in allegations of meddling in US and France Elections and Critical infrastructure outages of Ukraine

Table 1 showing an avalanche of strategies of nations aiming for global cyber power.

An understanding of the complexities of nations' cyber might is necessary for accurate placement because the civilian capabilities has to be factored into the equation, as global power dynamics and strategic stability is determined by it. In addition to operations mergers of segmentation, huge funds are invested in cybersecurity, with strategic efforts to leapfrog each other. Delloitte reports the US expenditure of 14billion USD in 2016.

How are the superpowers of cyber warfare ranked? The table below, extracted from the ITU global Cybersecurity Index as reported by World Economic Forum, depicts the first 20 most powerful cyber nations:
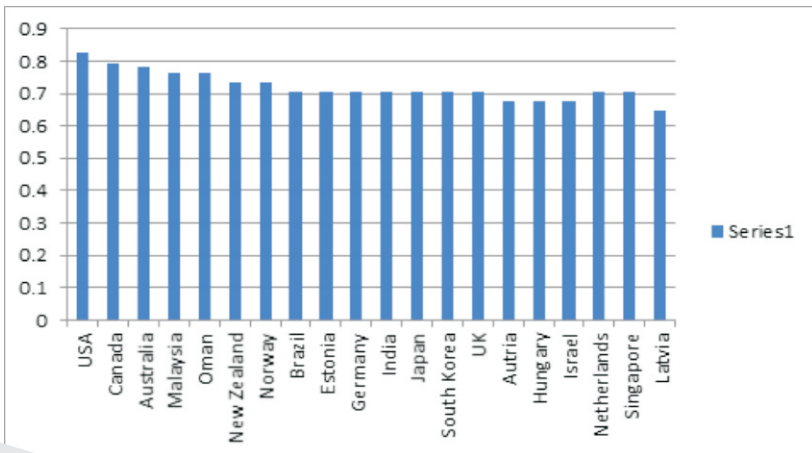
Ranking of cyber superpowers based on ITU Cybersecurity Index

CYBER APPLICATIONS IN TERRORISM AND INSURGENCY

Terrorism/Insurgency strives in secret financial flows, communications among members, recruitment procedures and intelligence, using stealth campaigns that use social media in sometimes tunnelled communications. The Internet supports this even though the debate of regulating the Internet or leaving it as anonymous as it is remains razing, effective cyber operations can unearth such communications and empower law enforcement to descend on and deter intended terrorists.

New York Times narrates how the US Cyber Command's targeting of ISIS networks in 2016 heralded the use of cyber might on terrorism; compelling nations, by natural obligation, to building capabilities (defense and offense) in cyberspace.

The use of drones in the terrorism landscape is a new phenomenon, and so is the use of it in counterterrorism. Drones (Unmanned Aerial Vehicles) are small crafts with the

capability of a payload, flying time and distance, and can be remote controlled for surveillance and disposition of bombs. Nation-states have used both regulation and rules to limit areas of use. Russia has announced the jamming and limiting of drones, preparatory for curb terrorist attacks during the 2018 FIFA World Cup. In the meantime, a drone coordination platform that could control several hundreds, mounted with advanced GPS systems and video cameras, to transmit information from enemy camps, has been developed.

The propaganda angle to terrorism, which strives to portray the defeat of legitimate governments to foray the might of terrorists, could also be countered with effective social and traditional media campaigns.

THE NIGERIAN LANDSCAPE
Nigeria prides herself of a strong, resilient and formidable military might in air, land, sea and recently space, but I doubt if we have a cyber programme on equal pedestrian. NITDA was privileged to interact and collaborate with the Defence Space Administration on a number of cybersecurity initiatives. There are a number of cybersecurity activities in other military formations that are in the infancy, there is need to up our game if we are not to be left behind on this front.

In capacity building for the military, since this is certainly not about developing military hardware, but just what could 100,000 staff be doing primarily in cybersecurity? Critically the capability to stay stealth, unidentifiable, is a good trait, which requires advanced coding and software development capabilities.

Firstly, we need to develop a critical mass of such advanced knowledge and skillsets for classes of officers in strategic training.

Secondly, the strategy of Japan and Canada which used private sector manpower in a revolving pool that ensures availability could be adopted. To achieve this, we could engender the adoption of strategic education system where civilians are introduced into career paths in the cybersecurity domain. Some of the skill requirements could be:

a) Foundational security: Providing the basics of TCP/IP, networking and subnet and security layers;

b) First Responders: These are skills required to identify incidences, preserve evidences and ensure transmission of admissible evidence in the case of law enforcement. They should also have forensic skills, disaster recovery and restoration of service;

c) Security Analysis: These analysts should be trained

threat analysts, with vulnerability, active log collection and analysis, tracing trends, forecasting malicious path and footprint of hackers. Career staff could start with learning hacking skills such as white hat, grey heart hacking, and explore advanced skillsets;

d) Security system designers: Their training would be to design security systems that are resilient, using advanced system configuration, system hardening, identity and access control skills.

e) Penetration Testers: These are required to test systems for resilience and proffer solutions to mitigate risks. The assessment of risk profile, etc

f) Secure Software Development. These are required to furnish software developers with guides on how to develop secure software systems that have in-built security. The main components include SDLC management and software testing

CONCLUSION

In concluding, it is noteworthy that in a discourse on cybersecurity, terrorism and insurgency, the civilian, military and peace building components are considered. Firstly, cybersecurity as it affects civilians and civil organizations revolves around protecting information CIA

and Critical national information infrastructure. Effective sensitization and institutional procedures, guidelines and structures for protecting CNII are conducted by collaboration between NITDA and sister agencies like ONSA. There is a whole gamut of regulatory and legislative frameworks aimed at directing the path and focus and engender commitment to a culture of cybersecurity in Nigeria.

Secondly, an analysis of trends in global application of cybersecurity might, and a calibration of the strengths of the most powerful 20 countries would spur us to action. In strategic operations, global leaders are giving autonomy to Cyber Commands in their military. This is a pointer to the possible devastation cyber incidences could cause a nation's sovereignty, and Nigeria is admonished to take a cue from world trends.

Thirdly, the use of drones in perpetrating terrorist attacks are noted elsewhere, but even though not here yet, it is foolhardy to think it will not get here. Innovative use of these UAVs for data gathering and transmission in dangerous terrains can be exploited and applied in our Sambisa Warfield

Fourthly, capacity building is critical. A list of likely advanced courses and possible certifications that could herald a career path for the private sector and individuals is discussed. NITDA has collaborations with international and

local institutions of higher learning to create an academic/professional platform that could serve as a fountain for meeting the imminent insatiable demand for professional cybersecurity capacity for internal use and possible export.

Thank you

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case study 1:

Wednesday August 15, 2012, a group with ties to the Iranian government attacked Saudi Aramco

ADDRESS DELIVERED BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM,
DIRECTOR GENERAL OF THE NATIONAL
INFORMATION TECHNOLOGY DEVELOPMENT
AGENCY (NITDA),
AT
THE STAKEHOLDERS' WORKSHOP ON NATIONAL
MOBILE POSITION DATA ANALYTICS PLATFORM
STRATEGY,

ON MONDAY JUNE 25, 2018
AT
THE TRANSCORP HILTON HOTEL, ABUJA

May Peace, Mercy and Blessings Be Upon You All All Protocols dully and respectfully Observed. Ladies and Gentlemen We are delighted to have you here to participate in the Mobile Position Data, MPD Workshop. Thank you for coming. Many of you are here this Monday morning after travelling long distances, this shows how committed we are to work together and build the Nigerian economy through technology. On behalf of my colleagues at the National Information Technology Development Agency, NITDA I thank you for honouring our invitation to this workshop, organized to discuss opportunities presented by mobile big data analytics. We all can attest to the rising trend of digital transformation of industries through Digital Economy. The digital economy is one of the few growth certainties in Nigeria even with some obvious uncertainties in our economy. Mobile big data is indeed the growth certainty of the Nigerian economy because its pace of growth is not determined by technology innovation but by the people who use the technology, and by people, I mean over 190 million citizens of Nigeria. Let me give you a mental image of where Nigeria is at, and would be in the next 5 Years. You see the rapid expansion of broadband mobile networks by Telecom Operators, such as MTN, Glo, 9Mobile, Airtel and others has introduced a versatile global infrastructure that internally generates vast amounts of spatio-temporal network-level

data (e.g., User id, location, device type, etc.). At the same time, mobile app vendors like Facebook, google, twitter etc. have a huge amount of our data at their fingertips, collected freely from us in exchange of free service. I think it is important at this juncture to understand what is a Mobile Big Data. If you need to be convinced that you are living in a science-fiction world, look at your cell phone. This cute, sleek, incredibly powerful tool has become so central to our lives that we take it for granted. It seems perfectly normal to pull this device out of your pocket, no matter where you are on the planet, and use it to talk to someone else, no matter where the person is on the planet. Yet every morning when you put your phone in your pocket, you are making an implicit bargain with the carrier: I want to make and receive mobile calls in exchange I allow this company to know where I am all the time. The bargain isn't specified in any contract but it's inherent in how the service works. You probably hadn't thought about it. But now that I have pointed it out, you might well think it's a pretty good bargain. Cell phones really are great, and they can't work unless the telco know vital information about you. Your cell phone tracks where you live and where you work. It tracks where you like to spend your weekends and evenings. It tracks how often you go to place of worships, how much time you spend clubbing and whether you speed when you drive. It tracks

people around you – since it knowns other phones in your area. It knows places you visit, where you shop and spend your money and where you go for leisure. The accumulated data can probably paint a better picture of who you are than any person around you. In 2012, research has proven that this data can be use to predict where people would be in 24 hours and within 20 meters. In view of the above, there is huge significance of transforming our nation's large mobile big data into a national resource so as to support economic recovery and diversification. Mobile big data analytics refers to qualitative and quantitative techniques and processes used to enhance productivity and business gain from this huge data collected by operators. Analytics could mean making sense from this unstructured data through clustering / classification, mapping and association of relevant data that create information and knowledge which can be used for decision and policy making. NITDA is mandated by the NITDA Act 2007 to ensure that Nigerians in particular, and the society in general get the most of the opportunities offered by the advances in technology innovations. Due to the multifaceted, cross-dimensional application of modern technologies, and couple with increasing need for ethical and equitable access and use of emerging technologies, we in NITDA take collaborations and partnerships with your organizations very critical to our

success. Therefore, our actions should not be viewed as an encroachment into other's mandate, rather a genuine desire to collaboratively explore new opportunities to develop our country. Data Is the Oil of the Digital Economy. We are in 21st century the digital age where the oil is no longer the most valuable asset a country must have. Data is the immensely, untapped valuable asset of the century and it's more valuable than ever. However, Nigeria is seriously lagging behind in putting the enabling framework to take advantage of this economic boom. There is a shortage of data in every level of government, leading to misinformed decisions. Decisions on energy and healthcare utilities are a few examples that could use data to improve efficiency in service delivery. And not to mention areas of national security intelligence and our education sector. It may interest you to know that, Nigeria is currently among the top ten in the World in terms of mobile connections and generating enormous amount of data in the mobile networks. Why not put this data to use for the development of our country? Our subscriber base constitutes a sensor network generating data on the locations and mobility of the population. Data generated annually is far more than 100 terabytes and it growths spontaneously due to increasing smartphone penetration. Mobile networks generate 'snapshots' of the entire country on a continuous basis, leading to application

areas such as better population estimates, commuting and tourism statistics, work-place location studies, and others. From experience in other countries in the world, most notably Estonia, we foresee use of this data in multiple areas. This workshop is aimed at triggering the formation of National Mobile Big Data Analytic Platform. The goal of the Platform is to enable a data mining and create a new value chain in the Nigerian economy through using big data collected by local mobile networks and skilled Nigerian data scientists; build up a central hub to collect and process location data from mobile network operators; disseminate aggregate statistics on several vital sectors of the economy such as population, security, healthcare, transportation, education and tourism through an open database; train and mentor thousands of Nigerians for database management, data processing and analytics, service the information needs of MDAs, NGOs and private companies through a data science hub. Let me quickly state that the rise of data is not without new challenges to individuals and society in general. Like other responsible governments across the world including the European Union which recently released its General Data Protection Regulations, the administration of president Buhari, through the National Information Technology Development Agency, has taken steps to protect the data of Nigerian citizens by putting up its

Data Protection Guidelines for public comments and review. The updated version contains an expanded definition and use of data. This workshop is expected to examine some issues which are specific to the development of mobile data analytics opportunities for Nigeria such as infrastructure, skillsets, data privacy, value and access. Besides, addressing the gray areas mentioned above, it is NITDA's expectation that stakeholders will discuss a roadmap for developing a national platform. NITDA's commitment to the development of mobile position data as a national resource is a clear example of how information and communication technology can be leveraged to support the federal government's Economic Recovery and Growth Plan, ERGP. Specifically, the ERGP broad objectives are restoring Growth through macro-economic stability and Economic diversification; investing in our people through social inclusion, job creation and youth empowerment; and improved human capital and building a globally competitive economy, through investing in infrastructure, energy, and improving the business environment. Mobile data as a national resource can be leveraged in four areas to support ERGP's objectives: 1. Job creation Directly: Hundreds of Nigerian graduates will be employed, trained and mentored to maintain and run data science Ventures; Indirectly: New capacity for data science prepares project staff to start their

own data-driven ventures; Data on an aggregate level will be opened through open data APIs, on which young entrepreneurs are encouraged to build their own applications and services; Export: In the long term, Nigeria is poised to become the global outsourcing hub for the USD 100 billion big data & analytics market, given adequate opportunities to develop skills through practice and mentorship (Nigeria is competing with Ukraine and India in this regard as countries with a large pool of high skill graduates); 2. Security Adequate information on population placement, especially in a dynamic way - hour-by-hour - provides security agencies a resource planning tool; If used responsibly, the data provides opportunities to determine population profiles based on their calling and movement patterns in an anonymous way, which will help in securing against militant threats; 3. Better delivery of public services, including accountability and transparency Access to data for decision making Access to data to calculate the impact of decisions. Examples are in the case of road construction or tourism investment. Impact calculations can be done post investment due to mobile location data being historically available. Journalists will have access to open database or submit an information request. 4. Promote digital inclusion and intergenerational economic mobility In conclusion, we at NITDA are of great confidence about the contribution of this

initiative to addressing some critical national challenges such as Intelligence gathering for National Security, policy making and anticorruption campaign. I believe it will create a new value chain for our economy and help the government realized the objective of Economic Growth and Recovery Plan. Finally, as indicated above, the development of data science capacity not only addresses the present data needs of the nation, but also positions Nigeria as a key player in the industries of the future and global market. NITDA is committed to the exploration of mobile data as a national resource and counts on the support of your organizations to ignite a data revolution in Nigeria. Thank you Isa Ali Ibrahim Pantami, PhD, FCBS, FIIM Director General NITDA

A KEYNOTE SPEECH

ON

CYBERSPACE AND NATIONAL DEVELOPMENT,

PRESENTED BY THE

DR ISA ALI IBRAHIM PANTAMI, FBCS, FIIM,
DIRECTOR-GENERAL NITDA,

AT THE

2ND CYBERSECURITY CONFERENCE ORGANIZED
BY THE SENATE COMMITTEE
ON ICT AND CYBERCRIME,

AT NAF CONFERENCE CENTRE

ON 26th June, 2018

I consider it a special privilege to present this keynote speech at this 2018 Cybersecurity Conference with the theme: *Implications for Disruptive Technologies on the Economy and National Security.* The composition of this august audience, comprising of techpreneurs, information technologists, captains of industry, academics, civil society, distinguished legislators, policy makers and the general public, highlights the importance attached to this event.

The frequency of events with similar themes expresses the profound imperative and impact disruptive technologies could have on national development and security. At a Disruptive Technologies conference in Lagos, I delved on three fundamental factors: i) the potential disruptive technologies have on growth, employment, creating new markets and business practices, need for new products and infrastructure and different labour skills; ii) the difficulty of regulating disruptive technologies to governments around the world; iii) Information Technology as the spine of most contemporary disruptive technologies, and NITDA, the development and regulatory agency's determination to develop the Industry through regulation while avoiding stiffening innovation.

On a more important pedestrian is Cyberspace (a disruptive technology) and its implications for National Security. Billions of dollars have been invested in cyber warfare codenamed "Code War" as nations articulate mechanisms to transit from traditional warfare to building capabilities in cybersecurity. In a recent lecture at the Command & Staff College Jaji, I posited that the Military must be critically strategic in reorganizing existing military structures to effectively secure our cyberspace. Since the US's cyber-attacks on ISIS in 2016, frontier nation's hitherto stealth development of cybersecurity capabilities came to the fore. This engendered a global scourge that we could only ignore at our peril, as attacks on critical national infrastructure can impact on the economy and sovereignty of nations.

The modern day variant of older disruptive technologies such as the Steam Engine, Electricity and others is Cyberspace (the Internet), which comes with countless splinter components that have both positive and negative implications for nation-states, enterprises, governments at all levels and individuals. Cybersecurity is the totality of measures including legislation, regulation, policy, guidelines, law enforcement, etc, to make cyberspace safe for all users without hindering the myriads of opportunities there are for national development

Harnessing Opportunities in Cyberspace for National Development

In the context of effective national development, cyberspace has provided the ICT-enabled platform for governments to articulate machinery to harness opportunities for improving the living standards of its citizens while ensuring safety of lives and property. Effective management of cyberspace has brought about enormous efficiency gains to government processes through political inclusion, eGovernment, eHealth, eAgriculture, eCommerce, which are applications of ICTs in delivering services to stakeholders. Timely provisioning of accurate information from the glut of information generated globally (called the Big Data) through processing power of ICTs and interconnectedness, has astronomically improved productivity and efficiency of products and competitiveness of enterprises.

Space provides countless opportunities for economic growth. In traditional space technologies the sending of satellite to orbit and the transmission and analysis of data created a thriving industry where structures are built and exploited for national development. In a recent article, Dr. …explored the need for effective and comprehensive review of legal framework, and brewing of local technology through careful adoption and adaptation, and training could

enhance the contribution of that industry to national development.

In exploring the myriad of opportunities for economic growth occasioned by disruptive cyberspace, what the private sector could do to benefit from this multi-trillion dollar industry will be the focus. This is apt because a synergy between captains of industry and the legislative arm (spearheading this) are proven platforms for using regulation for economic, political and social benefits of nations.

EconomicTimes reports actual cybersecurity products sales worldwide in 2017 as USD95 billion, with system integration and managed services for cyber security being worth about USD35 billion, and annual maintenance and support contracts being worth about USD10 billion. *CB Insights* reports investment of 3.1 billion in 300 startups in 2016, indicating the viability of cybersecurity as a business. *Cybersecurity Investing* reports that all top 10 cybersecurity companies have market capitalization of over billions of dollars, climaxing in trillions of dollars. Figure 1 indicates the proportions and focus of the top ten cybersecurity companies, with some sharing in many subsectors.

The critical questions are: Are our firms really (services,

development of tools, barely reselling or collaborating as representatives of external firms without concerted efforts at sufficient technology deposits) competitive in the global cybersecurity industry? Can't we be strategic in peering into the future and position our investment and efforts to partake of the largesse of this industry? Can't we identify niche areas peculiar to our environment and develop solutions/tools to mitigate the recent rampant cybercrimes of SIMM swap, SMS phishing and our variant of social engineering?

Massive disruption of legacy businesses especially in the financial technology sector facilitated by competitiveness in global business space, modern customer-centric drives, organizations collaborating through API and open systems, cloud computing, with obvious porosity for cyber-attacks. There is a massive shortage in supply of cybersecurity talent, which can be exported. The need for technical cybersecurity personnel is almost insatiable as global awareness in implications for cybersecurity become real. Is our approach to capacity building sufficient? Countless opportunities exist in capacity building. NITDA, using its Accredited Cybersecurity Education (ACE) Scheme's platform for collaborative engagement of academia and private sector certification/accreditation partners, is aimed at producing a critical mass of cybersecurity professionals.
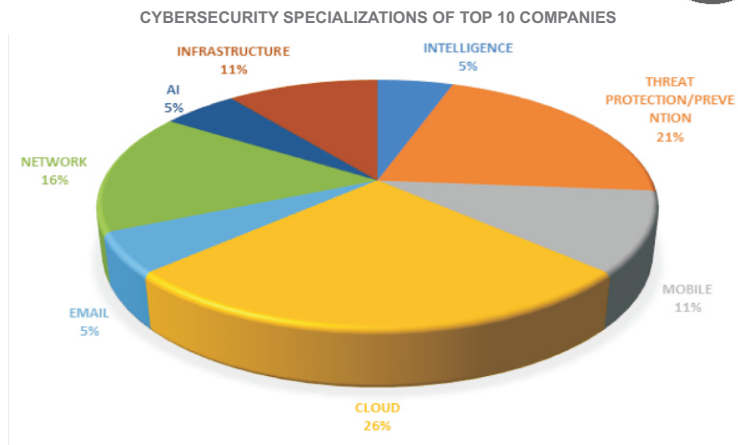
Figure 1: Specializations of top 10 cybersecurity companies

A cursory look at the chart places cloud solutions as highest with 26%, Intrusion/penetration detection is next with 21% and Network solutions with 15%. The indication is these areas hold more promise than others in the global arena. However, other areas of best prospect include: Encryption, End-to-end point detection, Intrusion prevention systems (IPS), advanced persistent threat (APT), Cloud security, etc Globally, IoT, Big Data Analytics, Data Mining and Crypto currencies, smart cities and intelligent transportation are huge areas of application for cyber technologies, but we must find niche areas that solve Nigeria's peculiar challenges.

REGULATION

It is acknowledged that regulating disruptive technologies is a global challenge, for obvious reasons: a) Regulations must follow maturity of technologies, b) criminals operate ahead of regulation, c) regulations making process is winding, cumbersome and time-consuming, etc. However challenging, it is clear that effective regulations is a veritable way of curbing the excesses of cyber criminals while encouraging innovation and growth.

The GDPR of the European Union is a dreaded regulation that has set standards for the processing of personal identifiable data of its citizens globally. This was upgraded from a Directive which was not mandatory. GDPR assigns roles and regulations to data processors and controllers for handling of identifiable data of EU citizens, enlisting applicable fines, for noncompliance with data protection, breaches of non-disclosure, data use without consent of data subject, ranging from 4% of annual turnover to 2% to 20m Euros.

The UN Secretary-General once said Rules are a positive way to go in limiting cybercrimes. Taking a cue from the GDPR, we can upgrade the cybercrimes and complementary legal frameworks. Even though a Joint Committee of NASS is on it, a whole-of-government approach on the review of the Cybercrimes (Prohibition, Prevention, etc) Act (2015) is needed for better effect. Noting that more needs to be done in cross-legislative synergy for repeals and new enactments,

and prompt dispatch of critical legislation that has national development and security implications, and as challenging as regulating disruptive technologies is, globally, it is gladdening to note that the legislative arms is taking a foremost step in contributing to making our cyberspace safe for all.

CONCLUSION

In concluding, countless opportunities exist in cyberspace for national development and to strengthen our resilience. Globally, opportunities provided by disruptive technologies are exploited and explored through a delicate combination of private sector investment and cutting-edge research and development, and effective regulation.

In addition to working closely with policy makers and legislators to proactively provide the enabling environment for businesses in this multitrillion dollar industry to thrive, the private sector must identify niche areas where they have competitive advantage to provide peculiar tools and solutions for Nigerians. Furthermore, solutions that could solve our negative image in cyberspace should be explored as well as new areas like cyber insurance, which is still in its infancy, for national development.

I admonish you to come up with implementable communiqué that would enhance growth while limiting the ills of cyberspace. Thank you.

INVEST IN NIGERIA SUMMIT

AT FOUR SEASONS HOTEL SILICON VALLEY, SAN FRANCISCO

BY

ISA ALI IBRAHIM PANTAMI PhD, FBCS

DIRECTOR GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA), NIGERIA

MONDAY, 09 JULY, 2018

PREAMBLE

In this era, the information/digital era, data is a new form of wealth and technology, ICT specifically, is a new vehicle for creating wealth and it is a critical driver to national growth. Additionally, Africa has 15% of the world population and we cannot afford not to be part of the digital era.

The National Information Technology Development Agency (NITDA) was established in 2001 to develop and regulate the IT sector in general. Section 6 of the NITDA act empowers it to develop and regulate technology application and innovation in Nigeria. Thus, NITDA created its subsidiary Office for ICT Innovation and Entrepreneurship (OIIE) to drive the innovation and entrepreneurship mandate of the agency.

The mandates for the establishment of OIIE include; (i) Develop, establish, support and incentivize ICT innovation hubs, information technology parks and community enterprise hubs across Nigeria and; (ii) Collaborate with private sector, development partners and MDAs at both federal and state levels on policies and programs that support ICT entrepreneurship and commercialization.

NITDA, as an agile facilitators, commits to creating an enabling environment for technology entrepreneurship to thrive.

WE INVITE YOU TO INVEST IN NIGERIAN TECH STARTUPs

As you may be aware, the African continent is a den of problems waiting to be solved and presents the next biggest markets worldwide. In particular, Nigeria has a rapidly growing youthful population. We are here to invite you to invest in Nigerian startups and these are some of the reasons;

o Nigeria has 190+ million population with approximately 70% young people i.e. 130 Million.

o Nigeria remains the world most mobilized country, with 81% of the internet traffic coming through mobiles.

o The African continent has particularly witnessed <u>continuous investments influx</u> from the US, Europe, and the BRIC (Brazil, Russia, India, China) countries with Nigeria, South Africa, and Kenya topping the list of investment destination in Africa. **Nigerian startups attracted an estimated N9.24million in Q1 2018 in Foreign Direct Investment (FDI).**

o The Nigerian tech startup ecosystem has produced 3 companies that sold for more than US$100mn: Andela, Konga, and Jumia. **Jumia is the only African "unicorn"**. [A unicorn is a company valued at over US$1B].

o Nigeria has over 55 innovation hubs, and multinational technology companies are establishing

their regional headquarters in Nigeria! There has been tremendous effort in the ease of doing business in Nigeria. Nigeria ranks has improved at 145 out of 190 countries on the global "doing business" index.

o Nigeria has a dedicated "Presidential Enabling Ease of Doing business Council" and initiative to ease the process of starting and doing business in Nigeria.

o Silicon Valley's Venture capitalist **Y-Combinator** has invested in Nigerian Startups who have demonstrated continuous progress, or traction such as **KANGPE**: (put a doctor in the pocket of every Nigerian). Kangpe is here with us!

o Similarly, Silicon Valley's Venture, **500 Startups** have also invested in **MailHaven, Fyodor Biotechnologies:** diagnose malaria in 25 minutes using a few drops of urine instead of blood and **Mobile Forms who is also here with us.**

NIGERIA IS HERE TO SUPPORT YOUR INVESTMENT

o We have several initiatives and meetups for the ecosystem such as StartUP Friday. SUF is a **tech meetup** that brings together entrepreneurs, angel investors, venture capitalist, technology enthusiasts and buyers. This provides visibility and connection to players such as those at Silicon Valley, that the

startups might have difficulty meeting otherwise.

o   E-Nigeria is an annual international Information Technology (IT) summit which brings together relevant stakeholders from the private, public, non-governmental sectors and the international IT community.

o   *NITDA* share findings from stakeholder engagements and research findings from similar markets to Nigeria as **policy recommendations** *to relevant government offices. We are open to suggestions from Silicon Valley.*

o   *As Investors, you need to* **understand the market** *well enough before making choices on which businesses are solving a relevant problem and have opportunities to scale and provide a reasonable return* **given** *their alternative investment destinations*.

We at NITDA are committed to facilitate the supportive environment for your engagement with the technology ecosystem. Finally, we want to use this opportunity to invite you to E-Nigeria 2018 where you will meet investable Nigerian startups.

STARTUPs

Today we bring to you some of the Nigerian startups to showcase their products and service.

S/N	Company Name	Brief Profile of Company
1	**Mobile Forms Inc**	+Silicon Valley Venture. +100,000 field agents in Nigeria and Ghana.
2	**Piggytech Global Limited (Piggybank.ng)**	+over 58,000 users who have saved over $3 million dollars. +has raised $1.1 million to scale quickly from local and international investors - Ventures Platform, Leadpath Nigeria etc.
3	**Kangpe Inc (US), RelianceHMO (Nigeria)**	+Silicon Valley Venture. +has booked $250,000 in run rate premiums and has been growing at 40% month over month.
4	**Vogue Pay**	+Vogue Web Solutions are in London, Lagos, Kampala and Uganda. +self-funded and year -on-year profits and growth since our inception.
5	**Usend Technologies**	+IT business with focus on web and mobile apps. +"Usend Messenger" will cover Instant Messaging to Shopping on a single platform.
6	**Kobo360**	+easy access to a large pool of trucks with real -time tracking at affordable and flexible rates.
7	**Cowrywise**	+a personal finance platform which automates savings.
8	**Cars45**	+a car buying service.
9	**Ping Express DBA**	+a simple, affordable, convenient and secure way to send money locally and internationally.
10	**PartzShop®**	
11	**Livebox Solution Server**	+assists students and teachers to access over 20 million quality educational resources without the internet.
12	**3D Printing of Prosthesis Limbs**	+Cornucopia Consults runs a Project working with NGO Enable The Future aimed at fitting new artificial limbs. +funding and partnerships to give new limbs to 1000 Nigerians annually
13	North East Innovation Hub	+established as part of VPs initiative for 6 hubs across the geopolitical regions, Abuja and Lagos.
14	**MercShipping Ltd**	+Merchshipping is an "UBER" For Deliveries and Logistics. +partnership with Fedex, and a few other smaller delivery vendors.
15	**MumsBooth**	+Mumsbooth is a community for women. +trained 160 women in Abuja and 35 of them have started their businesses.

TACKLING INCESSANT ICT PROJECT FAILURE THROUGH EFFECTIVE REGULATIONS

PRESENTATION BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT

1st AFRICA INFORMATION AND COMMUNICATIONS TECHNOLOGY ALLIANCE (AFICTA) e- CONFERENCE

ON

THURSDAY, 19TH JULY, 2018

[PROTOCOLS]

May Peace, Mercy and Blessings be upon you!

I want to specially congratulate the Board of Trustees of AfICTA on this momentous occasion. NITDA has been a consistent supporter of AFICTA as exhibited in the hosting of AfICTA side event during the 2017 edition of the e-Nigeria International Conference and Exhibition. I believe in the vision of the organization - Africa must work together to stand any chance in the world stage.

Distinguished colleagues, permit me to digress a little. The recently concluded World Cup is an object lesson for us all. While the five African representatives went home after the group stage, you will agree with me that Africa won the World Cup. France has Africans of Congolese, Senegalese, Algerian, Togolese, Cameroonian and Nigerian descent on parade. Of the four goals, Africa scored 3 to give France the cup. So I believe AfICTA is that platform that would bring African ICT thought leaders together to challenge the global status quo.

Information Technology projects failure is a global phenomenon with varying degree of impact on different

users. The International Data Corporation (IDC) in its 2009 report found that 25% of IT projects surveyed experienced outright failure, up to 50% needed substantial rework, and 20% - 25% do not provide Return on Investment (RoI) [Pucciarelli, Joseph C., Wiklund, Dana, 2009]. Furthermore, an insightful Gartner survey published in 2012 revealed that larger IT projects have increased risks of failure compared to small projects. The report concluded that overall, about 50% of IT projects fail

(see)

The Standish Group reported that between 2003 to 2012, only 6.4% of US Federal Government IT projects were successful. When NITDA released a statement that over 90% of IT projects in Nigerian Ministries, Departments and Agencies (MDA) failed, many people thought it doubtful. It may interest you to know that the Press Statement was issued based on an extensive research carried out by the Agency. Furthermore, other international and local research findings have justified that position and I will be glad to hear the experiences of colleagues participating in this conference, especially those from other African countries.

The pertinent question is: *What are the causes of IT projects failure*? It is almost impossible to exhaust all the remote and

direct causes of IT projects failure; however, the general view is that IT projects fail because of inadequate resourcing, exceedingly aggressive timelines, over/underestimated costs, overlooked requirements, inadequate risk assessment, poor governance and human errors. For us in NITDA, we have identified numerous causes but I will focus on the major ones from the public sector perspective.

a)   Inadequate Planning

Our experience at the IT Projects Clearance Committee has come to the irresistible conclusion that many MDAs do not properly plan their projects before implementation. IT Projects planning is critical to success. Unlike other kinds of projects, every decision made to execute an IT project must take into consideration the Enterprise Architecture framework, systems interoperability, security, sustainability etc. a critical analysis of these issues reveal the hollowness of many projects.

One recurring reason of lack of adequate plan is budgetary consideration. Many MDAs have reasonable understanding of their needs for a set of IT solutions. However, they are timid to drill deep into the project plan

except they are sure of securing funding for it. When they eventually secure legislative approval, they are not sure if the project would form government priority and receive the necessary cash-backing. This state of uncertainty hovers round the project until the procurement cycle is almost out at which stage the project owners get into a frenzy. Without adequate planning, such projects are headed for failure.

b)   **Poor Stakeholders Management**
Closely related to projects planning is stakeholders' management. Due to the high impact nature of most government IT projects, stakeholder management is critical for success. Many project managers implement projects without first critically doing a stakeholders' mapping, interest analysis, impact analysis, multiplier effects among others. Failure to give proper thoughts to these issues lead to the isolation of certain stakeholders whose inputs might result in better outcomes for the project.

c)   **Inadequate Skilled Manpower**
Many projects do not fail at the point of implementation but fail in terms of sustainability. The reason for this is not far-fetched- there is no adequate manpower within

the MDAs to properly scrutinize IT projects, ask the right questions from the contractor, monitor compliance with standards and continue the management of the project after the contractor has delivered the project. The criticality of quality manpower in the IT sector cannot be overemphasized. IT is fast-evolving therefore knowledge quickly gets stale and if IT project planners do not properly consider the need to train and retrain staff on the solution being deployed, the resultant effect would be project failure as government is left at the mercy of the consultants.

d)   Using IT as a vehicle for corruption

IT is a dynamic end new field for many Nigerians. Until recently when NITDA started enforcing IT Projects Clearance for public sector projects, some MDAs contrive bogus projects in the field of IT and flaunt such projects as being the complete solutions to perceived problems. Upon approval, huge amounts of money are paid while the problems persist or get worse. This grand scheme of corruption is done in active connivance with private sector players who act as the consultants and contractors in many cases.

Recently one of the most reformed MDAs approached NITDA to review an MOU it had with a service provider which had been retained for long. We were happy to see that the new Chief Executive Officer of that Agency had negotiated the contract to about a quarter of the cost while getting more value from the same service provider.

Furthermore, our investigation revealed that certain people in the system forced the Service Provider to mark up the cost in order for them to receive a share of the earnings. Incidents like these are prevalent in the MDAs, no wonder the service providers are not motivated to deliver on their expectations.

Brief Overview of NITDA

Distinguished colleaques, it is pertinent for us now to know the **role of NITDA in Nigeria's IT Landscape**. You may recall that Nigeria as a country, realizing that IT is the bedrock for national survival and development in a rapidly changing global environment, and in an effort to address a host of vital socio-economic issues such as reliable infrastructure, skilled human resources, open government and other essential issues of capacity building, approved the National IT Policy in March 2001 and began the implementation with the establishment of NITDA in April,

2001 to, as stated in the policy, "*to implement the National IT Policy, regulate, monitor, evaluate and verify progress on an ongoing basis*". The Agency's mission is to *develop and regulate IT for inclusive and sustainable national development* with the vision of *being the prime catalyst for transforming Nigeria into a knowledge-based economy*.

As can be deduced from the statements above, the Agency was borne out of the fact that Nigeria could not afford to be left behind in the IT revolution which was entering its 3rd wave at that time. The Agency's mandate can be summarized into three:
1.   IT Development;
2.   IT Regulation; and
3.   IT Advisory.

In fulfilling its IT development mandate, the Agency has established various IT capacity building centres in almost every local government in the country. It has carried out over a hundred digital capacity building activities for different categories of individuals and groups and given hundreds of postgraduate scholarships to students within and outside the country.

On IT Advisory, NITDA has become a major adviser to public and private sector players on IT projects and programmes implementation. Most MDAs have realized the value addition that Agency's Advisory gives to their projects and programmes. By consulting with NITDA, some agencies have realized there is no need to build their own data centres when they can get better value through collocation. Resources have been saved and issues of project sustainability have been addressed through the advice given by the Agency.

The IT Regulatory function of NITDA is the most important and yet the most neglected up till late 2016. The NITDA Act emphasizes regulation more than any other function. Upon assumption of office in September, 2016, we realized that we cannot have sustainable development without proper regulation of the IT sector. This narrative is seriously changing as we are strengthening regulation by improving internal capacity, restructuring the Agency and collaborating with relevant stakeholders to get the regulatory function right and beneficial to all Nigerians.

Regulation and IT Projects Failure

As enumerated above, IT projects failure is not peculiar to Nigeria. However the failure rate in the country's public

sector is most alarming. The most effective antidote to such abysmal failure rate is effective regulation. Section 6(a) of the NITDA Act provides - *the Agency shall (a) Create a frame work for the planning, research, development, <u>standardization,</u> application, <u>coordination, monitoring, evaluation and regulation</u> of Information Technology practices, activities and systems in Nigeria and all matters related thereto.*

Standardization, coordination, monitoring, evaluation and regulation are all regulatory functions, without which the Agency would have failed in its core *raison d'étre* (reason for being). NITDA strives to achieve a balance between regulation and development. According to Joseph Stiglitz, *while regulation has typically focused on preventing 'harmful' behaviors, there are some regulations that encourage 'constructive' behaviors*. The Agency's regulatory interventions are focused on prevention of failed projects and encouraging better project outcomes.

One of the first measures we took to reverse the ugly trend of project failures is to constitute an IT Projects Clearance Committee. This Committee is comprised of professionals from various disciplines who meet weekly to evaluate proposed projects from MDAs, engage such MDAs where

necessary and determine if such projects need to be reworked, improved or approved without any objection. Over 100 projects have been submitted and evaluated thus far by the Committee. The unanimous verdict of MDAs who have gone through the process is that it is worthwhile and value adding. Major MDAs such as CBN, EFCC, CAC, FIRS, Petroleum Equalisation Fund (PEF), etc. attest to the value of this process.

Other regulatory instruments are Nigerian Interoperability Framework (Ne-GIF), Nigerian Government Enterprise Architecture (NGEA), Data Protection Guidelines, Standard and Guidelines for Government Website, Guidelines for Clearance of information Technology Projects in MDAs, Framework and Guidelines for the use of Social Media Platforms by Government Establishments. Some of these instruments have been presented to stakeholders in for their inputs.

Furthermore, NITDA's regulatory intervention has come in handy to prevent foreign exploitation. In a recent case that we handled, a foreign Enterprise Resource Planning (ERP) software Licensor had an indigenous Channel Support Partner interfacing with its Nigerian customers. Suddenly the contract was terminated and the support service was

awarded to a foreign company. This state of affairs was unacceptable to us because it contravened the Guidelines on Nigerian Content in ICT 2013. We engaged the ERP company vigorously and ensured the decision was rescinded in favour of another local support service provider. If this had not been done, local companies and MDAs would have to pay more for lesser support and of course business processes would be held to ransom, which would inevitably lead to losses and eventual failure.

Still striving to ensure project failure prevention, NITDA issued a Framework and Guideline for Registration of IT Contractors and Service Providers. Although this was met with initial mild resistance, all stakeholders have now agreed that our decision was in the best interest of the sector and indeed the country at large. The intention of this registration is to ensure that those providing IT services to government are properly identified and their competencies confirmed. Due to lack of a database, some unscrupulous elements go from one MDA to another implementing the same failed projects without any reprimand. We are confident that this measure would help stop this practice as persons and companies with unregistered competencies would no longer get public sector jobs.

Distinguished colleagues, you will agree with me that IT projects failure is a huge drain on our meagre national resource; any veritable measure to reduce it is welcomed. However, the most sustainable measure is for the IT sector regulator to be supported to achieve its regulatory mandate fully with a view to developing the sector rather than stifling it.

In conclusion, I wish to thank the leadership AfICTA for this laudable initiative. I wish you very fruitful deliberations and look forward receiving the outcome.

I thank you for your attention.

Isa Ali Ibrahim Pantami, PhD, FBCS, FIIM,
19th July, 2018

AREWA TECH TALK
AT IBI TRAINING CENTRE,
DISCOVERY HALL, ABUJA

BY

ISA ALI IBRAHIM PANTAMI PhD, FBCS
DIRECTOR GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA), NIGERIA

SATURDAY, 21 JULY, 2018

PREAMBLE

May peace and blessing be upon you.

All protocols duly observed.

It gives me great pleasure to be the keynote speaker at the maiden edition of the Arewa Tech Talk organized by Arewa Tech Society to dialogue on the adoption of technology in the northern part of Nigeria and invariably, to develop the nation in ICT.

Emerging Fourth Industrial Revolution (4IR) technologies such as artificial intelligence, Internet of things, machine learning, big data and blockchain are rapidly changing how people, business, society and nations interact. These technologies have changed communication, travel, online shopping, social networking and education. As these emerging technologies evolve, they are quickly replaced by yet unimaginable new ones. Nigerians (especially the North) need to become increasingly nimble and adaptable with lifelong learning to be part of this revolution. Therefore, we need to groom software developers, network engineers, computer scientists and technicians to manufacture and assemble digital devices that would form part of the list of sustainable jobs that could be created through ICT.

According to the NBS survey in 2016 on access to PC, Kogi State has the highest percentage of total PC access in the country with 17.4 per cent. The FCT and Lagos have total access rates of 15.9 per cent and 15.8 per cent respectively. The survey indicated that all other states had lower than 10 per cent total access rates to computers. It also revealed that Kano, Kebbi, Zamfara, Borno and Sokoto had the least access to computers, at one per cent each.

The Opportunities for empowerment with ICT can be well adopted by people in the northern region of Nigeria for its anonymity, diverse reach and ability to work from home through online jobs. For example, **Social media** can be used to enhance business and the **internet** gives a wider costumer reach to businesses and audience. **Online education** exist for self-education and to study from home by taking online courses and using e-forum to find answers to technical and every day questions. Technical skills are needed all over the world. People in the North as well as in the whole country at larger must be trained to use and leverage on ICT.

General constraints to the use of technology in the northern Nigeria as in developing countries include; (i) lack of ICT skilled Manpower; (ii)Cultural/demographics (eg education is not priority especially for women); and (iii) Political constraints such as Unstable governments.

These challenges need to be addressed for adoption of ICT for national development, job creation and empowerment.

The National Information Technology Development Agency (NITDA) was established in 2001 to develop and regulate the IT sector in general. Section 6 of the NITDA act empowers it to develop and regulate technology application and innovation in Nigeria. NITDA has carried out several developmental initiatives and a number of ICT projects around the 36 States. The high dense tech area such as Lagos has taken the limelight and most of the international partners are most comfortable to collaborate with the tech ecosystem in that region.

However, in my administration at NITDA, we are implementing the mandate of agency in its national capacity. Interventions, initiatives and programs are spread across all geopolitical regions. For example, our Startup Friday which was previously held only in Lagos and Abuja is now a state ignition program and has now been hosted in Kaduna, Gombe and AkwaIbom. We plan to take to other states subsequently. Furthermore, we plan to build hubs in the 6 geopolitical regions, the first of which will be commissioned in Katsina on Monday 23rd July 2018. NITDA remains committed to regulate and develop ICT not only in the north but the entire country.

I must commend other efforts made to disrupt the northern tech ecosystem. Initiatives such as Startup Gamji and Startup Arewa are for awareness and community building. We have tech hubs (Bluehub in Kano, KadICT hub in Kaduna, nHub in Jos), tech startups and ICT companies such as FlexiSAF, Payant, MyLearningAcademy, and many more are catalyst to the growth of technology in Nigeria.

As our goals are similar, I encourage us all to continue to mentor others, be role models to others and also work together to achieve our collective goal. I also enjoin the northern youth to pursue academic and business opportunities in this vast sector as the government is poised to transit quickly to a knowledge-based economy as obtained in other countries.

Finally, let me congratulate the organizers of this event, AREWA TECH SOCIETY, which created this platform to dialogue on how AREWA can leverage technology to empower the youth and address societal challenges. This indeed is very APT and commendable. I also look forward to receiving the communique of the program.

Stay focused, determined and humble.

THE NATIONAL IT POLICY:
THE ROLE OF THE PRIVATE SECTOR,
GOVERNMENTAND MEDIA
BY

ISA ALI IBRAHIM (PANTAMI), PhD, FBCS, FIIM
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT THE ICT IMPACT CEO FORUM AND
AFRICA DIGITAL AWARDS

AT

ORIENTAL HOTEL, LEKKI, LAGOS

ON

FRIDAY, 27 JULY 2018

All protocols duly observed.

May Peace, Mercy and Blessings be upon you!

I am very delighted to be at this year's edition of the ICT Impact CEO Forum and Africa Digital Awards. The fact that this event is in its 7th year says a lot about the vision and tenacity of the organizers, as well as the acceptability by ICT stakeholders. As such, I use this opportunity to salute the efforts of ICTWatch Network and everyone that has played a role in organizing this event.

Your theme, "Broadband Access: National Scorecards and Roadmap to 2020" is spot on and addresses an important trigger to the sustainable development of the ICT sector. Broadband access is a game changer when it comes to using ICT as a tool for increasing creativity and improving productivity.

A recent study on "Socio-economic Impact of Internet in Emerging and Developing Economies" stated that there is a 1-2% increase in GDP for every 10% increase in Internet penetration. This study was corroborated by another study by McKinsey- a respected global consulting firm. As such, any effort to improve the level of broadband penetration should be supported.

Access to broadband will significantly transform how we use ICT. For example, broadband access will provide a gateway for our young entrepreneurs to access knowledge and will allow Nigerians to access media rich content. With broadband, doctors can provide sophisticated telemedicine services and spare their patients the trouble of traveling long distances for consultation.

Broadband will enable farmers to enjoy real time access to weather and crop information for their farms. Educators can also enrich learning using Virtual Reality (VR) technologies. E-commerce can be greatly enhanced by broadband and this can make our make our 37million Micro Small and Medium Enterprises (MSME) more profitable.

NITDA was established in the year 2001 to implement the National IT Policy. This mandate entails both the regulation and the development of the sector. The IT Policy focuses on the use of IT to transform the different sectors of the Nigerian economy. After the approval of the Policy we collaborated with the United Nations Economic Commission for Africa (UNECA) to develop an ICT4D Strategic Plan to cover the following sectors:

1. Electronic Government
2. Education
3. Infrastructure Development
4. Healthcare
5. Human Resource Development
6. Private Sector Development
7. Agriculture Sector Development
8. ICT Awareness and Popularization
9. Governance and Legislation Framework
10. National Security and Law Enforcement
11. Research and Development (R & D)

The ICT4DPlan was developed with UNECA in 2010 and first updated in 2014. However, a number of developments have taken place in the ICT sector since then and this made it necessary for us to further update the Plan. Another update of the ICT4D Strategic Action Plan Implementation Status was done recently and a Report was prepared and published in June 2018.

The update covers the notable developments in the ICT sector, including the Economic Recovery and Growth Plan and NITDA's Strategic Roadmap (2017-2020), amongst others. It also includes contributions from the stakeholders of the ICT industry. This updated plan identifies and

assesses the notable initiatives under each pillar, along with the achievements challenges and weaknesses.

The 2017-2020 Strategic Roadmap of NITDA was initiated on my assumption of office. It identifies the key areas that we are focussing on at the Agency as we have identified these as the key areas that would assist us in developing and regulating the Nigerian ICT sector. The 7 key areas that have been identified are as follows:

1. Regulation
2. Capacity Building
3. Local Content Development and Promotion
4. Digital Job Creation
5. Government Digital Service Promotion
6. Cyber Security
7. Digital Inclusion

An inspirational African proverb emphasizes the importance of teamwork by stating the following: "To go fast, go alone. To go far, go together". We want to ensure that our development of the ICT sector is holistic and sustainable and this has informed our decision to work with our stakeholders.

We consider the private sector, the public sector and our respected members of the fourth estate of the realm as our

key stakeholders in the implementation of the IT Policy. Each stakeholder has a key role to play and I will briefly discuss these roles.

The private sector drives the economy of our nation and policies like the IT Policy are meant to create an enabling environment for the sector to thrive. To that end, one of the key roles that we expect the private sector to fulfil is the role of providing feedback. Your feedback is critical to enabling us fine tune our approach in order to ensure that we enable you to support us in our efforts to make Nigeria an IT capable country.

We also expect the private sector to see themselves as the key drivers of the IT Policy. In fact, the private sector provided a large proportion of the people that served on IT Policy drafting committee. The policies, standards, guidelines and frameworks that we provide should become working documents that guide in the development of products and services in the industry. These documents have been developed with a view to achieving the goals of the IT Policy and by adopting them, the private sector helps in this process.

The government/public sector plays the role of policy

formulation, advocacy and enforcement. There are number of public sector organizations at this event and most, if not all, provide policy direction for the development of the sector.

Synergy and collaboration are buzzwords of the 21st century and this has motivated government institutions to work together. NITDA regularly collaborates with relevant government institutions and such partnerships have enhanced our capacity to develop appropriate policies for regulating and developing the sector.

The media is another critical partner in the development of ICT in Nigeria. Their key role is to ensure the dissemination of updates from NITDA on our activities aimed at implementing the Policy. In an era that has sadly become characterised by hate speeches and fake news, we expect the media to be professional when spreading news both on traditional and social media. NITDA has made it easier for the press to publicize our activities by releasing regular Press Statements to Media houses to inform them of the activities of Agency.

Partnerships have come to stay and we are optimistic that we will continue to elicit the support of our key stakeholders,

including the ones discussed earlier. With these few words, I encourage all three groups of stakeholders to ensure that they always work together and ensure accurate dissemination of information to one another and to the general public.

I will end these remarks by wishing you all very fruitful deliberations. Thank you for your kind attention.

ADDRESS

BY ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM

DIRECTOR GENERAL/CEO

NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)
AT

THE 2nd e-GOVERNMENT CAPACITY BUILDING
PROGRAM FOR CEOs of MDAs Date

Date: 9th August, 2018

Venue: International Conference Centre

PROTOCOL

May Peace, Mercy and Blessings be upon you all. It is my pleasure to welcome you all to the second phase of the Strategic e-Government Capacity Building Workshop for CEOs of MDAs. The first CEO workshop was held on the 17th of April at the Abuja International Conference Centre. The Phase one of program recorded tremendous successes and provided evidence on the critical demand for the services of NITDA in transforming and digitizing government services in Nigeria and enabling us to become a globally competitive nation. Seventy-six percent (76%) of participants in the first phase had no prior exposure to e-Government training. We intend to close this gap within the next 2 years ensuring that all Nigerian Executives are properly informed on the National egovernment agenda. The aim of the workshop is to support executives in reducing the rate of failure for ICT projects and sensitize participants on the Nigerian e-Government agenda which seeks to enhance the transparency, efficiency and quality of government services. As Executives in our various institutions, we are constantly challenged to deliver better government services in the midst of shrinking resources. The success of the current administration depends a lot on how well we are able to deliver government services that are

efficient, transparent and convenient to the citizens, businesses and other government institutions we serve. We are responsible collectively for improving the economy and making Nigeria globally competitive with sustainable growth and greater social inclusion. We are challenged to increase access, scale, coverage and convenience of our services. The resources available are overburdened and hence we must consider the transformative potential of ICT. It is imperative for Nigeria to be transformed, citizens to be engaged, rights to be protected and institutions strengthened through the use of information and communications technology. Electronic governance can transform internal and external public sector interactions and create new channels to deliver value while keeping all stakeholders engaged and informed on institutional roles and responsibilities. Ladies and gentlemen, the goal is to use ICT to enable your organisations to succeed. We are not just pushing for the adoption of technology. This workshop is organized to enable us to share common vision and be able to collaborate in this strategic initiative. The specific objectives of this are as follows: 1. Effectively utilize ICT to improve the quality of service rendered to citizens, businesses and other governmental institutions; 2. Monitor, manage and successfully deploy ICT projects within their respective MDAs; 3. Ensure efficiency in the delivery of

government services to citizens, businesses and other governmental institutions; and 4. Effectively reduce the volumes of failed ICT projects within their organization and the country. We are all aware of the key role ICT is playing in supporting the current administration's change agenda especially in fighting corruption, improving security and economic transformation through diversification. Nigeria has recorded success in using ICT to drive government policies as evident in the Treasury Single Account (TSA), Integrated Personnel Payroll Information System (IPPIS), Government Information Financial Management Information System (GIFMIS), Bank Verification Number (BVN), e-Taxation, e-Passport, e-Wallet for farmers and business name registration automation by Corporate Affairs Commission CAC among others. Presently, ICT contributes over 10.58% of the nation's Gross Domestic Product (GDP). The implementation of TSA and IPPIS/BVN saves Nigeria $11.3M and $56.3M respectively every month while eliminating thousands of ghost workers. The Nigerian government is becoming more complex and wide-reaching than ever before and citizens believe and expect that public services must be delivered effectively and at speed. Therefore Government Digital transformation is strategic to the sustainability of the country. The National Information Technology Development Agency through its mandate

seeks to promote e-government initiatives for improving National competitiveness, openness, collaboration and resource sharing. NITDA is mandated to: 1. Design and develop standards, policies and guidelines on various aspects related to e-government 2. Encourage and facilitate the formulation of new ICT legislations as well as amendment of existing laws and regulatory framework. 3. Provide advisory services to Agencies of government regarding ICT 4. Play the role of an anchor across various ICT initiatives in different sectors to enable overall development. At NITDA we have identified 7 key priority areas of focus to support President Muhammadu Buhari's change mantra. These include Capacity Building, Local Content Development, Digital Job Creation, Government Digital Service Promotion, Cyber Security, and Revenue Generation. Various initiatives are currently on-going to achieve these thematic pillars. The Capacity Building Program of today is one of these numerous initiatives. I therefore implore CEOs here present to see this program as a major step in laying a proper foundation of the Nigeria egovernment initiative in order to enhance effective and efficient service delivery. I wish to express our appreciation to all invited guests, resource persons and others who created time to be present at this event. I wish us all a successful event. Thank You and God Bless

TECHNOLOGICAL DISRUPTION

SPEECH DELIVERED BY

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NATIONAL INFORMATION TECHNOLOGY
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AT THE 58TH ANNUAL GENERAL CONFERENCE OF
THE NIGERIAN BAR ASSOCIATION 2018

29 August 2018

PROTOCOLS

It is my utmost pleasure that I stand before the body of great learned gentlemen today to speak on issues of regulation and technology. The relationship between law and technology is not new. I have chosen this topic because of the role the National Information Technology Development Agency (NITDA), of which I am the headmaster, plays in the regulatory landscape of Information Technology in Nigeria.

Law simply regulates the conduct of the society and at the same time regulate the use of technology. This was initially a simple concept until the emergence of what we now refer to as disruptive technology or disruptive innovations, which have the aim of disrupting the existing order.

It is no longer news that technology has been integrated in every aspect of our society and thus the major form of societal interaction has migrated from the face-to-face interactions to digital forms of social endeavor. From the financial sector to social interactions, the broad spectrum of the society has come to embrace the use of technology, because it reduces cost, has a wider reach, more convenient and in government circles reduces human interactions and thus helps in the fight against corruption.

Whether we call it "technological disruptions", "disruptive innovations" or "disruptive technology", the terms all represent technologies with the principal aim of changing established ways of doing things. in his article, *The Innovator's Dilemma – When New Technology Causes Great Firms to Fail*, published in Harvard Business Review, using the term "disruptive technology", described two ways technology can affect businesses. First the "sustaining technology" which evolves gradually and improves business methods and processes, then the "disruptive technology" which initially is uncertain but gradually gains prominence through adoption and use, eventually threatening and overthrowing the existing order. For clarity I will stick with "disruptive technologies".

For me, disruptive technologies are simply technologies which have the primary objective of breaking the norm, regulations and laws as the case may be. I will start with an example that we can all relate to. The famous "UBER". Uber is a taxi hailing service that has no single Taxi. Uber registers car owners who want to deliver taxi services and connect those who need taxi services through an app that rides on google maps. This eliminates the entry barriers created for regular registered taxis. What are the effects of this? On the 9th of August 2018, BBC news website reported that the city

council in New York voted to limit the number of cabs that can be registered under Uber and similar cab hailing services as well as set minimum conditions for its drivers. The reason behind this is that the city realized that the number of cab hailing drivers had increased to 80,000 as against 13,500 famous New York Yellow Cabs. This put so much pressure on the regular taxi drivers and as a result of this financial pressure there was an increase in suicide among regular taxi drivers.

Another example is ALAT. ALAT if a fully functional bank app. Even though backed by WEMA, the app allows you to open and account and have full services of a functional bank with your reach in 5 minutes. Your bank card will be delivered within 2 days while it would take about 5 working days to get these same services from a regular brick and mortar banks. This on its own circumvents most rules that would apply when you walk into a bank to open an account, thanks to Bank Verification Number (BVN).

The legal sector is not left out of this disruption. In the United States of America, Ross Intelligence, a legal start-up company, dealing with legal research, has recently applied the Artificial Intelligence project of IBM called "Watson" to help lawyers find relevant cases using natural language

search. So any lawyer can ask questions in plain English, the same way you communicate with a colleague and Watson using the legal database, reads through the entire set of laws and answers citing authorities, within seconds. Though the application is not designed to replace lawyers, but I believe it is a matter of time before disruptive technologies step into the court room. I dare say that such apps would not be governed by the Legal Practitioners Act or the Rules of Professional Conduct for Legal Practitioners. It will also interest you to know that in some courts in the United States, accused persons are arraigned using teleconferencing technology, thereby eliminating the necessity to transport such accused to court. This may also challenge the definition of "Open Court" as defined by the Criminal Procedure Act 2004.

One of the best yard stick for measuring the impact of technology is to determine the effect of such technology on the existing rules, regulations and laws. This can be done by applying existing legal rules to particular issues which have been identified with respect to that technology. Where there is no need to alter existing rules to meet the challenges of the new technology, then we may consider it as technology that is not disruptive. In some cases, it is possible to maintain existing legal rules and spell out how these rules should be applied to the new technology.

However, it is not always possible to stretch existing law to regulate the effects of new technology. In such circumstances there may be a need to amend the laws and maybe even a need to infuse new sets of regulations into the system. Christian Twigg-Flessner in his article "Disruptive Technology-Disrupted Law? How Digital Revolution Affects (Contract) Law" argues that where the "functional equivalent" principle, cannot be applied, then the rule makers should consider wholesale reforms in terms of legal rules.

This form of regulation is unique, because there has to be a balance between promoting innovation and protecting the citizens against the adverse use of these innovations. Sometimes the fundamental principles of existing regulations themselves have to be reconsidered in the face of disruptive technology. For example, a self-driving car, knocked down and killed a 49-year-old lady in Arizona. The car, operated by Uber used components from several other companies including artificial intelligence and machine learning to take decisions. This was an unprecedented case where there was a need to determine the issue of liability for a self-driving car with a complex mix of hardware and software from various vendors. The world was not afforded that opportunity as Uber settled the case out of court.

Perhaps it was the recognition of the need to provide for a rule making structure that allows for the flexibility and quick response to emerging IT issues that the Federal Government set up NITDA with powers to make subsidiary legislations. NITDA in its mandate, is charged with the responsibility of regulating Information Technology for the purpose of development. While this may sound contradictory to some, the development of any sector, would require some form of regulation to provide confidence in the sector and midwife viable local participation from the citizens of the country in question.

Section 6 of the NITDA Act 2007 enumerates the primary mandate of the Agency, which is to develop Standards, Frameworks, Guidelines and Regulations for the Information Technology industry in Nigeria. Section 17 of the NITDA Act 2007 makes it an offence if any individual or corporate body fails to comply with the provisions of the Act or in deed any Guidelines issued by NITDA. The Interpretation Act 1990 also has provisions equating subsidiary legislations with regular enactments thus giving NITDA the opportunity to create instruments that would impact on disruptive technology. In line with this, NITDA was in the forefront, advising and supporting the enactment of the Cybercrimes (Prohibition, Prevention etc.) Act of

2015 and currently has several regulations that are impacting on the Information Technology sector.

I dare to say that despite the fact that NITDA is an IT regulatory Agency, our Mandate also recognizes the need to collaborate with other entities and establish beneficial relationship that would advance the execution of our function. In order to sustain an appropriate regulatory framework for Information Technology in Nigeria, there is also the need to build capacity in the area of regulations for the IT sector. In that direction, NITDA under my supervision, has created a Strategic Roadmap for developing the Nigerian ICT Sector. The roadmap has 7 key areas with regulation and capacity building being the first two areas in that order.

To this end, NITDA collaborated with the Nigerian Bar Association, Abuja Chapter, to establish a Digital Law Research Center, where lawyers are provided access to various literature from different jurisdiction for the purpose of research. I believe this would enrich the capacity of lawyers, especially here in Abuja, to acquire knowledge that would enable them stand shoulder high with their peers anywhere in the world. NITDA has also dedicated a certain portion of its post graduate scholarship for the benefit of

lawyers to further build capacity and enable them serve as advocates for the evolving area of Information Technology Law in Nigeria.

My intention today is not to dissuade any member of the legal profession to shy away from emerging technologies no matter how disruptive they may be. Rather it is to encourage us to embrace these technologies and collaborate with one another to create an adequate socio-cultural and legal environment for these technologies to thrive. The use of technology can reduce the time, cost and energy spent on legal research, automate office processes and with application of artificial intelligence, forecast the outcome of a particular case.

We stand here today, together as advocates in a country where there is a dire need for security and economic development. Information Technology offers positive opportunities in both areas. Let us as fellow citizens of this country work hand-in-hand to ensure that we build a nation where peace and justice reign.

Let me end my time on this podium with a quote from the famous Judge, Lord Denning, in the case of Parker Versus Parker, reported in 1954 All England Law Report page 22,

"*What is the argument on the other side? Only this, that no case has been found in which it has been done before. That argument does not appeal to me in the least. If we never do anything which has not been done before, we shall never get anywhere. The law will stand still while the rest of the world goes on, and that will be bad for both.*"

Thank you.

INFORMATION TECHNOLOGY AND THE NATION'S DEVELOPMENT: THE ROLE OF YOUTHS

BEING A SPEECH DELIVERED

BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR GENERAL/CEO
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY
(NITDA)

AT THE 2018 NIGERIA ASSOCIATION OF COMPUTER SCIENCE STUDENTS (NACOSS) NORTHWEST ZONAL CONFERENCE
Opening Ceremony

ON

SEPTEMBER 3RD, 2018

Venue: University Assembly Hall, Ahmadu Bello University, Zaria.

May peace, mercy, and blessings be upon you!

All protocols duly observed.

I am highly delighted to attend this auspicious event as it aligns with our ROADMAP at National Information Technology Development Agency, (NITDA) for developing the Nigerian ICT sector. It gives us the opportunity to reflect on the great potential we have in our youth and it also provides us with a platform to support them and identify unique solutions that can be incubated and showcased to the world.

I am equally honored to attend the 2018 Nigerian Association of Computer Science Students (NACOSS) Northwest Zonal conference as the keynote speaker on the topic *Information Technology and the Nation's Development: The Role of Youth*.

The National Association of Computer Science Students (NACOSS), as a student arm of the Nigeria Computer Society (NCS) which is the professional body for computer scientist and IT professionals in Nigeria has come a long way, with presence in almost all tertiary institutions in Nigeria (both private and government owned). The society

provides avenue for students (in any IT related field) to highlight and champion issues of interest in a coordinated and organized manner. Through consistent and professional exposure, NACOSS seeks to provide an excellent foundation for Computer Scientists, Engineers and any IT related discipline in Nigeria. We are aware that, NACOSS has over the years given to the economy and society the finest professionals in Information and Communications Technology (ICT) and we hope they will be dedicated to doing even more in future.

With IT skills, the average young persons can organize themselves in order to address their own needs and interests. They can make their particular contribution to social progress and be an asset to the growing economy of a nation. Needless to say that skills and manpower, are in high demand due to the emerging technology explosion. It is our strong belief that the IT sector provides a lot of opportunities and a genuine option for both attracting and retaining revenue for the country. We are also confident that IT will serve as a key enabler of all the other sectors of the country and this would lead to wealth generation, job creation and increased efficiency in service delivery.

In line with this, NITDA has developed a ROADMAP focusing on some key regulatory and developmental areas. These are: IT Regulation, Capacity Building, Promotion of Government Digital Services, Digital Job Creation, Cyber Security, Digital Inclusion and Local Content Development.

To start with the least, NITDA is at the fore front of promoting indigenous IT solutions and innovations. We strongly believe that the development of capacity in indigenous IT solutions will help create enormous employment and wealth opportunities for Nigerians. It will help in increasing foreign income through outsourcing and foreign direct investments. We have actively promoted the entrepreneurship culture in Nigeria by identifying and promoting Startups. The NITDA's Office for ICT Innovation and Entrepreneurship (OIIE) has successfully conducted youth oriented events like the StartupFriday and StartupClinic that provides a platform for youth to showcase their ideas for further development and/or connect with investors. If you follow our activities, you may be aware that there is currently a selection of startups going on that will be sponsored to the annual Gulf Information Technology Exhibition (GITEX) in Dubai. We have in the previous years sponsored a number of such statups who have emerged stronger employing a good number of Nigerians or connected with investors and expanded.

With respect to capacity building and digital inclusion, the agency has provided over 160 digital capacity building centres and digital job creation centres in the last 2 years in secondary schools and other tertiary institutions in various locations in the country. We have also embarked on our first set of ICT capacity building program and training for women/girls. We have trained over 100 women in ICT skills and entrepreneurship and provided computing tools for them with the aim of creating 300 direct jobs and over 1000 indirect jobs. We have a clear plan of replicating similar programs across the country's six (6) geopolitical zones. This program is also part of the Agency's continuous efforts aimed at supporting youth and the Economic Recovery and Growth Plan (ERGP) of the nation.

So, with respect to the role of the youth, you will agree with me that a lot is already going on and no doubt, the application of ICT to the various spheres of our lives is a veritable option for national growth and development. Our efforts at NITDA are attempts at promoting a sustainable ecosystem for development.

You have to come up with innovative ideas and play active roles in ensuring that you support not only in building the

nation but to the global development goals. Through partnerships and collaborations, and programmes like this, you need to organize and re-organize for success. You need to be "glocal" entrepreneurs that can think globally and act locally. The role of technology in creating opportunities is a reality especially for the youth, be it in software applications, bio-engineering, digital media, mobile applications and so on. Whatever attracts and ignites your creativity. So, the youth have to be creative in their thinking and apply globally accepted solutions to some of our local problems.

This sort of Techno-Social interactions will help reliable and creative business ideas to thrive, so I encourage you to keep attending and associate freely with your peers. Exchange ideas and develop them into products. Document best practices and adapt. Come to NITDA's OIIE for guidance and advice. Our doors are always open to review your futuristic ideas and help you develop them into tangible products.

Once again, I am humbled for honoring me to be the **Keynote Speaker** at the opening ceremony of this event. I hope my few words will be of benefit, and encourage you to do more.

Thank you very much for your attention.

GOODWILL MESSAGE AT THE OPENING OF INTERNATIONAL CONFERENCE ON INFORMATION AND COMMUNICATION TECHNOLOGY AND ITS APPLICATIONS (ICTA 2018)

DELIVERED

BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR GENERAL/CEO
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY
(NITDA)
AT THE
Opening Ceremony OF THE INTERNATIONAL
CONFERENCE ON ICTA 2018

ON

SEPTEMBER 5TH, 2018

Venue: Federal University Of Technology Minna, Niger State, Nigeria.

All protocols duly observed.

I am pleased and honored for your invitation to deliver a Goodwill message at the opening of this International Conference on Information and Communication Technology and its Applications (ICTA 2018). I am also delighted that the theme of this conference is in line with the Economic Recovery and Growth Plan (ERGP) of the current administration of President Muhammadu Buhari and the Strategic RoadMap (Focal Priorities) of the National Information Technology Development Agency (NITDA). As you may be aware, NITDA is the government's agency responsible for the development and regulation of the IT sector of the country. This conference goes a long way in supporting the activities that we do to ensure the country's sustained growth of its digital economy.

Education is the foundation and bedrock for the development of every society, as emphasized by goal 4 of the Sustainable Development Goals (the achievement of quality education). The importance of collaboration with the academia and institutions like the Federal University of Technology Minna (FUT Minna) cannot be overemphasized. The University has over the years produced some sterling alumni, some of whom are adding

value to us at the Agency. Hence, this Information and Communication Technology (ICT) conference is a welcome and laudable initiative expected of such a citadel of excellence like the FUT Minna.

Events like this conference gives us the opportunity to reflect on technological trends and their impact on job creation in particular and the economy in general. Issues such as cloud computing, artificial intelligence, internet of Things (IoT), big data analytics and mobile technologies etc, are trends that are changing the world as we speak. NITDA in collaboration with relevant stakeholders is working hard to ensure that the nation benefits from the opportunities presented by these innovators. Aside from regulatory efforts and support NITDA has been supporting our young innovators to actualize their dreams. The Gulf International Technology Expo (GITEX) is an example of NITDA's support in job creation, which has enabled over sixty (60) young innovators to participate in the annual Global event, which has created opportunities for networking and investments. NITDA, with the support of its stakeholders in both the industry and the academia are looking into some of these technologies to promote the digital economy. Our focus is to develop, rather than strangulate innovation.

As we all know, we are in the digital age where Data is critical to promoting sustainable development. NITDA has recently made appreciable efforts through the drafting of the Data Protection Guidelines, National Cloud Policy, and Nigerian e-Government Interoperability Framework (NeGIF), all in an attempt to promote a sustainable ecosystem for development. No doubt, the application of ICT to the various spheres of our lives is critical option for national growth and development.

In conclusion, we look forward to receiving the outcome of this conference to support our regulatory and developmental work and contribute in achieving a steady growth in our economy by harnessing our collective innovative efforts.

REMARKS

BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT

THE COMMISSIONING OF THE DIGITAL JOB
CREATION CENTRE

AT

VOICE OF NIGERIA
ON THURSDAY, 6 TH SEPTEMBER 2018

Protocols and Greetings. May Peace, Mercy and Blessings be upon you all. I am very delighted to commission this Digital Job Creation Centre (DJCC) at such a strategic location like Voice of Nigeria. Our role at the National Information Technology Development Agency (NITDA) is to regulate and develop the Information Technology sector of the country, as well as offer advisory services. We are committed to ensuring that Information and Communication Technologies (ICTs) have a positive impact on every sector of the economy. To this end, when I took up the mantle of leadership at NITDA about 2 years ago, I came up with a Roadmap that detailed a plan to develop the ICT sector of the country. This Roadmap has since been endorsed by the Management Team of NITDA and the Stakeholders of the ICT sector of the country. Our Roadmap for the development of the ICT sector of the economy also aims to diversify the economy by transforming Nigeria into a knowledge based economy. The Roadmap is made up of the following 7 pillars: 1. Regulation 2. Capacity Building 3. Local Content Development and Promotion 4. Digital Job Creation 3 5. Government Digital Services 6. Cyber Security 7. Digital Inclusion This Digital Job Creation Centre will address a number of these pillars. I will mention a few of these. With regard to capacity building, we have provided a rich collection of e-learning content to broaden the horizon of the

users in several areas of learning. VoN plays an important role in educating society and shaping the perception of our citizens. As such, it is important that the personnel are able to use ICT in creative ways to carry out this responsibility. The Government Digital Services pillar focusses on how ICT is used to deploy government services to citizens in a way that is efficient, transparent and effective. These days a vast majority of your target audience have a preference for listening to the radio via their phones and computers, rather than through tradition physical radio sets. The infrastructure, software and bandwidth we have provided at the DJCC will make it easier for you to provide the public service of radio broadcasting in line with global best practice. You will notice that this centre has a name of one of the pillars in our Roadmap- the "Digital Job Creation" pillar. This name was chosen deliberately. We want these centres to be triggers for the development of jobs that can thrive in this Fourth Industrial Revolution, jobs that evolve with the needs of the citizens and take advantage of cutting edge technologies. 4 The media industry is a very dynamic one and we have provided some of the latest media and editing software at the DJCC. This will enable users of the Centre to create new streams of businesses for the benefit of our national economy. The advent of the social media has redefined how broadcasting is done. There is an upside to this as society can

now be part of the news making process. Unfortunately, it also comes with a downside- we now have increased cases of fake news and hate speech. This DJCC can used to develop a team that can help to reduce the incidents of both vices. We received request for the establishment of DJCCs from several institutions from across the length and breadth of the country. We would have desired to deploy such centres to most of the requesting institutions, however, we have budgetary constraints. As such, we had to wisely choose the institutions where these centres would be deployed. We selected VoN because we are confident in the capacity of the DirectorGeneral and his management team to use it in a way that would have significant benefits for Nigerians. We urge you to take full advantage of this opportunity. We are on hand to support you and we are committed to using ICT to transform every sector of the economy. 5 With these few remarks, on behalf of the entire management team of NITDA, I hereby commission this Centre and happily hand it over to the VoN. Thank you for your kind attention.

SECURITY AND PRIVACY: TOWARDS THE DEVELOPMENT OF A VIBRANT NATIONAL IT GOVERNANCE STRUCTURE

KEYNOTE ADDRESS
BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA), NIGERIA

AT THE

10TH ANNUAL CONFERNECE OF ISACA, ABUJA CHAPTER

HELD AT

NAF CONFERENCE CENTRE AND SUITES, KADO - ABUJA

TUESDAY, 11TH SEPTEMBER 2018

[PROTOCOLS]

May Peace, Mercy and Blessings be upon you all.

It is my pleasure to be identified with ISACA. ISACA engages in the development, adoption and use of globally accepted, leading-industry knowledge and practices for information systems with the provision of practical guidance, benchmarks and other effective tools for all enterprises that use information systems. These guidelines and tools define roles for and help enterprises develop information systems governance, security, audit and assurance. The Nigerian government as an enterprise that believes in the possibilities brought by ICT has placed these responsibilities and much more on NITDA's shoulder. This is why activities of ISACA, especially Nigeria chapters, are of high interest to us. I am glad that Nigeria has strong and excellent representation in the 180,000 members of this body. Nigeria and in particular, the National Information Technology Development Agency (NITDA) appreciates the role ISACA Nigeria is playing in helping to shape the IT landscape.

Information security and privacy is a recurrent theme in our internet dominated world. Information security differs from

privacy. Information security seeks to achieve the objectives of Confidentiality, Integrity and Accessibility while privacy focuses on the rightful use of data, how it is to be collected, stored and shared. Cybercrime and cyber terrorism are both manifestations of data security and privacy breaches.

If proper IT security measures are not put in place, terrorists may disrupt the national elections by hacking into INEC voter register database; they can disrupt the banking system by hacking into and taking over the Bank Verification Number (BVN) platform. They can critically disrupt the national economy by cyber-jacking the Treasury Single Account (TSA) software, etc.

I would also like to quickly lay some conceptual foundations with the concept of IT Governance. NITDA under my watch believes in the critical role of IT Governance and we have defined it as a framework for decision rights and accountability to encourage desirable behaviour in the use of Information Technology. The desirable behaviour expected of IT has to help accomplish National Strategic direction: *vision, strategy, goals, plans and objectives*. The role of NITDA and indeed mine as the Chief Information Technology Officer for the country is to set and pursue implementation of a National IT Strategic direction that is in alignment with the National strategic direction and plan.

As we are all aware that the present administration under the leadership of His Excellency, President Muhammadu Buhari, GCFR, has National direction that is encapsulated in three pillars:

1. Security
2. Economy
3. Anti-Corruption

That is why NITDA in the last two years, under my leadership, has been setting and pursuing a strategic IT direction that is focused on IT regulation and development to drive the implementation of the National direction. For instance, the Economic Recovery and Growth Plan (ERGP) recognized IT as a critical tool for driving every program of the plan.

Having realized the critical role of IT governance to national IT development, NITDA has been able to define IT Governance that focuses on a small set of critical IT-related decisions and put mechanisms in place to actualize them. The IT Governance captures:

1. **IT Principles**: a clear direction, policy, goal and objectives for IT use;
2. **Enterprise Architecture**: a clear road map and a

sustainable framework for IT deployment;

3. **IT Infrastructure Capabilities**: Building IT infrastructure that enhances national digital growth and development;

4. **Business/Governance Application Needs**: ensuring the right and sustainable applications are developed and adopted to leverage the capabilities of IT infrastructure; and

5. **IT Investment and Prioritization**: A prioritized IT investment that guarantees return on investment (ROI) and public value.

As we all know, the issue of security and privacy cuts across these critical IT related decisions. In the context of security and privacy, it lays emphasis on defining plans and programs for:

1. IT Security/Privacy Principles;
2. Security/Privacy Enterprise Architecture;
3. IT Security/Privacy Infrastructure;
4. Business/Governance Application Needs for Security/Privacy; and
5. IT Security/Privacy Investment and prioritization.

Moreover, the issue of security and privacy in the context of Information Technology (IT) governance is coming at no better time considering the global events bordering on information security and privacy.

This presentation would focus more on our efforts as an Agency on how we are implementing the IT Governance perspective in the context of security and privacy. NITDA as Nigeria's IT sector regulator has had course to deal with issues relating to information/data security and privacy from different dimensions.

First of all, as part of my restructure strategy and efforts on assumption of office, we created a Cybersecurity and e-Government and Regulation Departments to champion the cause of IT Governance as related to security and privacy.

As for the IT security/privacy principle aspect of IT Governance, we have a National Cybersecurity Strategy that is being implemented. In addition, as a clearing house for IT projects in the public sector, NITDA is looking at coming up with a full-fledged National Information Security Policy and Strategy for Pubic Institutions to cater for every aspect of Information Security. We have developed a draft Data Protection Guidelines which is currently under stakeholder review process. The Guideline makes it mandatory that the Data Subject must be informed of the purpose of collection and must give a valid and express acceptance. The Data Collector is obligated to publish privacy policy which would state in explicit terms the types of data collected and what it's

being used for. Also, only needed data are to be collected. This is to stop the incidence of collecting unneeded data which ends up being misused. The Guideline also provides that the data must be released upon reasonable request by data owner. The Guideline also makes it mandatory for the Data Controller to put in place appropriate cybersecurity measures to avoid possible breach of data privacy.

NITDA is developing a Nigerian Government Enterprise Architecture and a critical part of it was dedicated to security of Information Technology systems. This section specifies what security measures should be in place while deploying IT systems in Public Institutions.

We have a Computer Emergency Readiness and Response Team (CERRT) with adequate tools to deal with varieties of information security incidents in public institutions. We are also encouraging and creating awareness for the establishment of sectorial CERRTs.

A national Public Key Infrastructure (PKI) project is ongoing to address every issue of information confidentiality, integrity and availability. We are working with relevant stakeholders for a holistic and successful implementation.

We have also set up an IT Clearance Committee to look at every IT project implementation in Federal Public Institutions (FPIs). One key criteria for clearing an IT project is IT systems security. For us, it is a critical criterion.

In addition to these, a critical component of IT Governance is continuous security and privacy awareness and collaboration. We have embarked on awareness and sensitization programs on cyber security across the six geo-political zones.

You may also recall that as part of our role in ensuring standards and best practices, COBIT 5 was introduced and adopted in Nigeria as a National framework of IT standards on December 4, 2013. COBIT 5 is a globally accepted framework for IT Governance based on industry standards and best practices and has been gradually implemented in Nigeria in the past five years in a number of FPIs.

Furthermore, in an effort to ensure comprehensive operationalisation of the Framework, we inaugurated the COBIT 5 National Implementation Committee in January, 2017. The Committee was charged with the responsibility of, among others:

- ensuring the domestication of the framework to become relevant to the Nigerian environment and meet the developmental and service improvement aspirations of the country;
- continuous consultations with various industry regulators and stakeholders;
- setting up a national implementation committee that comprises various sector regulators; and
- developing a generic regulatory framework (COBIT.ng) that shall be the instrument for the domestication of the COBIT 5 framework in Nigeria.

Membership of the committee were drawn from various FPIs including Central Bank of Nigeria (CBN), National Universities Commission (NUC), National Agency for Food and Drug Administration and Control (NAFDAC), Security and Exchange Commission (SEC), Nigeria Maritime Administration and Safety Agency (NIMASA), Nigeria Communication Commission (NCC), Nigeria Electricity Regulation Commission (NERC), National Environmental Standards and Regulations Enforcement Agency (NESREA), Professional Associations as well as representatives of the private sector. It is our hope that the outcome of this conference will inform the activities of the committee.

In conclusion, IT Governance spans every aspect of an organisation. It ensures alignment with the organisations strategic objectives, facilitates value addition, ensures security risk management, provides guidance for adequate resource and performance measurement. My dream as the Chief Information Technology Officer of the country is to lay the foundation for digitally transformed Nigeria and ensure our Information and Communication Technology infrastructure and applications in which our lives have been dependent on is highly protected and safe.

I therefore want to encourage the political leaders, policymakers and captains of industry here present to take advantage of the conference and come up with resolutions and recommendations that will help us a country develop vibrant IT Governance Structure and an effective implementation strategy.
Thank you for your attention.

Isa Ali Ibrahim Pantami, PhD, FBCS, FIIM

11th September, 2018

EFFECTIVE REGULATION FOR INVESTMENT IN NIGERIA'S THRIVING ICT SECTOR BEING A SPEECH

PRESENTED BY

ISA ALI IBRAHIM (PANTAMI), PhD, FBCS
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT THE

ITU WORLD TELECOM EVENT @DURBAN2018
DURBAN INTERNATIONAL CONVENTION CENTER
SOUTH AFRICA

ON WEDNESDAY, 12 SEPTEMBER 2018

All protocols duly observed. May Peace, Mercy and Blessings be upon you! I am very delighted to welcome you to NITDA's pavilion at this very important event. Let me start by expressing my profound gratitude to the Nigerian Local Organizing Committee (LOC) for the 2018 International Telecommunication Union (ITU) World Telecom meeting for creating a time slot for us as partners for the event. ITU is the United Nations' specialized Agency for Information and Communication Technology (ICT). The Agency is responsible for the allocation of global radio spectrum and satellite orbits, development of technical standards that ensure networks and technologies interconnect seamlessly, and also strive to improve access to ICT to underserved communities worldwide. Meetings of this nature provide a platform and opportunity for African stakeholders to focus on the prospects for investment in the continent's ICT sector. Nowadays, ICT underpins everything we do. Nigeria as a country is struggling to ensure that the best use of ICT is made for economic growth and global competitiveness. Today, I have the singular honour of discussing the investment climate and vast investment opportunities in Nigeria's thriving ICT sector. Nigeria is strategically located between West and Central Africa, giving investors easy access to approximately 190 million Nigerians and an additional 200 million West

Africans, as well as 150 million Africans in Central Africa. We also have one of the largest economies in Africa which, according to the World Bank, has a Gross Domestic Product (GDP) valued at $405billion USD. For ICT to thrive in any society there needs to be a sizeable number of highly skilled people who can understand and use technology. Nigeria, of recent, has experienced a boom in education and this has led to an increase in skilled manpower and a growing middle class. According to a recent Nielsen report, Nigeria has a rapidly-expanding middle-class population of over 42 million people. This has become evident in the entrepreneurship drive of its population and the increasingly significant role technology is playing in their lives. Millions of Nigerian youths are beginning to give-up formal employment to learn hands-on ICT skills like programming and networking, which has positioned them for better opportunities. Other sectors of the economy that experience boom include finance, services, e-commerce etc. In recent years, ICT has become one of the most vibrant industries in Nigeria, and the reason is not farfetched. According to Nigerian Communication Commission (NCC), there are approximately 114 million Nigerian Internet users as of 2nd quarter of 2018; an increase of over 50 percent from the 2013 figure of 51.8 million. This presents a huge opportunity for growth in ICT as Internet is the backbone on which

Information Technology is built. The sector has established itself as a key driver of economic growth. While the National Bureau of Statistics (NBS) does not provide separate figures for the ICT and telecoms sectors, the industries grew by a combined 2.3% quarter-on-quarter in the April-to-June period of 2017, and currently accounted for 10.2% of real GDP. Even in the face of lower oil prices and the exchange rate volatility that threw the country into recession in 2016, the industry has continued to thrive and, according to the NBS, it regularly outperforms the economy as a whole. The fourth quarter of 2016 was particularly strong, posting 20% growth over the prior quarter. Broadband access is important to economic growth and, according to independent studies cited by the ITU; countries can increase efficiency and have up to 1.38% growth in per- capita income by increasing broadband penetration by 10%. We realize this in Nigeria and have developed a comprehensive National Broadband Plan (NBP). A key goal of the plan is to increase the broadband penetration in Nigeria to 30% by 2018, up from about 6% in 2013. The efforts are already yielding positive results and the ITU Broadband Commission for Sustainable Development attests to this as they confirmed that we attained a broadband penetration level of 20.95% in September 2016. The success story recorded in the ICT sector is as a result of the effective regulatory instrument put

in place by relevant regulators for the sector. The National Information Technology Development Agency (NITDA) is one of such regulators. NITDA was established in April 2001 to implement the Nigerian Information Technology Policy and co-ordinate general IT development in the country. It was mandated by the National Information Technology Development Act (2007) to create a framework for the planning, research, development, standardization, application, coordination, monitoring, evaluation and regulation of Information Technology practices, activities and systems in Nigeria. Its role therefore is to develop Information technology in the country through regulatory standards, guidelines and policies. Additionally, NITDA is the clearing house for all IT projects and infrastructural development in the country. It is the prime Agency for e-government implementation, Internet governance and general IT development in Nigeria. The Agency has over the years developed many policies, programmes and initiatives for the sector. The government has developed specific ICT policies to attract and retain investment. At NITDA, we are implementing a Roadmap that is aimed at transforming Nigeria into a knowledge-based society. The 7 key pillars of our Roadmap are IT Regulation, Capacity Building, Digital Inclusion, Digital Job Creation, Government Digital Service Promotion, Local Content Development & promotion and

Cybersecurity. We are open to investment in any of these areas. NITDA has an Office for ICT Innovation and Entrepreneurship (OIIE) that is focused on identifying and supporting promising Nigerian startups in the ICT space. The activities of the OIIE have enabled the ICT startup innovation ecosystem in Nigeria to grow at a remarkable pace. One of our startups- Genie Games- won the 2nd position at the keenly contested Startup Movement Competition at GITEX 2016. Many Nigerian startups have also won plaudits from home and abroad. For example, HopStop, an online city transit App acquired by Apple for a whopping $1billion, was owned by a Nigerian-born Entrepreneur. Mark Zuckerberg, the CEO of Facebook, visited Nigeria in 2016 and had very complimentary things to say about the quality of ICT talent in the country. His foundation also provided $24million funding for Andella, a Nigerian company focused on building World-Class Software Development Teams. Konga.com, a Nigerian e-commerce company, attracted over $65million funding in 2014. Also, out of a record-breaking total of $366.8 million raised by African startups in 2016, investments in Nigerian startups had the largest share of $109.4 million. These investment stories underscore the viability of the Nigerian startups and the capacity of Nigerians to conceive ingenious ideas. We invite you, our potential investors, to take

advantage of this massive talent pool as you invest in Nigeria. There is also in NITDA Office for Nigerian Content Development in ICT (ONC). ONC is established as a subsidiary of NITDA as part of a sustainable institutional framework to enforce compliance with the Regulatory Guidelines for Nigerian Content Development in ICT under the NITDA ACT, 2007. The strategic role of the ONC is to help develop a truly indigenous ICT industry for wealth creation in the Local Economy through the implementation of the guidelines. Nigeria is the 6th largest producer of crude oil and, over the years, we have relied heavily on proceeds from the oil sector. However, the administration of President Muhammadu Buhari, GCFR, has placed a lot on emphasis on growing the non-oil sector. This focus is paying off; according to the Nigerian National Bureau for Statistics (NBS), the contribution of the non-oil sector to the real GDP has increased from 89.98% in the 1st Quarter of 2016 to 91.11% in the 2nd Quarter of 2017. The Information and Communication Technology (ICT) sector contributed 11.27% to the total nominal GDP in the 2nd Quarter of 2017. We see a good potential for growth in the sector and we are creating an environment that can significantly increase the sector's contribution to the nation's GDP. As such, this is a good time to invest in our ICT sector and we invite you to partner with us in this season of growth. With the recent

release of Executive Orders by the federal government on ease of doing business, the business environment is Nigeria is conducive and Nigerians are very hospitable people. Our President recently established the Presidential Enabling Business Environment Council (PEBEC) to further improve the investment climate in the country and we are implementing these Executive Orders that are aimed at increasing the ease of doing business in Nigeria. This Council has already completed 31 reforms that make it easier to invest in Nigeria. Our investors can now obtain a visa-on-arrival and have a seamless and speedy process of registering their business in Nigeria. The Federal Government has also placed a lot of emphasis on transparency and accountability. Nigeria is an active member of the Open Government Partnership (OGP) - a global body that promotes transparency, citizen engagement, and anti-corruption. We have also produced a Nigerian OGP National Action Plan (2017 – 2019). In August 2017, Nigeria's Federal Ministry of Industry, Trade and Investment (FMITI) published the list of 27 new industries eligible to enjoy the pioneer status incentive in Nigeria. Companies investing in these sectors receive tax holidays for three to five years. Some of the sectors include E-commerce services, Business Process Outsourcing and Software development and publishing. You are invited to

invest in the sectors. We also have a good investment opportunity in the hardware sector. The computer hardware industry has seen a lot of investment from Original Equipment Manufacturers (OEMs). The Ikeja Computer Village is the largest technology market cluster in West Africa and is estimated to contribute about $2billion to Nigeria's economy annually. We currently have 7 local OEMs but they can only meet about 20% of the local demand for computer hardware. We are happy to facilitate the establishment of world class Original Design Manufacturing (ODM) factories in Nigeria to guarantee quality components assembly locally. This is another important area that we seek partnerships and investments. Nigeria's ICT sector has a great potential and this is the right time to invest! I invite you all to take advantage of this mutually beneficial opportunity to invest in one of Africa's fastest growing ICT sectors. With these few words I wish to thank you all for your kind attention and we look forward to partnering with you.

PROSPECTS OF ICT IN ENTREPRENEURSHIP AND YOUTH DEVELOPMENT

BEING A SPEECH DELIVERED

BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR GENERAL/CEO
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY
(NITDA)

INVITATION AT GOMBE STUDENTS ASSOCIATION [GOSSA] AHMADU BELLO UNIVERSITY, ZARIA
Opening Ceremony

ON

15TH SEPTEMBER, 2018

Venue: Ahmadu Bello University, Zaria.

I am highly delighted, humbled and honored to be in your midst today and to deliver a speech on such an important topic: "Prospects of ICT in Entrepreneurship and Youth Development". Viewed in another way, this topic very much aligns with one of our key mandates at NITDA, which is "to develop the Information Technology (IT) sector of Nigeria, by setting up the necessary regulatory and governance apparatuses that will stimulate the growth of the IT ecosystem" – and in turn to positively impact the nation's economy.

Events like this give us the opportunity to reflect on the great potential we have in our youths and also provide us National Information Technology Development Agency (NITDA) with a platform to support them. Indeed, it is also an opportunity for students to interact and exchange ideas with companies from the ICT industry. I wish to commend Gombe Students Association [GOSSA] and the University, Abubakar Tafawa Balewa, for all the efforts and contributions in IT capacity building, fostering digital inclusion, reducing digital divide, etc to mention but a few. I also wish to express my gratitude to GOSSA for such an invitation to deliver this speech and for organizing such an important conference - more so for the apt and timely theme.

It is beyond reasonable doubt that if properly harnessed and utilized, the power of Information and Communication Technology (ICT) could provide a pathway and serve as a catalyst for economic development of our dear nation. Indeed, the small businesses created by innovative entrepreneurs have proved to be the most significant contributors to the national wealth. Entrepreneurship is the willingness and ability of an individual to seek for investment opportunities, to establish and to run an enterprise successfully.

One of the greatest problems is lack of information base, and this makes researching ideas difficult and cumbersome. Consequently, majority of entrepreneurial activities in Nigeria are based mostly on intuition and hope, rather than moved by research results of market needs. We strongly believe that it is the duty of the IT sectors to provide data/information to the youth as a guide in gathering their research and ideas.

With IT skills, the average young people can organize themselves in order to address their own needs and interests. They can make their particular contribution to social progress and be an asset to the growing economy of a nation. Needless to say that skills and Manpower, are in high demand due to the emerging technology explosion.

In line with this, NITDA has developed a ROADMAP focusing on some key regulatory and developmental areas. These are: IT Regulation, Capacity Building, Promotion of Government Digital Services, Digital Job Creation, Cyber Security, Digital Inclusion and Local Content Development. To start with the least, NITDA is at the fore front of promoting indigenous IT solutions and innovations. We strongly believe that the development of capacity in indigenous IT solutions will help create enormous employment and wealth opportunities for Nigerians. It will help in increasing foreign income through outsourcing and foreign direct investments. We have actively promoted the entrepreneurship culture in Nigeria by identifying and promoting Startups. The NITDA's Office for ICT Innovation and Entrepreneurship (OIIE) has successfully conducted youth oriented events like the StartupFriday and StartupClinic that provides a platform for youth to showcase their ideas for further development and/or connect with investors.

If you follow our activities, you may be aware that there is currently a selection of startups going on that will be sponsored to the annual Gulf Information Technology Exhibition (GITEX) in Dubai. We have in the previous years sponsored a number of such statups who have emerged stronger employing a good number of Nigerians or connected with investors and expanded.

With respect to capacity building and digital inclusion, the agency has provided over 160 digital capacity building centres and digital job creation centres in the last 2 years in secondary schools and other tertiary institutions in various locations in the country. We have also embarked on our first set of ICT capacity building program and training for women/girls. We have trained over 100 women in ICT skills and entrepreneurship and provided computing tools for them with the aim of creating 300 direct jobs and over 1000 indirect jobs. We have a clear plan of replicating similar programs across the country's six (6) geopolitical zones. This program is also part of the Agency's continuous efforts aimed at supporting youth and the Economic Recovery and Growth Plan (ERGP) of the nation.

So, with respect to youth development, you will agree with me that a lot is already going on and no doubt, the application of ICT to the various spheres of our lives is a veritable option for national growth and development. Our efforts at NITDA are attempts at promoting a sustainable ecosystem for development.

You have to come up with innovative ideas and play active roles in ensuring that you support not only in building the nation but to the global development goals. Through partnerships and collaborations, and programs like this, you need to organize and re-organize for success. You need to be

"glocal" entrepreneurs that can think globally and act lo cally. The role of technology in creating opportunities is a reality especially for the youth, be it in software applications, bio-engineering, digital media, mobile applications and so on. Whatever attracts and ignites your creativity. So, the youth have to be creative in their thinking and apply globally accepted solutions to some of our local problems.

Come to NITDA's OIIE for guidance and advice. Our doors are always open to review your futuristic ideas and help you develop them into tangible products.

Once again, I am humbled for honoring me to be the Guest Speaker of this event. I hope my few words will be of benefit, and encouragement.

Thank you very much for your attention.

STRENGTHENING INTERNAL SECURITY FRAMEWORK AND COMMUNITY POLICING IN NIGERIA: THE ROLE OF ICT

LECTURE BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

DELIVERED TO

PARTICIPANTS OF THE SENIOR EXECUTIVE
COURSE NO. 40, 2018
AT
THE MAIN AUDITORIUM, NATIONAL INSTITUTE
FOR POLICY AND STRATEGIC STUDIES, KURU

ON

FRIDAY, 21st SEPTEMBER, 2018

[PROTOCOLS]

May Peace, Mercy and Blessings be upon you!

Permit me to share a story with this august body of intellectuals. A man was travelling a long while ago, he got tired and decided to take a nap under a tree shade. As he was napping, a smart monkey quietly came and picked his cap. He woke up to discover his cap had become the new toy for the monkey. He did all he could to get the monkey to drop the cap to no avail. Eventually he got an idea, he started doing an imaginary match-past. He then raised an imaginary cap, saying hip, hip, hip hurray! and flung the imaginary cap. At that point the monkey flung the cap away and our man recovered his cap and went happily on his journey.

He narrated the story to his son. The son had a cause to pass the same way again and he had to sleep under the same tree shade and a monkey also picked up his hat. The son remembered the story his father told him and he decided to do the imaginary match-past. After all the acting, the monkey pressed the hat more firmly on his head and hissed, you think you are the only one that has a father!

The essence of this story is that while ancient security management strategies and procedures are good for learning, we must however remember that the criminals are also innovating and becoming more adept at the art of committing crimes.

Internal security is achieved when a sovereign or autonomous state maintains peace and tranquillity within its borders. Maintaining internal security in a country such as Nigeria involves mitigating obvious and tacit threats such as civil disorder, organized crimes, terrorism, political turmoil, industrial disorder, and foreign states sponsored threats. Maintaining internal security majorly rests with the Federal Ministry of Interior (FMI). The Ministry galvanizes and collaborates with the Nigerian Police Force (NPF) and other paramilitary forces to enforce internal security. Although the Nigerian military forces are mandated to enforce external security, they may be galvanized sometimes to help cover shortfalls in maintaining internal security.

While the Nigerian police and other paramilitary forces have tried to address the issue of internal security, Nigeria still experiences a plethora of internal insecurity. These insecurity challenges include kidnapping, armed robbery, ritual killings, religious and tribal unrest, and political

unrest. These internal security challenges have not only challenged the economy and stability of Nigeria but have also engendered distrust among Nigerians. Distrust among Nigerians is a major consequence of internal insecurity and this has created a contagious effect such as distrust among tribes or with different religious faiths, etc.

One of the effective ways of enforcing internal security is through community policing. Community policing ensures collaborative effort between the police and the community in preventing and detecting criminality and other threats to internal security. Community policing establishes active symbiotic relationship between the police and the community and relies on both information and a problem-solving methodology to effectively respond to the security requirements of both the community and the country at large.

Most of the criminalities, social, and political unrest perpetrated emanate from the community level and the actors involved usually have families, friends, and co-workers at the community level. The existence of these actors and their activities at the community level provides the opportunity for the availability of valuable information that may help prevent or detect their activities. However,

when this information is not available to the police, perpetrators usually succeed in committing crimes and other social/political unrest. Therefore, it is imperative that a platform such as community policing is created and encouraged to enable communities share valuable security information or intelligence with the police to help prevent and detect threats to internal security.

Community Policing in Nigeria predates the establishment of the Nigerian Police Force. While the Nigerian police was first established in 1820, communities have had a system of ensuring internal cohesion, security and maintenance of public order and safety. In April 2004, the Federal Government launched a pilot phase of community policing in Enugu State. The current Inspector General of Police did a relaunch of the Community Police Guidelines and Management Committee in September 2017. The overarching aim of Community Policing is to ensure all stakeholders see security as a collective responsibility, not an outsourced responsibility solely handled by our over-burdened police officers. The success of Community Policing and internal security architecture is founded on the ability to gather information and act as quickly as possible in preventing crime. For the police, the mantra had always been prevention is better than cure. The need to pre-empt

criminals by having a proven system of information sourcing, sorting and implementation is still an ever-present need today in whatever model of policing we seek to adopt.

2.0 The Role of Information Communication Technology

Information is at the heart of Community Policing and internal security. Intelligence derived from information can aid the police force in early prevention and detection of crimes. However, this objective can be defeated if the community are not trained on recognition of what constitutes criminality and how such information can be acquired and reported. Additionally, such information must be delivered rapidly and securely to the police force to maintain its usefulness.

Information Communication Technology (ICT) offers the means of facilitating community policing which in turn helps strengthen internal security. ICT provides platforms for creating awareness and training on recognition of security information and how it should be acquired. ICT provides a secured means of sharing security information within the communities as well as communicating with the police. This information can be systematically indexed and stored in a database for future investigation by the police.

2.1 ICT and Community Policing Strategy

An important strategy in using ICT to strengthen internal security and community policing is the development of a policy and the creation of a framework for the implementation of the policy. The policy will ensure that all requirements of the adoption of ICT in this phenomenon and roles of all stakeholders are represented. The framework will contain strategies that can be referenced during the implementation of the policy. One cardinal omission in the community policing guideline is the absence of ICT as a tool for its effective implementation.

There needs to be a clear policy and implementation plan on how social media platforms, Unstructured Supplementary Service Data (USSD), Closed Circuit TV (CCTV) cameras, smart phones, robotics, artificial intelligence etc. can support our security framework in crime prevention, investigation, arrest and prosecution. Our policy and national security arrangement must be specific on these issues as we cannot do Community Policing the way it was carried out in 1820 as time as well as they way we communicate have changed and our policies and strategies must respond to these changes.

3.0 Awareness Creation

Awareness creation in form of education remains one of the best means of strengthening internal security. If the youths of this country are educated and possess useful skills that can generate income, then their proclivity for crime will significantly reduce. ICT provides platforms for the delivery of education to remote and underserved regions of the country. Internet and platforms such as electronic learning (e-learning) and virtual libraries can be centrally deployed and made accessible to these remote locations. NITDA has already been providing these educational technologies since 2007 and we have deployed over 1000 ICT intervention sites nationwide. These ICT intervention sites are located in schools and remote underserved areas of the country. More of these ICT centers are required in every community to provide easy access to information. Furthermore, we in NITDA are working very closely with the Federal Ministry of Education (FME) and other relevant stakeholders to ensure that academic curricula from primary schools to the university can be made available on e-learning platforms. This action will increased access to quality education by the less privileged students as well as underserved communities.

4.0 Collaborative Engagement Through an Information Sharing Web Portal

The most important platform the police can use in strengthening internal security using community policing is a secured web portal that facilitates security awareness creation and information sharing between the police and the community. The portal will be accessed by both the community and police force via a computer, smart mobile device, or a simple phone that can send SMS. The web portal can be modularized, with some modules enabling the police to provide an array of information to communities including maps of crime prone areas, police contacts, information about known/wanted offenders, gang awareness, educational information about staying safe and preventing crime, and information about events and resources. Other modules can be provided to allow the community to anonymously report community concerns, alert the police about crimes, and/or complain about police conduct and behaviour. The backend of the portal can contain other systems such as big data analytics for deriving intelligence from information, database for systematically storing information, and electronic document management system for storing documents.

5.0 Effective Use of Social Media Platforms

Another technology for community policing are social media such as Facebook, Twitter, and Youtube. These are popular platforms which can easily be used by the police and the community for sharing security information. The police force can create proprietary channels on these platforms where communities can anonymously share information. Conversely, using these social media platforms may pose a threat to national security as the information shared are stored in servers located in foreign countries. This information can easily be accessed by such nations and used negatively against the country. This will also contravene NITDA's policy on data localization which promotes the physical localization of the country's data. Additionally, getting useful information by the police via social media may be daunting because of the presence of a myriad of irrelevant information.

6.0 IP Surveillance Systems

Internet Protocol (IP) based camera surveillance systems provide the ability to prevent and detect crimes at the community level. These systems relay and record live footages of activities within designated areas in the community. The output from these systems can be fed to an already existing web portal for access by the police force.

Every important part of every community should have IP surveillance systems deployed.

7.0 Conclusion

The role of ICT in strengthening internal security and community policing cannot be over emphasized. ICT provides platforms that facilitate sharing and management of information which is the core of any nation's internal security. The National Information Technology Development Agency (NITDA) is open and willing to provide the necessary support required in ensuring that the police force, NIPSS, and other relevant stakeholders maximize the use of ICT in strengthening internal security and community policing.   This is within the purview of our statutory mandate as provided for in Sections 6(f and j) of the NITDA Act, 2007, which mandate the Agency to advise Government on ways of promoting the development of information technology in Nigeria including introducing appropriate information technology legislations and ways of enhancing national security and the vibrancy of the industry. The Police and other institutions in Nigeria are welcome to tap into the professional knowledge of NITDA to help infuse technology into our processes and strategies for the actualisation of our national aspirations of Peace and Progress as well as President Muhammadu Buhari's change

agenda in the area of enhancing national security.

I thank you for your attention.

Isa Ali Ibrahim Pantami, PhD, FBCS, FIIM,
21st September, 2018

Acceptance Speech and Goodwill Message

DELIVERED

BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR GENERAL/CEO
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY
(NITDA)
AT THE
5ᵗʰ Edition of the Nigeria Mobile Economy Summit and
Expo - NIMES 2018

ON

October 11ᵀᴴ, 2018

Venue: Protea Hotel, Isaac John, GRA, Ikeja Lagos

All protocols duly observed.

I am pleased and honored for this special invitation. It is with great pleasure that I receive this Award as the IT personality of the year. So please allow me to thank you warmly for granting me the honor to gratefully accept this high distinction. This is not only for me, but for the entire industry and management team of the National Information Technology Development Agency (NITDA). I am also delighted that this event, as organized by Center for Cyber Awareness and Development (CEDAD) with the theme Transforming Mobile Technologies into Economic Opportunities with Better Infrastructure is in line with the Economic Recovery and Growth Plan (ERGP) of the current administration of President Muhammadu Buhari and the Strategic RoadMap of the National Information Technology Development Agency (NITDA). As you may be aware, NITDA is the government's agency responsible for the development and regulation of the IT sector of the country.

Enhancing innovation is one of the key strategies to develop the economy of the Nation and create jobs, which is one of the focal priorities of NITDA. Events like this give us the opportunity to reflect on technological trends and their impact on job creation in particular and the economy in general. Issues such as cloud computing, artificial

intelligence, internet of Things (IoT), big data analytics and mobile technologies etc, are trends that are changing the world as we speak. NITDA in collaboration with relevant stakeholders is working hard to ensure that the nation benefits from the opportunities presented by these innovations. Apart from the regulatory efforts and interventions in developing the IT sector, NITDA has been supporting innovators to actualize their dreams. The Gulf Information & Technology Expo (GITEX) is an example of NITDA's support in job creation, which has enabled over sixty (60) young innovators to participate in the annual Global event. This has further created opportunities for networking and investments. You may be aware that NITDA will be sponsoring 6 additional startups to this year's GITEX, with the support of its stakeholders are looking into some of these technologies to promote the digital economy. Our focus is to develop, rather than strangulate innovation.

As we all know, we are in the digital age where Data is critical to promoting sustainable development. NITDA has recently made appreciable efforts through the drafting of the Data Protection Guidelines, National Cloud Policy, and Nigerian e-Government Interoperability Framework (NeGIF), all in an attempt to promote a sustainable ecosystem for development. No doubt, the application of ICT to the various spheres of our lives is critical option for national growth and development.

In conclusion, I will like to thank the Center for Cyber Awareness and Development (CECAD) for organizing the 2018 Nigeria Mobile Economy Summit and Expo and for acknowledging and appreciating our effort in transforming Nigeria into a knowledge-based and IT driven economy. We look forward to receiving the outcome of this event to support our regulatory and development work in the area of IT. We hope our humble contribution is supporting the achievement of a steady growth in our economy, and is also helping us to harness our collective innovative efforts.

Acceptance Speech and Goodwill Message

DELIVERED

BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR GENERAL/CEO
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT THE

2018 Edition of the Nigeria Tech Innovation & Telecom
Awards (NTITA)

ON

October 12TH, 2018

Venue: Oriental Hotel, Lagos.

All protocols duly observed.

I am pleased and honored for this special invitation. It is with great pleasure that I receive the Telecom Award as the **Public Sector IT CEO** of the year. So please allow me to thank you warmly for granting me the honor to gratefully accept this high distinction. This is not only for me but for the entire industry and management team of National Information Technology Development Agency (NITDA). I am also delighted that this event, as organized by Nigeria Tech Innovation & Telecom Awards under the umbrella of the Association of Telecom Companies of Nigeria, (ATCON) is an initiative in line with the Economic Recovery and Growth Plan (ERGP) of the current administration of President Muhammadu Buhari and the **Strategic RoadMap** of the National Information Technology Development Agency (NITDA). As you may be aware, NITDA is the government's agency responsible for the development and regulation of the IT sector of the country.

Enhancing innovation is one of the key strategies to develop the economy of the Nation and create jobs. NITDA in collaboration with relevant stakeholders is working hard to ensure that the nation benefits from the opportunities presented by these innovations. Apart from the regulatory

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In conclusion, I will like to thank the Nigeria Tech Innovation & Telecom Awards for acknowledging and appreciating our effort in the Industry. We look forward to receiving the outcome of this event to support our regulatory and development work in the area of IT. We hope our humble contribution is supporting the achievement of a steady growth in our economy, and is also helping us to harness our collective innovative efforts.

NEW AND EVOLVING OPPORTUNITIES IN THE NIGERIAN ICT SECTOR

BEING A SPEECH PRESENTED

BY

ISA ALI IBRAHIM (PANTAMI), PhD, FBCS, FIIM, MCPN, MNCS

DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT THE AFRICA INVESTMENT FORUM AT DUBAI
WORLD TRADE CENTRE

ON

WEDNESDAY, 17 OCTOBER 2018

All Protocols duly observed.

May Peace, Mercy and Blessings be upon you!

It is with great delight that I welcome you to this strategic Africa Investment Forum (AIF). It provides a veritable platform for showcasing the investment opportunities in the African ICT sector in general and the Nigerian ICT sector in particular. I wish to use this opportunity to thank the leadership of the Dubai World Trade Centre for considering us a worthy AIF partner for the last couple of years.

With a population of about 1.2billion people, Africa is the second most populous continent and is home to about a fifth of the world's population. In fact, it is projected that a quarter of the world's population will come from Africa by the year 2050. Furthermore, the continent accounts for a significant portion of the world's natural resources, much of which are used for the manufacturing of ICT devices. For instance, 71% of the world's tantalum- a key resource for laptops and other electronics, comes from Africa. Many rechargeable batteries use cobalt and Africa accounts for 58% of the global production of cobalt. The list goes on.

Nigeria is a gateway to sub-Saharan Africa. Our country is strategically located between West and Central Africa, and this gives investors easy access to close to 190 million Nigerians and another 200 million West Africans. Investing in Nigeria can provide access to 150 million Central Africans. It also gives you access to one of Africa's largest economies with a Gross Domestic Product (GDP) valued at $405billion USD in 2016, according to the World Bank.

As the 6th largest producer of crude oil, many foreigners tend to associate the Nigerian economy mainly with the oil sector. This may have been true in the past but the concerted efforts of the administration of President Muhammadu Buhari, GCFR, has led to a focus on growing the non-oil sector of the country. The efforts are paying off- the National Bureau for Statistics (NBS) reports that the non-oil sector in real terms contributed 91.45% to the nation's GDP in Q2 2018, up from 90.39% in the 1st quarter.

The rigorous implementation of the administration's Economic Recovery and Growth Plan (ERGP) led the economy out of a recession in 2017 with a growth of 0.83%, up from -1.58% recorded in 2016, which came on the back of improvements in agriculture, industry and trade.

According to the NBS, the economy has registered four consecutive quarters of steady growth. In Q1 2018, the economy grew 1.95% and it is projected to grow by up to 3% over the year, based on factors such as stable production, increased in non-oil output and improved foreign exchange availability.

The Information and Communication GDP grew by 11.81% in Q2 2018, up from 1.58% in Q1 2018 and -1.15% in Q2 2017. This is very positive and we are confident that we can experience even greater growth in the coming years. As such, this is an opportune time to invest in the Nigerian ICT sector.

A ready pool of young "digital natives" awaits investors in our ICT sector. With a population having an average age of 18.2 years, Nigeria is the 22nd youngest country on earth. The youthfulness of our population is an asset and the fact that many young Nigerians are ICT enthusiasts even makes it better. Investors can be assured of accessing a large pool of youthful and skilful employees at a fair-price, more cost-effective that engaging employees in other parts of the world.

Innovation is part of our DNA as Nigerians and there are several stories of innovation across the globe that have the imprint of Nigerians. HopStop, an online city transit App acquired by Apple for a whopping $1billion, was owned by a Nigerian-born Entrepreneur. In August 2018, a team of Nigerian teenagers won the first place in the junior division of the Technovation World Pitch Summit that took place in Silicon Valley. A Nigerian entrepreneur also developed *Mekamon* ~the world's first gaming robot, with the special ability to customize the gaming bot to perform personalized functions. He got a dream deal with Apple pricing each unit at $300 and putting them in nearly all their stores in the United States and the United Kingdom.

The National Information Technology Development Agency (NITDA) has an Office for ICT Innovation and Entrepreneurship (OIIE) that is focussed on identifying and supporting promising Nigerian startups in the ICT space. The activities of the OIIE have enabled the ICT startup innovation ecosystem in Nigeria to grow at a remarkable pace. One of our startups- Genie Games- won the 2nd position at the keenly contested Startup Movement Competition at GITEX 2016. Two of our startups (Arone and Max) were semi-finalists at the GITEX 2018 startup competition. The Nigerian tech ecosystem has produced 3 companies valued

for more than $100million, including the only African "unicorn" (Jumia), valued at over $1billion.

African startups raised $560million in 2017 and Nigerian startups accounted for $114.6million of this amount. These investments and stories of innovation underscore the viability of the Nigerian startups and the capacity of Nigerians to conceive ingenious ideas. We invite you, our potential investors, to take advantage of this massive talent pool as you invest in Nigeria.

In recent years, ICT has become one of the most vibrant industries in Nigeria, and the reason is not farfetched. According to Nigerian Communications Commission (NCC), there were approximately 98.3 million Nigerian Internet users as at November 2017; an increase of nearly 50 percent from the 2013 figure of 51.8 million. This presents a huge opportunity for growth in ICT as Internet is the backbone on which Information Technology is built.

NITDA was established in April 2001 to implement the Nigerian Information Technology Policy and co-ordinate general IT development in the country. It was mandated by the National Information Technology Development Act (2007) to create a framework for the planning, research,

development, standardization, application, coordination, monitoring, evaluation and regulation of Information Technology practices, activities and systems in Nigeria.

Its role therefore is to develop Information technology in the country through regulatory standards, guidelines and policies. Additionally, NITDA is the clearing house for all IT projects and infrastructural development in the country. It is the prime Agency for e-government implementation, Internet governance and general IT development in Nigeria. The Agency has over the years developed many policies, programmes and initiatives for the sector.

At NITDA, we are implementing a Roadmap that is aimed at transforming Nigeria into a knowledge-based society. The 7 key pillars of our Roadmap are IT Regulation, Capacity Building, Digital Inclusion, Digital Job Creation, Government Digital Service Promotion, Local Content Development & promotion and Cybersecurity. We are open to investment in any of these areas.

Nigerians are very friendly people and our business environment is conducive. A Presidential Enabling Business Environment Council (PEBEC) was established in July

2016 to improve the ease of doing business in Nigeria. In addition to this, an Executive Order 001 was signed in May 2017 with the aim of improving the following 6 indices as it relates to improving the business environment in the country:

1. Transparency: Government Agencies now publish a complete and updated list of all fees, timelines, conditions and requirements for obtaining permits, licences and approvals on their premises and websites.
2. Default approval: Approvals for applications to government Agencies are given within a stipulated period or a default approval will be deemed to have been given after such periods.
3. One Government: Agencies now actively collaborate amongst themselves and documents are only be collected at one point, rather than multiple points as was the case before.
4. Entry Experience of Visitors and Travelers: Tourist and business visas are now processed within 48hours. The visa-on-arrival process has also been streamlined for efficiency and transparency.
5. Port Operations: These have been harmonized into one single interface station implemented by a single

joint task force.

6. <u>Registration of Business:</u> This is now fully automated and online.

As a result of the ease of doing business initiative, Nigeria now ranks 145 out of 190 countries in the 2018 Doing Business Report, the World Bank's flagship report, (up from 169/190 in the previous year's report). Nigeria was acknowledged as one of the top 10 most improved economies in 2017. We aim to be in the top 100 of the World Bank's ease of doing business by 2020.

In August 2017, Nigeria's Federal Ministry of Industry, Trade and Investment (FMITI) published the list of 27 new industries eligible to enjoy the pioneer status incentive in Nigeria. Companies investing in these sectors receive tax holidays for three to five years. Some of the sectors include E-commerce services, Business Process Outsourcing and Software development and publishing. You are invited to invest in the sectors.

On a last note, our hardware sub-sector presents a very good investment opportunity. The Ikeja Computer Village is the largest technology market cluster in West Africa and is estimated to contribute about $2billion to Nigeria's economy

annually. We currently have just 7 local Original Equipment Manufacturers (OEMs) who can barely even meet 20% of the local demand for computer hardware by government alone, not to talk of the entire country. We are interested in investors willing to establish world class Original Design Manufacturing (ODM) factories in Nigeria to guarantee quality components for local assembly.

With a thriving ICT sector, innovative and youthful population, as well as a business-friendly environment, the Nigerian ICT sector is an investor's haven! I invite you all to take advantage of this mutually beneficial opportunity to invest. I thank you all for attending this AIF and we look forward to partnering with you.

WELCOME ADDRESS AND INAUGURAL SPEECH

BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT THE

INAUGURAL MEETING OF THE GOVERNING COUNCIL OF THE NIGERIA e-GOVERNMENT INTEROPERABILITY FRAMEWORK (NE-GIF)

Monday, 22 October, 2018

May Peace, Mercy and Blessings be upon you all.

It is with great pleasure and honour that I welcome all of you to this inaugural meeting of the Governing Council of the Nigeria e-Government Interoperability Framework (Ne-GIF).

You may kindly recall that in May this year, NITDA in reliance on Section 6(a) and (c) of its enabling Act and in recognition of the fact that e-Government interoperability is germane to transforming and improving the way Nigerian government provides digital services, developed the Nigeria e-Government Interoperability Framework (Ne-GIF). The Framework is aimed at providing tools, specifications and recommendations to support Ministries, Departments and Agencies (MDAs) to achieve interoperability of e-government solutions for the purpose of effectively providing cross-portfolio services to Nigerian citizens.

With the ardent support of stakeholders, the Agency has been able to complete the development process of this framework and is now commencing the implementation stage.

Although the framework have made amazing and beautiful recommendations on how MDAs can achieve the needed interoperability, the existence of the framework and those beautiful recommendations in themselves, cannot help the country to achieve the objectives of the framework. These provisions/recommendations needs to be backed up with

effective implementation by all MDAs.

Thus, the Agency through the framework deemed it necessary to establish this Governing Council and empowered it with the responsibility of promoting and ensuring compliance with the provisions of the framework.

Having critically considered the strategic mandates of various MDAs, each MDA represented here today have been carefully selected to serve on this Council because of their organization's strategic mandates and their role in the transformation of the Nigerian Interoperability space. Also, you have been selected to chart the part to compliance for other MDAs to follow and as such you are expected to lead by example i.e. ensure compliance to the provisions of the framework by your respective MDAs.

However, we should be mindful of the fact that the task of implementation is enormous and challenging, especially since the document is a framework and not yet an enforceable document. Thus, a high level of commitment is required from each member of the Council in order to achieve the objective of the Framework. This Commitment should be made manifest through time dedicated to:

1. brainstorming and strategizing on possible implementation plans at various Governing Council meetings;
2. identifying critical services of various MDAs that should be integrated and coordinate the integration process;

3. encouraging and commending MDAs to establish their respective Technical Working Groups (TWGs) as recommended in the framework;

4. monitoring, encouraging and directing TWGs of MDAs on how best to implement the provisions/recommendations of the framework;

5. ensuring that compliance reports from MDAs are timeously gotten and archived as well as ensuring the preparation of the Governing Council's Annual Compliance Report; and

6. the regular review of the framework to ensure that it remains up to date and implementable.

In view of the above, it is worthy of note that being a member of this Council is both an honour and a huge responsibility.

I therefore urge everyone to be dedicated to the task assigned to the Council and work actively to ensure that tremendous progress is recorded in the implementation of the Framework.

Conclusively, I hereby inaugurate this Governing Council as a standing body to help ensure the effective implementation of the framework and I look forward to your active participation and contributions towards achieving the objective of the framework.

I wish you all fruitful deliberations in your inaugural meeting and wish you God's grace and speed in the implementation process.

DEVELOPING AN RFID & IOT ECOSYSTEM AND
INVESTMENT OPPORTUNITIES IN NIGERIA

A SPEECH PRESENTED

BY

ISA ALI IBRAHIM (PANTAMI), PhD, FBCS, FIIM

DIRECTOR-GENERAL/CEO
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT THE

RFID & WIRELESS IoT TOMORROW 2018,
DARMSTADTIUM, SCHLOSSGRABEN 1,64283,
DARMSTADT, GERMANY
ON

31st OCTOBER 2018

[PROTOCOLS]

May Peace, Mercy and Blessings be upon you!

I am very delighted to be here with you at this very important event. Let me start by expressing my profound gratitude to the event organizers for creating a time slot for us to talk about the efforts we are making in developing the RFID and IoT ecosystem in Nigeria as well as investment opportunities.

RFID & Wireless IoT Tomorrow is Europe's largest event for RFID and wireless IoT technologies and applications. This event brings together stakeholders in the field of wireless technology and applications with focus on experience and knowledge sharing in RFID & Wireless IoT. Events of this nature provide a platform and opportunity for African stakeholders to focus on the prospects for investment in the continent's ICT sector.

The Internet availed us the opportunity to connect in the way we could never have dreamed possible. Currently, IoT and associated wireless applications have taken us beyond connection to become part of our lives - creating a global nervous system. The internet has become one of the most

significant technologies with a tremendous impact on social and industrial environments. It completely changed the understanding of gathering informational resources, doing exchange of data or the ways of communication. Internet of Things or IoT is envisioned as a collection of many interconnected objects, services, humans, and devices that can communicate, share data, and information to achieve a common goal in different areas and applications.

RFID on the other hand, enables the tagging or labelling of every single device, so as to serve as the basic identification mechanism in IoT. RFID makes it possible for an entity, people, and devices, etc, to become a wireless identifiable object and communicate among the physical, cyber, and digital world. Over the past decade, the industry has made it possible for technological barriers to be eliminated, met interoperability requirements and worked on global standardization. It has strengthened educational and promotional efforts in creating standards.

The world population is expected to grow to 7.6 billion by 2020 with growth in IoT connected devices, according to Cisco Internet Business Solutions Group, is estimated to reach 50 billion - resulting in more connected devices than people. No doubt, the African environment is gradually

feeling the wave of this technology which is facilitated by the widespread use of smartphones, affordable bandwidth and availability of big data analytics.

Adopting IoT technology in areas such as transportation, security, health, manufacturing, home and cities would assist to improve the ease of doing business, deliver better environmental management, introduce comfort in homes and improve efficiency in industrial operations.

Deploying wireless technology in gas pipeline monitoring, energy generation, distribution, energy optimisation and usage will result in increased productivity, efficiency and safety. IoT technologies also help to enable smooth and efficient delivery of electricity with green energy initiative and management, thereby saving more energy, reducing cost and increasing reliability.

Agriculture is a key aspect of the Nigerian economy and the sector is being transformed by commercialization at the small, medium and large-scale enterprise levels. In African, Caribbean and Pacific Group of States (ACP countries), the use of smart 'connected' devices in agriculture is still at an experimental stage. Yet new projects are emerging, and global trends show how this new technology offers vital

development opportunities. IoT technologies can improve famers' decision through the availability of more accurate data and precision measurement. Also, RFID chips have been a mainstay of African livestock farming for many years. The technology is deployed with varying degrees of complexity – in some cases akin to the IoT model. Accurate temporal and spatial monitoring will help to reduce water, energy and pesticide usage in agriculture.

With a population of about 1.2 billion people, Africa is the second most populous continent and is home to about a fifth of the world's population. In fact, it is projected that a quarter of the world's population will come from Africa by the year 2050. Furthermore, the continent accounts for a significant portion of the world's natural resources, much of which are used for the manufacturing of ICT devices. For instance, 71% of the world's tantalum - a key resource for laptops and other electronics, comes from Africa. Many rechargeable batteries use cobalt and Africa accounts for 58% of the global production of cobalt. The list goes on.

Nigeria is a gateway to sub-Saharan Africa. Our country is strategically located between West and Central Africa, and this gives investors easy access to close to 190 million Nigerians and another 200 million West Africans. Investing

in Nigeria can provide access to 150 million Central Africans. It also gives you access to one of Africa's largest economies with a Gross Domestic Product (GDP) valued at $405 billion USD.

As the 6th largest producer of crude oil, many foreigners tend to associate the Nigerian economy mainly with the oil sector. This may have been true in the past but the concerted efforts of the administration of President Muhammadu Buhari, GCFR, has led to a focus on growing the non-oil sector of the country. These efforts are paying off - the National Bureau for Statistics (NBS) reports that the non-oil sector in real terms contributed 91.45% to the nation's GDP in Q2 2018, up from 90.39% in the 1st quarter.

The rigorous implementation of the administration's Economic Recovery and Growth Plan (ERGP) led the economy out of a recession in 2017 with a growth of 0.83%, up from -1.58% recorded in 2016, which came on the back of improvements in agriculture, industry and trade.

According to the NBS, the economy has registered four consecutive quarters of steady growth. In Q1 2018, the economy grew 1.95% and it is projected to grow by up to 3% over the year, based on factors such as stable production, increased in non-oil output and improved foreign exchange

availability.

The Information and Communication GDP grew by 11.81% in Q2 2018, up from 1.58% in Q1 2018 and -1.15% in Q2 2017. This is very positive and we are confident that we can experience even greater growth in the coming years. As such, this is an opportune time to invest in the Nigerian ICT sector.

A ready pool of young "digital natives" awaits investors in our ICT sector especially the RFID and Wireless IoT ecosystem. With a population having an average age of 18.2 years, Nigeria is the 22nd youngest country on earth. The youthfulness of our population is an asset and the fact that many young Nigerians are ICT enthusiasts even makes it better. Investors can be assured of accessing a large pool of youthful and skilful employees at a fair-price, more cost-effective that engaging employees in other parts of the world.

Innovation is part of our DNA as Nigerians and there are several stories of innovation across the globe that have the imprint of Nigerians. HopStop, an online city transit App acquired by Apple for a whopping $1billion, was owned by a Nigerian-born Entrepreneur. In August 2018, a team of Nigerian teenagers won the first place in the junior division

of the Technovation World Pitch Summit that took place in Silicon Valley. A Nigerian entrepreneur also developed Mekamon the world's first gaming robot, with the special ability to customize the gaming bot to perform personalized functions. He got a dream deal with Apple pricing each unit at $300 and putting them in nearly all their stores in the United States and the United Kingdom.

The National Information Technology Development Agency (NITDA) has an Office for ICT Innovation and Entrepreneurship (OIIE) that is focussed on identifying and supporting promising Nigerian startups in the ICT space. The activities of the OIIE have enabled the ICT startup innovation ecosystem in Nigeria to grow at a remarkable pace. One of our startups - Genie Games- won the 2nd position at the keenly contested Startup Movement Competition at the Gulf Information Technology Exhibition (GITEX) 2016. Two of our startups (Arone and Max) were semi-finalists at the recently concluded GITEX 2018 startup competition. The Nigerian tech ecosystem has produced 3 companies valued at more than $100million, including the only African "unicorn" (Jumia), valued at over $1billion.

African startups raised $560million in 2017 and Nigerian startups accounted for $114.6million of this amount. These

investments and stories of innovation underscore the viability of the Nigerian startups and the capacity of Nigerians to conceive ingenious ideas. We invite you, our potential investors, to take advantage of this massive talent pool as you invest in Nigeria.

In recent years, ICT has become one of the most vibrant industries in Nigeria, and the reason is not farfetched. According to Nigerian Communication Commission (NCC), there are approximately 114 million Nigerian Internet users as of 2nd quarter of 2018; an increase of over 50 percent from the 2013 figure of 51.8 million. This presents a huge opportunity for growth of IoT and RFID applications as Internet is the backbone for these technologies. The sector has established itself as a key driver of economic growth.

The success story recorded in the ICT sector is as a result of effective regulatory instruments put in place by relevant regulators in the sector. The National Information Technology Development Agency (NITDA) is one of such regulators. NITDA was established in April 2001 to implement the Nigerian Information Technology Policy and co-ordinate general IT development in the country. It was mandated by the National Information Technology

Development Act (2007) to create a framework for the planning, research, development, standardization, application, coordination, monitoring, evaluation and regulation of Information Technology practices, activities and systems in Nigeria.

The Agency's role therefore is to develop Information technology in the country through regulatory standards, guidelines and policies. Additionally, NITDA is the clearing house for all IT projects and infrastructural development in the country. It is the prime Agency for e-government implementation, Internet governance and general IT development in Nigeria. The Agency has over the years developed many policies, programmes and initiatives for the sector.

The government has developed specific ICT policies to attract and retain investment. At NITDA, we are implementing a Roadmap that is aimed at transforming Nigeria into a knowledge-based society. The 7 key pillars of our Roadmap are IT Regulation, Capacity Building, Digital Inclusion, Digital Job Creation, Government Digital Service Promotion, Local Content Development & promotion and Cybersecurity. We are open to investment

in any of these areas.

Furthermore, the activities of the OIIE have enabled the promotion of local IoT solutions and providing those solutions with access to market and creating collaborative spaces where people can tinker and build.

The Nigerian government seems to be aware of the potential of the IoT space as well. Recently, it approved six Cisco-executed "IoT labs" in six Unity schools across the six geopolitical zones of the country. Furthermore, the hardware community is doing incredible things around IoT. From the introduction of GRIT Systems to Fasmicro's Zenvus, which makes a range of connected sensors and nodes, the maker community are building quite a few IoT solutions that actually have the potential for massive scale. There's also the Obuno IoT Engine, built with 95% made-in-Nigeria components by not-for-profit Innovation Habitat Initiative for Indigenous Technology (iHabitat) under the supervision of one of NITDA's staff members. Furthermore, the Agency has a very close working relationship with the RFID Research & Development Centre, the African University of Science and Technology, Abuja, focusing on RFID-IoT Capacity Building and development of regulatory instruments.

We also have a good investment opportunity in the hardware sector. We are happy to facilitate the establishment of world class IoT and RFID industry in Nigeria that will guarantee speedy development and deployment of applications and usage. This is another important area that we seek partnerships and investments.

It will be interesting to know that Nigerians are very friendly people and our business environment is conducive. A Presidential Enabling Business Environment Council (PEBEC) was established in July 2016 to improve the ease of doing business in Nigeria. In addition to this, an Executive Order 001 was signed in May 2017 with the aim of improving the following 6 indices as it relates to improving the business environment in the country:

1. Transparency: Government Agencies now publish a complete and updated list of all fees, timelines, conditions and requirements for obtaining permits, licences and approvals on their premises and websites.
2. Default approval: Approvals for applications to government Agencies are given within a stipulated period or a default approval will be deemed to have been given after such periods.

3. One Government: Agencies now actively collaborate amongst themselves and documents are only be collected at one point, rather than multiple points as was the case before.

4. Entry Experience of Visitors and Travelers: Tourist and business visas are now processed within 48hours. The visa-on-arrival process has also been streamlined for efficiency and transparency.

5. Port Operations: These have been harmonized into one single interface station implemented by a single joint task force.

6. Registration of Business: This is now fully automated and online.

As a result of the ease of doing business initiative, Nigeria now ranks 145 out of 190 countries in the 2017 Doing Business Report, the World Bank's flagship report, (up from 169/190 in the previous year's report). Nigeria was acknowledged as one of the top 10 most improved economies in 2017. We aim to be in the top 100 of the World Bank's ease of doing business by 2020.

In August 2017, Nigeria's Federal Ministry of Industry, Trade and Investment (FMITI) published the list of 27 new industries eligible to enjoy the pioneer status incentive in

Nigeria. Companies investing in these sectors receive tax holidays for three to five years. Some of the sectors include E-commerce services, Business Process Outsourcing and Software development and publishing. RFID and Wireless IoT are critical to each of these and you are invited to invest in the sectors.

The market potential of IoT is estimated to be worth $19 trillion by 2020. This is shared between the private sector, estimated to have $14.4 trillion and the public sector, estimated to have $4.6 trillion market share. This means there is an opportunity which countries like Nigeria can leverage on for their technology ecosystem. With a thriving ICT sector, innovative and youthful population, as well as a business-friendly environment, the Nigerian ICT sector is an investor's haven! I, on behalf of the Nigerian Government, invite you all to take advantage of this mutually beneficial opportunity to invest.

With these few words I wish to thank you all for your kind attention and we look forward to partnering with you.
Isa Ali Ibrahim Pantami, PhD, FBCS, FIIM

31st October, 2018

REMARKS

BY

ISA ALI IBRAHIM PANTAMI, PhD, FBCS, FIIM, MNCS, MCPN
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT
THE NITDA PRESS CONFERENCE 2018

TAKING PLACE AT THE
SANDRALIA HOTEL, JABI

ON

THURSDAY, 1ST NOVEMBER 2018

All protocols duly observed.

May Peace, Mercy and Blessings be upon you!

I am pleased to welcome you all to this important Press Conference where I will be updating you on our upcoming e-Nigeria 2018 Conference, Exhibitions and Awards. I will also highlight the recent activities of the National Information Technology Development Agency (NITDA) under my stewardship.

eNigeria 2018
eNigeria is Nigeria's annual international summit on Information and Communications Technology (ICT), organized by NITDA in collaboration with relevant stakeholders. It provides a platform for brainstorming on emerging technologies, local innovation and relevant ICT issues for the socio-economic development of Nigeria. The event will also feature exhibitions and Awards to deserving people and institutions in the Nigerian ICT ecosystem.

I am delighted to announce to you that His Excellency, President Muhammadu Buhari, GCFR is our Special Guest of Honour at this year's event. He will declare the Conference open during the Opening Ceremony slated for Monday, 5th of November, 2018 at 10:00am.

The theme for eNigeria 2018 is "Promoting Digital Economy in an Era of Disruptive Technologies Through Effective Regulations". Our Keynote Speaker is Mallam Nuhu Ribadu, the Pioneer Chairman of the Economic and Financial Crimes Commission (EFCC). We also have a pool of respected and highly knowledgeable Resource Persons that will deliberate on the 3 focal points of the theme, namely Digital Economy, Disruptive Technologies and Effective Regulations.

In September 2016, I had the privilege of being appointed as the Director-General of NITDA by His Excellency, President Muhammadu Buhari, GCFR. Our vision at NITDA is to be the prime catalyst for transforming Nigeria into an Information Technology (IT) driven economy.

On assumption of office, I led our team to develop a 2017-2020 Strategic Roadmap for the Agency. Considering the wide scope of NITDA's mandate, this Action Plan relies extensively on the NITDA Act, the National IT Policy, the Nigerian Strategic ICT4D Plan and eNigeria communiqués (2015 and 2016).

Our aim has been to achieve these objectives of the strategic roadmap in a uniform, consistent and coordinated manner:

    i) Reposition NITDA to effectively regulate the

Nigerian IT sector and deliver its statutory mandate.

ii) Foster local content, build IT capacity and create jobs to enable the development of a sustainable knowledge based economy.

iii) Foster transparency and accountability in government through the use of IT for governance.

The following were identified as the pillars of the Roadmap:
1. IT Regulation
2. Capacity Building
3. Digital Inclusion
4. Digital Job Creation
5. Government Digital Service Promotion
6. Local Content Development & Promotion
7. Cyber Security

I. Regulation

Regulation is a key tool for achieving the social, economic and environmental policy objectives of government. The National Information Technology Development Agency is charged with the mandate to develop and regulate Information Technology for sustainable national development pursuant to **Section 6** of the **NITDA Act**.

The following are some of our achievements in the area of regulation:

- All the MDAs have been provided with a copy of the template and it has also been made available online. We have developed the procedure for an objective analysis of all the IT projects submitted for clearance.
- Over **13 Billion** Naira has been saved through compliance with this process.
- Surveillance has captured 100+ ICT projects.
- A total of 410 MDA'S and 105 Higher Educational Institution have been engaged in order to ensure compliance
- Framework and Guidelines for IT Projects Clearance has been developed
- Enforcement of executive order 001: (MDAs website assessment conducted and report produced for improvement).

II: Capacity Building

Capacity building is an important aspect of the mandate of the Agency. The NITDA Act of 2007 specified the following activities as part of the mandate of the Agency- the creation of a *framework for planning, research, development, standardization, application, coordination, monitoring, evaluation and regulation of Information Technology practices, activities and systems in Nigeria and all matters related thereto and for that purpose, and which*

without detracting from the generality of the foregoing shall include providing universal access for Information Technology and systems penetration including rural, urban and under-served areas.

The following progammes have been carried out:

i. **Training of Youths with Disabilities:** This is to empower them with ICT skills to take them out of the roads/begging and be gainfully employed through ICT. Close to 200 have been trained and empowered with ICT equipment.

ii. **Youth Empowerment Training in Web Technology and Open Source Software:** Training of Youths in web development and entrepreneurship. Over two weeks intensive training, with post-training support and mentoring. Two Hundred (200) unemployed graduates from states in the North-East devasted by the war on terror were trained.

iii. **CERRT Awareness and Cyber Drills:** Cyber awareness training for MDAs on threats and mitigation was conducted for 55 MDAs under the first

phase while arrangements have been concluded for the second phase.

iv.   Training on Online Outsourcing: NITDA trained Youths on how to secure online jobs through outsourcing platforms. Fifty (50) youths were trained under this programme.

v.   Coding Talent Hunt for Children: We value the importance of "catching-them-young".   As such, a two week summer-time computer coding initiative targeted at children of ages 6-18 years with the aim of instilling problem-solving capabilities in them and making them technology champions. One Hundred and Fifty (150) participants of the target group have been trained.

vi.   Training on Introduction to Single Board Computer (SBC) and Open source Hardware: One Hundred (100) participants were trained on the following; Arduino, Aguino. Raspberry Pi etc. The training was aimed at developing IoTs solutions.

vii.   **Development of Amadioha**- an Indigenous IoT Platform for the implementation of smart technologies was developed by the Agency. The platform is currently being tested and deployed across the country.

viii.   **Training on Introduction to Open source Software:** Sixty (60) participants were trained on Python programming and Printed Circuit Board (PCB) design and fabrication. The training was aimed at developing IoTs solutions.

ix.   **Training on Sustainable Entrepreneurship in ICT through Emerging Technologies**: Over 200 have been trained; including a training that was targeted at girls.

x.   **ICT Training for Unemployed Graduates:** A Youth Empowerment Program for Unemployed Graduates on Digital Literacy, I.T Essentials, and Embedded System was held with One Thousand Two Hundred (1200) Participants in attendance.

xi. Successfully delivered a Software high Quality Assurance workshop titled 'NITDA **Penetration Testing Workshop** in 2016.

xii. Successful delivery of Software and Penetrations Essentials Training (SAPTET)for over 50

Also, we have sponsored over 150 Nigerians for post-graduate studies in the different ICT domains. We recently included ICT Law as part of the courses for which scholars are selected.

III: Digital Inclusion

NITDA's Act of 2007 empowers the Agency to oversee the development and regulation of the IT sector in Nigeria. The Act empowers NITDA to ensure digital inclusion for all regions of the country. Relevant sections of the Act are listed below:

- Provide guidelines to facilitate the establishment and maintenance of appropriate infrastructure for information technology and systems application and development in Nigeria, for public and private sectors, urban-rural development, the economy and the government;

- Create a framework for the planning, research, development, standardization, application,

coordination, monitoring, evaluation and regulation of Information Technology practices, activities and systems in Nigeria and all matters related thereto and for that purpose, and which without detracting from the generality of the foregoing shall include providing universal access for Information Technology and systems penetration including rural, urban and under-served areas.

Inadequate IT infrastructure has being the bane of development in the country and a leading cause of poor quality of service. From basic computing devices and networks to broadband penetration and last mile fibre optic connectivity, this infrastructure deficit is preventing several Nigerians from gaining affordable and reliable digital access. This lack of access further inhibits further investment in IT infrastructure.

We have carried out extensive intervention in this area. Some of these include the following:

- 166 ICT Centres established in the country from 2016 to date
- ICT policies have been developed for 14 States across the country
- Establishment of fully functional Virtual libraries and e-libraries at the twelve locations
- 16 universities have benefited from the WAN project

- 166 e-Learning Centres have been established since 2016.

IV: Digital Job Creation

Information Technology has shown potentials of enhancing *Job Creation and Wealth Generation* in Nigeria. The success of different clusters in the growth and innovation of startups has clearly shown the latent opportunities in this sector. NITDA's support to the innovation ecosystem will drive the economic evolution towards a sustainable knowledge based economy and a significant increase in the nation's GDP.

The NITDA Act empowers the Agency to drive the development of technology innovation and entrepreneurship ecosystem, this is currently being implemented through the Office of ICT Innovation and Entrepreneurship (OIIE) to achieve the following key objectives:

- Favorable policies for the increase in the size and sustainability of technology businesses in Nigeria
- Creation of a conducive environment for technology innovation, growth and commercialization
- Drive the increase in wealth generation through sustainable jobs and markets
- Encourage the purchase of home grown ICT solutions for existing challenges.

This Action Plan will address the goal of this pillar by providing support to ICT hubs and incubation centres across the country and by creating a policy to accelerate support for innovation and entrepreneurship. ICT hubs will be set up in strategic locations across the country and outsourcing will be promoted as a key opportunity for the creation of IT-enabled jobs.

Innovation Hubs: 2

The past editions of Start up Friday (SUF) have taken place in Abuja, Lagos, Kaduna, Gombe and Uyo. The programme has attracted over 2,500 participants, 600 co-founders, 55 investors and 10 hub operators in the differnet regions. NITDA also collaborated with the Presidency to organize the Aso Villa Demo Day in 2016. The event played host to Mark Zuckerberg, the CEO of Facebook, while the SUF has hosted Michael Siebel, CEO and a partner at Y Combinator-the famous US-based Accelerator.

V: Government Digital Service Promotion

Pursuant to Section 6 (c) of the NITDA Act 2007 and NITDA's Strategic Roadmap, the Agency created an e-Government Development and Regulation (eGDR) department to enable efficient digital service delivery in the public sector. The Roadmap identified Government Digital

Service as one of its strategic pillars and an efficient tool for NITDA to achieve one of its functions as stated in the NITDA Act 2007, which is to;

Develop guidelines for electronic governance and monitor the use of electronic data interchange and other forms of electronic communication transactions as an alternative to paper-based methods in government, commerce, education, the private and public sectors, labour, and other fields, where the use of electronic communication may improve the exchange of data and information.

NITDA is promoting Government Digital Services (GDS) through the following:

- Development of a National Enterprise Architecture
- Implementation of GDS IT Standards
- Update of relevant GDS Laws and Regulations
- Development of a National Data Exchange Policy and Architecture

VI: Local Content Development & Promotion

Creating a sustainable economy involves building domestic manufacturing and purchasing markets. Ensuring the growth of IT manufacturing and software development, through the promotion of local content, will lead to

considerable growth in the Nigerian IT sector. It will enable Nigeria to benefit from the increasingly global IT market. Additionally, the promotion of local IT products will conserve foreign exchange for the country and boost exports.

The NITDA Act mandates the Agency to drive the growth in the production of ICT products in Nigeria for both local and foreign markets. It is imperative that a holistic program be put in place to protect "Made in Nigeria" products and ensure they are of the best quality.

The Local Content program of NITDA is designed to achieve the following:
1. Reduce forex outflow and increase GDP
2. Ensure global best practices in product development
3. Attract FDI into the economy
4. Create Jobs

Some of the key projects include hardware technical support for Original Equipment Manufacturers (OEMs), local content promotion and funding and the initiation of an effective compliance programme. Effort will also be made to identify and publicize local ICT companies and the Agency will partner with the National Office for Technology Acquisition and Promotion (NOTAP) to ensure the patronage of Made-in-Nigeria software.

Achievements/Status

- 1ˢᵗ Data Localization Summit- 2016
- Data Center Managers Focused Group Meeting- 2016
- Data Classification Workshop in partnership with Microsoft Nigeria- 2016
- Increased hosting of significant Government data in Nigeria by several Government Agencies in Galaxy Backbone Plc e.g. Budget Information Management System (BIMS), NPOWER portal, FIRS Integrated Tax Administration Systems (ITAS)
- Development of a draft framework for Data Classification
- Development of draft Guidelines for data center operations
- Due to increasing local demand for data services as a direct result of operation of Guidelines, Nigeria's 1ˢᵗ Cloud Local Cloud services(CLOUDONGROUND) has been hosted by a leading tier 3 data center in Nigeria providing Infrastructure as a service (IaaS) and Disaster Recovery as a Service (DRaaS) to local companies in Nigeria.
- Stakeholder Engagement with local OEMs in Lagos.
- Hosted a media session with ICT reporters to provide

detailed brief and press kits to members of the media to ensure adequate and accurate coverage of the NITDA Regulations and the Nigerian Content program in ICT.

- Through the Intervention of the NITDA DG, the ONC notified the office of the Accountant General of the Federation on provisions to the Guidelines on Nigerian content and urged a supervised transition of the Government Integrated Financial Management Information System (GFMIS) and the Integrated Payroll and Personnel Information System (IPPIS) to indigenous alternatives.

- As a result of the visit of NITDA's delegation led by the DG to the Bureau for Public Procurement (BPP), as initiated by the ONC, NITDA has been restored as the clearing house for ICT procurements for MDAs in line with the Federal Government Circular.

- Developed the "Local Content Compliance Framework" to drive compliance and reporting requirements in line with provisions of Nigerian Content Guidelines. A level of self-compliance with the Guidelines has been achieved with ICT Multinationals and MDAs.

- The Agency sponsored 16 start-ups to the 2016 edition of GITEX

- Two of the start-ups got to the final stage of the GITEX 2016 competition
- A Nigeria start-up came 2nd in the overall ratings at the same event
- The Agency successfully coordinated the Africa Investment Forum (AIF) where many investors interacted with the Nigerian businesses and start-ups and indicated willingness to partner with them
- A Nigerian company (Precise Financial Systems) successfully demonstrated an iTeller banking solution that was developed to run on the hardware of the German partners they met at the Nigerian Pavilion during GITEX 2015. iTeller is a complete suite of automated cheque lodgement and processing solution which comes with multi-functional applications and capability.
- Some of the startups are already being accelerated and mentored by other companies within and outside the country.
- Boosted investment and promotion of local entrepreneurs.
- Hosted a focused session with members of ISPON to deepen understanding of software space in Nigeria
- Held extensive deliberations with NOTAP which led to the set-up of a joint (NOTAP-ONC) committee

- Hosted local developers of financial software in Nigeria. The companies also made presentations to the ONC

- Developed a joint report with NOTAP with recommendations for NITDA and NOTAP to strengthen local software development and to commence a process of winding down licence issuance to banks who import foreign software.

- Agreement reached on support to NOTAP in the review of applications for software licence certificate. The certificate issued by NOTAP entitles Nigerian companies to secure foreign exchange to pay foreigners for software licences. NOTAP has commenced consultations with ONC on specific cases.

- With the intervention of NITDA, ONC successfully challenged the implementation of significant software transactions to purchase foreign software worth about 2 billion Naira. Alternatives for similar software exist in Nigeria.

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- Hosted two global ODMs and Intel to discuss requirements for setting up a world class ODM in Nigeria- the ODMs hosted were JP Sacouto of

Portugal and Asus of Taiwan.

- Hosted a focused session with local ODMs to address challenges and agree on a way forward to ensure quality after sales service is available to Nigerians

- Developed a draft framework for quality ICT manufacturing in partnership with key stakeholders

- Conducted surveillance and acted promptly to demand specific large procurements of PCs by government buying locally

- Played a key role in the formation of the Certified Computer Manufacturers Association (CCMON). The Association will act as an SRO and will be responsible for liaising with Government to resolve issues of standards and after sales service.

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- Played a key role in the formation of the Certified Computer Manufacturers Association (CCMON). The Association will act as an SRO and will be responsible for liaising with Government to resolve issues of standards and after sales service.

VII: Cyber Security

The NITDA Act 2007, specifically Section 6(l), empowers NITDA to advise Government on ways of promoting IT including legislations to enhance national security; in addition, as articulated in ICT4D 2008 (P.15, NSA02) there is an urgent need for NITDA to establish a Cyber Security Assistance Centre. Moreso, the National Cyber Security Policy and Strategy 2014, specifically Article 6.7. (I - X) states that Sector based Computer Emergency Response Team (CERT) shall be established by the sector supervising regulatory body, such CERT shall:

I. promote trust and confidence among stakeholders under that sector;

ii. facilitate information sharing and technology exchange

iii. facilitate criteria, measures, standards, guidelines etc. for that sector

iv. undertake cyber security readiness, information security assurance and compliance, etc.

It is in light of the above that NITDA, as the regulator of the Nigerian Information Technology sector, has set up its Computer Emergency Readiness and Response Team (NITDA-CERRT).

NITDA-CERRT is dedicated to developing guidelines for the standardization of Information System Security Infrastructure for its stakeholders. The CERRT will also respond to computer, network and related cyber security incidents that affect its stakeholders. Furthermore, NITDA-CERRT intends to build National readiness by fostering the development of sectoral Computer Emergency Response Teams (CERTs).

In line with the above objectives, the department identified the urgent need to provide a framework for a whole-of-government practice for adoption by all tiers of government. In addition to prescribing common policies, procedural and technical frameworks, the department also identified the need for MDAs to adopt industry recognized standards and regulations while seeking to improve their operational processes through IT.

eNIGERIA 2018:
WELCOME ADDRESS AND PROGRAMME HIGHLIGHT

BY

ISA ALI IBRAHIM (PANTAMI), PhD, FBCS, FIIM, MCPN, MNCS

DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

AT THE INTERNATIONAL CONFERENCE CENTRE
ON
MONDAY, 5TH OF NOVEMBER, 2018

All Protocols duly observed.

May Peace, Mercy and Blessings be upon you!

I consider a privilege and a great honour to welcome this highly esteemed audience to the 11th edition of the E-Nigeria Conference, Exhibition and Awards. E-Nigeria provides a platform for all the stakeholders to brainstorm on germane issues on the front burner of our nation's ICT sector in order to proffer ingenious solutions.

The e-Nigeria 2018 theme, "Promoting a Digital Economy in an Era of Disruptive Technologies Through Effective Regulations" is a response to the complex mix of digital opportunities, challenges and burdens, driven by the increasing influence of emerging technologies on commerce and society. The major goal of e-Nigeria 2018 is to accelerate the development and access to digital products and services to millions of Nigerian citizens, ultimately creating Africa's largest single digital market by 2020.

In the last 2 years we have redoubled our efforts in regulating and developing the ICT sector as we seek to be the prime catalyst for transforming Nigeria into an Information Technology (IT) driven economy. As part of these efforts, I

led a team that developed a 2017-2020 Strategic Roadmap for the Agency as well as an Action Plan for the attainment of the goals listed in the Roadmap.

The Roadmap is based on the following 7 pillars:
1. IT Regulation
2. Capacity Building
3. Digital Inclusion
4. Digital Job Creation
5. Government Digital Service Promotion
6. Cyber Security
7. Local Content Development & Promotion

The Roadmap addresses 7 principal pillars that have the potential of determining the structure upon which a successful ICT sector can be built. Our aim has been to achieve these objectives of the strategic roadmap in a uniform, consistent and coordinated manner:

i) Reposition NITDA to effectively regulate the Nigerian IT sector and deliver its statutory mandate.

ii) Foster local content, build IT capacity and create jobs to enable the development of a sustainable knowledge based economy.

iii) Foster transparency and accountability in government through the use of IT for governance.

Our theme at this Conference addresses the various pillars. For example, Digital Job Creation, Local Content Development & Promotion and Capacity Building speak to the aspect of the Digital Economy. Digital Inclusion and Government Digital Services depend on the use of disruptive technologies to thrive, while IT regulations and Cybersecurity address the aspect of Effective Regulations. We have made a lot of progress in the implementation of the Roadmap and I will share some of these areas with you.

In the area of regulation, we took His Excellency, President Muhammadu Buhari's commendation of our IT Clearance efforts, as a motivation to do more. We have been actively engaging all Agencies of government and have developed guidelines on IT Project Clearance for MDAs. Through our IT Project Clearance activity, we have saved the government over 13 billion Naira. We are also being proactive, offering advisory to MDAs at the early stages of their budgeting cycle to ensure that whatever project they propose provides value for money, avoids duplication and eschews waste.

Nigeria is the 6th largest producer of crude oil as well as the 7th most populous country in the world. For years we have depended on our natural resources for wealth but the Federal Government now has deliberate policies to wean our

economy off oil and rather focus us on human resources. This is why the Economic Growth and Recovery Plan of the government prioritizes human capital development.

We are confident that with a critical mass of ICT savvy Nigerians we develop the type of digital economy that can rival oil as the main stay of our economy. Nigeria is also endowed with a ready pool of young "digital natives" that can support the process. Innovation is second nature to Nigerians and there are several stories of innovation across the globe that have the imprint of Nigerians.

HopStop, an online city transit App acquired by Apple for a whopping $1billion, was owned by a Nigerian-born Entrepreneur. Also, in August 2018, a team of Nigerian teenagers won the first place in the junior division of the Technovation World Pitch Summit that took place in Silicon Valley.

NITDA's Office for ICT Innovation and Entrepreneurship (OIIE) identifies and promotes innovation. The activities of the OIIE have enabled the ICT startup innovation ecosystem in Nigeria to grow at a remarkable pace. The Nigerian tech ecosystem has produced 3 companies valued for more than $100million, including the only African "unicorn" (Jumia), valued at over $1billion.

Furthermore, of the $560million raised by African startups in 2017, Nigerian startups accounted for $114.6million of this amount. These investments and stories of innovation underscore the viability of the Nigerian startups and the capacity of Nigerians to conceive creative ideas.

NITDA has supported ICT training programmes at the basic and advanced levels, including trainings in several disruptive technologies. We have targeted different categories of people including children, people living disabities, women and young graduates, to mention but a few. We recently sponsored over 150 Nigerians for post-graduate studies in the different ICT domains. We have also included ICT Law as part of the courses for which scholars are selected.

For the Digital Inclusion of Digital Job Creation pillars, we have deployed IT projects across the length and breadth of the country in institutions of learning and public spaces. We have made over 200 interventions in the form of Digital Job Creation Centres, Virtual Libraries, Wide Area Networks, e-Learning Centres, IT hubs and so on. We have also assisted 14 States to develop IT Policies specific to the peculiar needs of those States.

With respect to Government Digital Service Promotion, we successfully hosted the e-Government Capacity Building for CEOs of Ministries, Department and Agencies. We have developed a number of standards, guidelines and frameworks. These include the Nigerian Government Enterprise Architecture Framework and the Data Protection Guideline.

Cybersecurity is generating a lot of interest across the globe, due, in large part, to the high profile breaches across national borders. On assumption of office, I established a cybersecurity department within NITDA to strengthen our nation's ability to handle these type of threats.

Our Computer Emergency Readiness and Response Team (NITDA-CERRT) is dedicated to developing guidelines for the standardization of Information System Security Infrastructure for its stakeholders. The CERRT also responds to computer, network and related cyber security incidents that affect our stakeholders.

We take the issue of local content development and promotion very seriously and in line with Mr President's directive at E-Nigeria 2017, as well as Executive Orders #3 and #5, we have an active surveillance for violations of local

content guidelines. We have a joint partnership with NOTAP to Implement Local Content Guidelines to ensure adoption of indigenous software.

We have issued notices on improved customer service and customer support to Indigenous ICT Companies. We have reviewed the directive of after-sales-support policy of OEMs and Data Centres to ensure that they provide services that are at par with foreign alternatives. We have also ensured the repatriation of sensitive government data back to Nigeria.

We are committed to making even further progress over the coming year and we look forward to the continued support of all our stakeholders.

With these few words, I welcome you once again to E-Nigeria 2018 and I wish you a most rewarding experience.

**Africa Digital Economy and Technology Forum
(ADETF)**

BEING A GOODWILL MESSAGE
DELIVERED

BY

Dr ISA ALI IBRAHIM (PANTAMI), FBCS, FIIM
DIRECTOR GENERAL/CEO
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

**Smart Nation Nigeria (Digital Economy Development
Conference) 2018**
Fellows Dinner

ON

Wednesday 14th November, 2018

Venue: Park Inn by Raddison Hotel, Abeokuta

May Peace, Mercy and Blessing be upon you All.

All protocols duly observed.

I am pleased and honored to attend the Smart Nation Nigeria Digital Economy Development Conference 2018. I would like to use this opportunity to express my profound appreciation to the Africa Digital Economy and Technology Forum (ADETF) for initiating the Smart Nation Nigeria conference in order to support in advancing the Digital Economy of the Nation. It is also with great pleasure that I was found worthy for the **Distinguished Fellow Award**. So, please allow me to thank you warmly for granting me the honor to gratefully accept this high distinction. This is not only for me but for the entire industry and management team of National Information Technology Development Agency (NITDA).

I am equally delighted that this event, as organized by the Smart Nation Nigeria under the umbrella ADETF is an initiative in line with the Economic Recovery and Growth Plan (ERGP) of the current administration of President Muhammadu Buhari and the **Strategic RoadMap** of the National Information Technology Development Agency (NITDA). As you may be aware, NITDA is the government's

agency responsible for the development and regulation of the IT sector of the country.

Enhancing innovation is one of the key strategies to develop the economy of the Nation and create jobs. NITDA, in collaboration with relevant stakeholders is working hard to ensure that the nation benefits from the opportunities presented by these innovations. You may be aware of the recently concluded e-Nigeria International Conference hosted by NITDA from the 5th to the 7th of November 2018, and the pronouncement by the President during the event, on the achievements recorded by the Agency in several key areas including Local Content Development and Promotion. The agency was also able to save up to 13 billion Naira for the Federal Government through our Regulatory efforts. The NITDA IT Clearance policy is worthy of mention here. These and other regulatory processes and development activities are on-going efforts at supporting the diversification of the economy.

Apart from the regulatory efforts and interventions in developing the IT sector, NITDA has been supporting innovators to actualize their dreams. The Gulf Information & Technology Exhibition (GITEX) is an example of NITDA's support in job creation, which has enabled over sixty (60) young innovators to participate in the annual

Global event. This has further created opportunities for networking and investments. You may be aware that NITDA has sponsored six (6) additional startups to this year's GITEX which was held between the 14th to 18th October 2018. NITDA with the support of its stakeholders are looking into several innovative ideas to promote the digital economy. Our focus is to develop, rather than strangulate innovation.

As we all know, we are in the digital age where Data is critical to promoting sustainable development. NITDA has recently made appreciable efforts through the drafting of the Data Protection Guidelines, National Cloud Policy, and Nigerian e-Government Interoperability Framework (NeGIF), all in an attempt to promote a sustainable ecosystem for development. No doubt, the application of ICT to the various spheres of our lives is a critical option for national growth and development.

In conclusion, I will like to thank the ADEFT and the Executive Board for acknowledging NITDA's contributions towards the development of Information and Communication Technology (ICT) and Digital Economy in Nigeria, and for considering me worthy of this Award. We look forward to receiving input from this forum to support

our regulatory and development work in the area of IT. We hope our humble contribution is supporting the achievement of a steady growth in our economy in a way that it will extend throughout the Continent of Africa; and also help us to harness our collective innovative efforts for sustainable development.

Thank you and God Bless.

DG's Presentation at eCAM

with theme:

"The Role of ICT in Electoral Process Management and Marketing Communications"

at

The Electronic Campaigns and
Marketing Summit (eCAM 2018)

Yar'Adua Centre

November 15-16, 2018

Information Technology and Elections Management
All protocols observed.

May Peace, Mercy and Blessings be upon you all. It is my pleasure to be here today to discuss this important topic at the Electronic Campaigns and Marketing Summit. It is of significance to discuss Information Technology and Elections Management given the point we are in our political dispensation. Come February 2019, the citizens of Nigeria would have cast votes for elective positions at the Federal and State levels.

Mr. Aneas Chuma, a United Nations (UNDP) representative during the opening session of an ICT thematic workshop said and I quote: "Supporters believe technology can solve most election-related problems. Critics believe it can dilute the core essence of democracy. The challenge is to find an answer that lies in between - one that aims to apply appropriate technology to promote free, fair and credible elections". The Independent National Electoral Commission INEC, has made tremendous achievements towards finding the middle ground in the use and adoption of Information Communication Technology (ICT) especially from 1999 to present. Over these years, INEC has moved from typewriters and pioneered the Optical Magnetic

Recognition (OMR) forms used in the 2003 elections, Direct Data Capture Machine (DDCM) and Very-small aperture Terminal (V-SAT) for results transmission used sparingly in 2007 General elections and fully in the 2011 General elections and the Electronic Voters' Register (EVR), Automatic Fingerprints Identification System (AFIS) with business rules and Smart Card Reader (SCR) for the 2015 General elections. The development of e-collation support platform has also drastically reduced occurrences of result manipulation at collation centers. All these afore mentioned technologies have contributed to the reduction of incidences of multiple registrations and multiple voting. I also note that some countries have even gone further to pioneer electronic voting for its citizens to the extent their electoral laws allow. Notwithstanding, technology cannot replace a lack of trust in the framework of an electoral process nor by itself build that trust. What is evident is that technology used in Elections management seeks to serve two main objectives:

1. To ensure all information produced during the electoral process (from registration to collation to dissipation of results) is credible and trustworthy;

2. Assurance that the electoral outcome is a true and fair representation of citizens' desire and will.

NITDA is statutorily mandated to regulate, render advisory services and incentivize information technology products,

processes and services for the general well-being of Nigeria. so therefore, on this auspicious day, I want to present practical ways in which ICT can further assist during the electoral process:

1. The mandatory use of the National Identification Number (NIN) and the use of the National Identity Database (NIDB): Efforts are being made for the harmonization of databases that already collect primary bio-data of Nigerians towards an identity data warehouse called NIDB, INEC should also leverage such a database for its Voters' Registrar and will thus only require registration to vote in a particular election period. I also use this medium to let the general public take note that the use of NIN becomes mandatory starting January 2019 for numerous activities from enrollment into primary, secondary and tertiary institutions, sim card registration, the issuance of driver's license and the issuance of PVC to name a few.

2. The deployment of a services oriented architecture (SOA) for communication between NIMC and Public institutions that require the use of identity services via the use of enterprise service bus. While application-programming interfaces (APIs) can be

used, it introduces complex point-to-point interagency connections.

3. Alternative avenues for continuous voters registration: While the continuous registration exercise has been largely successful, it is a time consuming process. Currently, to register for Permanent Voter Card (PVC), participants have to spend time queuing and getting their bio-data taken. This queuing, which sometimes last upwards of four hours, has discouraged a numerous number of would-be voters especially those with white-collar jobs. The provision of alternative avenues for continuous voter enrollment is thus needed to avoid disenfranchisement. INEC can alleviate some of the chaotic circumstances by deploying systems (similar to the NIMC Pre-enrollment Portal) that can allow for intending individuals to register their details online (while uploading a valid means of identification), book appointment times for fingerprinting online, and simply present the printer verification with a lookup reference number to allow for the pulling up of data to facilitate secondary finger printer capture (if needed).

4. The provision of manned and unmanned standalone kiosks in a registration centers that allow for a speedy

self-enrollment process.

5.   Notification of voters via SMS or email for collection of PVCs: Presently, INEC has stated that there are over 10 million uncollected PVCs[1]. INEC needs to enhance its current systems to allow for automated workflow routines to enable PVC tracking and notification via SMS or email once a card is ready. INEC may also partner with the Nigerian Post Office (NIPOST) on delivery of PVCs. This will curb the high numbers of uncollected PVCs in the country.

NITDA will continue to work with INEC, stakeholders and innovators alike to facilitate the indigenous development of bespoke ICT software and hardware for elections management in country.

With these few words, I wish you a very successful summit. God bless you all, and God bless the Federal Republic of Nigeria.

Thank you for your attention.

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5. European Commission – United Nations Development Programme Thematic Workshop on Information Technology and Elections Management – Informed decisions for sustained outcomes.

SPEECH BY

Dr ISA ALI IBRAHIM (PANTAMI), FBCS, FIIM
DIRECTOR GENERAL/CEO
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA)

as Special Guest at the

Nigeria Computer Society's 40th Anniversary and National
Information Technology Merit Awards (NITMA)

which held

Friday, 16th November 2018

At the Muson Center, Onikan Lagos.

May Peace, Mercy and Blessings be upon you all

It gives me great pleasure to be part of this august gathering at this momentous occasion, as the 40th year of trailblazing efforts of the Nigerian Computer Society. This achievement is proof of the hard work and dedication of all stakeholders in our Information Technology eco system in Nigeria, who have kept the candle burning even through difficult years, when IT was considered luxury and the specific preserve of few multinationals. Today, IT is not viewed as a fringe activity of a few persons, IT has taken its rightful place as the critical enabler of commerce, social networking, development and governance in Nigeria. This is the fruit of the hard work and commitment of all you seated here today and thousands of young Nigerians who have chosen to utilize technology to create opportunities and by so doing developing our dear Nation.

I want to also give special thanks to His Excellency, President Muhammadu Buhari, GCFR who has demonstrated his support for the ICT sector in no small measure. As you may know, His Excellency has ensured that everything we need to drive this sector as a critical opportunity for diversification, is available to us. You are witnesses to his participation at the e-Nigerian Conference

and Exhibition, where he commended and challenged the eco system to create even more opportunities for Nigerians. Our special thanks also go to the Vice President, Prof Yemi Osibanjo, SAN for his unwavering support and commitment to Information Technology. I also wish to thank the Honourable Minister for Communications, Barr Raheem Adebayo Shittu, for his commitment and tireless efforts in leading and coordinating the sector, It is such a fine moment for IT in Nigeria having the full support of the Government, long may it continue.

At NITDA, we are focused on driving a roadmap for the development of Information Technology in Nigeria. Our strategy comprises of seven core pillars as you may know, namely: IT Regulation, Capacity Building, Digital Inclusion, Digital Job Creation, Government Digital Service Promotion, Local Content Development & promotion and Cybersecurity. We have carefully selected these pillars as the principal spheres of action to galvanise IT in Nigeria. The concerted effort and commitment of the Governance Board, Management and Staff of NITDA has meant, we have begun to record successes in the Implementation of these pillars.

At the core of these pillars is the need to create jobs and opportunities for young Nigerians and indigenous technology companies. Critical to this is the pillar on Local

Content Development and Promotion. NITDA therefore is driving the development of local content through the Implementation of the Regulatory Guidelines for Nigerian Content Development in ICT, which was conceived as a strategic and measurable framework to harmonise the development of local content in ICT. This efforts is coordinated through our vibrant Office for Nigerian Content Development in ICT (ONC). I am pleased to inform you that from my resumption of office in September 2016 till date, we have recorded milestones and successes that are galvanising local players and entrepreneurs to invest and build businesses to develop information Technology in Nigeria.

It may interest you to note that Nigeria is poised to spend a whopping four hundred and two billion Naira (N402 billion) on acquisition of Information Technology goods and service by the year 2020. This is based on a projected a year on year compound annual growth of 15.7% as against a projected 3.5% growth for the total economy within the same period. Herein lies the opportunity and the challenge for us all, even with modest growth in economy, IT spend will certainly continue to rise, we must prepare to capture more value for Nigeria. Also, as Nigeria prepares to join negotiations on the African Continental Free Trade Agreement (AFCTA), of

which NITDA is playing a key role in these preparations, new vistas will open the vast ICT market across the continent. Ladies and gentlemen, we must be ready to take advantage of these opportunity. Local content development avails us the platform to take our place in Sub-Saharan Africa IT market currently valued at about ten billion ($10bn) Dollars.

On resumption office In September 2016, it became necessary to re-focus the Nigerian Content Development Program, therefore we improved the status of the program to subsidiary of NITDA, with some level of autonomy to enable the office proactively engage and to drive compliance with the Guidelines for Nigerian Content as cornerstone of the program. We also re -organised the role of NITDA as the clearing house for all IT projects of the Federal Government, these functions allow us to have central visibility on all IT projects and to ensure compliance with the Guidelines. This has already started bearing meaningful results. So far, we have reviewed projects of about seventy billion Naira, and we have ensured that every project where local capacity exist, such project compulsorily demonstrates alignment with local content objectives of the current administration, as contained in the Presidential Executive Orders 003 and 005 on Local Content Development and Promotion.

Consequently, we have begun to screen IT project contractors and IT companies who provide services to the Federal Government. This activity is to weed out quacks and to ensure that only verified and competent local IT companies have access to the spend of our Government for technology. We are working closely with the Bureau of Public Procurements (BPP) to achieve this feat.

As stated, we have begun to witness remarkable success. As soon as the Executive Orders were issued, we held strategic meetings with key eco-system leaders for hardware and software in Lagos in August of 2017 and January 2018 respectively. We agreed on a plan of action and I am happy to say we have upheld our part of the bargain. This year we have issued hundreds of compliances notices and conducted enforcement of Guidelines where necessary. We have for the first time commenced criminal proceedings against violators of the regulatory guidelines for Nigeran Content Development in line with Section 17 & 18 of the NITDA Act 2007 which criminalises breach of the Guidelines and Standards of NITDA. This enforcement process has signalled to stakeholders that we are not relenting in driving local content development, we will not relent in prosecuting anyone who violates our guidelines.

You may have heard of the N-Power Program of the Federal Government, a laudable program of the current administration to empower and train our youth. As part of the program, devices were to be given to the volunteers with relevant content to build their capacity and enable the delivery of their roles. Three hundred thousand volunteers are to be trained at the end of the first phase of the program, therefore, three hundred thousand devices where to be supplied to these participants. We became aware that the Federal Government had recruited the services of professionals to run and administer this program, NITDA therefore duly notified them of the need to comply with the Guidelines and subsequently the executive Orders of the Government. So far, about 100,000 + devices have been issued for a combined value of N12.5 billion Naira. It may please you to note that local OEMs secured about N4billion of that amount because the intervention and engagement of NITDA. This is proof our commitment to the local eco-system. We are aware that the program is about to proceed with issuing devices to the rest of the participants who were recently engaged by the N-power program, we are poised and ready to ensure Nigerian OEMs secure even more of these orders.

Last year, our indigenous OEMs also recorded the highest

volume of hardware devices sold in the last five years with a combined value of about 11 billion Naira in sales for desktops, laptops, tablets and so on. This ensured that local OEMs increased capacity by hiring and training significantly more staff and operating more support centres. At NITDA, we ensured that only local devices where purchased for our digital job creation centres and other needs of the agency in 2017. Also, due to the operation of the Guidelines which mandates data hosting in Nigeria, we can confidently state that about 90% of Governments data is hosted locally at this time. Systems such as the Integrated Payroll and Payment System (IPPIS), Government Integrated Financial Management Information Systems (GIFMIS) , databases of all commercial banks, all Telco's, the databases of the Federal Inland Revenue Service, the Corporate Affairs Commission of Nigeria, the Independent National Electoral Commission of Nigeria (INEC), National Identity Management Commission of Nigeria (NIMC) and so on constitute a substantial part of government data or government regulated data are all hosted Nigeria. Except for a few other cases like the data of the Treasury Single Account (TSA) where sensitive data is hosted outside Nigeria due to some technical and financial reasons, NITDA is currently superintending efforts to ensure a repatriation of REMITA data by System Specs who should be commended for the effectiveness of the TSA which has saved the Government N24.7 billion monthly, and is also a shining example of what local content can do.

Notably, we have operationalised a partnership with the National Office for Technology Acquisition and Promotion (NOTAP). NOTAP is mandated to register all technology being imported into Nigeria and to ensure that capabilities that exist locally are not imported for the purpose of acquiring foreign exchange to pay for these services. NOTAP have reliably informed us that 80% of these agreements registered are for software services. Therefore, we have collaboratively sprung into action to ensure we reverse this trend of importing capabilities that we have. Consequently, we are jointly driving a program to ensure Nigerian software developers and development firms provide a chunk of the software that we need. Our focus as priority is in the banking sector where huge sums are expropriated yearly to service software licenses that can be developed locally, we are committed to reversing this trend. NOTAP has also ensured that any such software registered in Nigeria is only supported by a local firm for 25% of the total registered value as fees for the local company. This is commendable and noteworthy.

The Guidelines for Nigerian Content has been in operation since 2013, we have given it significant impetus and have operated the regulation since my resumption of office. However, as it is the nature of such programs, we have commenced an evaluation to update and amend the Guidelines and strategy of the program. Various

stakeholders have been engaged and even more will be before an amended and updated document is issued hopefully first quarter in 2019. Within NITDA, we have completed our realignment of the document to ensure consonance with the Executive Orders of the Presidency and currently tidying up with the Nigerian Communications Commission as a strategic sister agency, soon we will invite broad stakeholders to make final inputs before issuance. We entreat you to make meaningful contributions as we improve and increase the potency of the program as a platform for national development.

This year also for the first time, we have received and analysed Local Content Development Plan (LCDP) and reports of major IT multinationals operating in Nigeria. We have captured details of their efforts and given them feedback on areas they need to improve. Commendations have also been issued for those who have invested considerably for the development of technology in Nigeria. We have other achievements like ensuring quality service delivery by local service providers and data centres, and the successful facilitation of targeted stakeholder and industry sessions for development of Nigerian content, and the publishing of a Dashboard on local content development quarterly to track implementation and compliance. Time

will not permit me to go into details of those.

With all these gains, there remains a lot more that can be done to improve our performance on local content. There remains the issue of quality of local devices and adequate support for indigenous IT services. We have reorganised the certification and testing process to ensure quality devices and have begun to take local OEMs through their paces in this regard. Soon we will have a mark of quality that will significantly signal another milestone in indigenous content promotion in Nigeria.

As I stated earlier, none of this is achievable without the support of the Nigerian Computer Society as an umbrella organisation of all interest groups, stakeholders and professionals in Nigeria. I must also thank the Computer Professionals Registration Council of Nigerian for its unwavering support and partnership in uplifting IT in Nigeria. We look forward to more areas of collaboration and partnerships to build the Nigerian IT eco-system of our dreams. I congratulate you all for the remarkable achievement of the NCS, and I pray the continual guidance and blessings of the Almighty God in all your affairs.

Thank you and May God bless you all.

KEYNOTE ADDRESS OF

**HIS EXCELLENCY,
VICE PRESIDENT OF NIGERIA,
PROFESSOR YEMI OSINBAJO, GCON**

AT THE

FIRST DEVELOP ONDO WEEK

DELIVERED BY

DR. ISA ALI IBRAHIM PANTAMI *FNCS, FBCS, FIIM*
(Director General/CEO National Information Technology
Development Agency NITDA)

ON 21ˢᵗ November, 2018

Protocols

I want to congratulate Ondo State and its great people for blazing another trail in national development. Ondo has been known for many good things. It was from this State that late Michael Adekunle Ajasin wrote the plan for the first comprehensive blueprint on free education in Nigeria. That template became a national asset that greatly boosted education within and outside Nigeria. Ondo's proud and hardworking people made the cocoa seed a global citizen, attending to the tables of the high and mighty from the global East to West. As our nation searches deep to rediscover our winning mantra, States like Ondo are worthy places to retreat for conversations on partnership for development.

The concept of development has suffered from the dual disease of overexposure and under implementation- *more talk, less action.* There are tons of well-researched papers, journals, articles, conferences, seminars and fora where the concept of development has been discussed, yet development has eluded most parts of the 'developing world'. The theory of development, is surely more enticing than the practice, but we know that we must turn words to actions to make progress in our ever-changing world. While I would leave the theoretical issues to the experts, I must say

that everyone of us have our definition of what development means. For the hungry man whether in Akure or Azare, development is banishment of hunger and provision of daily bread in a sustainable manner. For the poor communities, provision of basic amenities such as water, roads, power and education are development. For the city slum dweller, availability of decent, livable communities amounts to development.

For us as government, we align with Merrill Ewert who coined the term *Humanization Development,* where people are recognized as active participants, not passive bystanders in their own journey of development. We believe that people are capable of changing their own reality through a process of self-realization, mastery of their environment, needs analysis and resource prioritization. As governments and development partners we have over time failed to achieve desired results because we have defined development in terms of so-called best practices that have failed to address local realities because we failed to partner with the people to identify their needs. I have seen some well-built cottage hospitals in remote villages lying fallow, inhabited only by reptiles, while people are dying from preventable diseases. You wonder why? The concept of the donor's health management is a hospital building. While the people have

put their trust in a village 'doctor' or midwife for ages. The villagers would rather die from mistreatment than to go to the hospital. So, the right approach to such would be to help develop the local health workers first and then provide decent environment and incentives to aid their work.

What the government of President Muhammadu Buhari has done in the last three and half years is to humanize development. We understand that farming land is crucial to the survival of our people so securing the country is a top priority. By deploying hard and soft leadership skills we were able to decimate the terrorist strongholds in the Northeast, quell restiveness in the Niger Delta and generally reduced incidents of armed violence. Without security there can be no peace, without peace there can be no development. Another life-threatening issue we've had to deal with is endemic corruption in public sector. Before this administration came on board, Nigeria was living on life-support. Corruption made development impossible. Roads where awarded and not built, infrastructure loans were taken and not expended for its purpose. Contracts where given to cronies who had no idea of where the project site is located among other gory tales.

The government employed a potpourri of strategies to

address these issues knowing *that if we don't kill corruption, corruption will kill us as a nation.* Firstly, the President gave independence to the law enforcement agencies to do their work, leading to the highest number of convictions ever recorded on corruption related cases in our national history. Laws, Agreements and Executive Orders where also issued to bolster the fight against corruption. This difficult fight is the most crucial for our nation's development. When money for power projects are siphoned, cottage industries are shut down and opportunities evaporate for the poorest of the poor. When the children of the poor are left unfed, they run away from school and take to crime thereby increasing cost of law enforcement. By reducing incidents of public corruption, we are freeing up more resources to build rails, roads, ICT hubs, skill acquisition centres, feed millions of school children daily and invest in our youths.

By focusing our policies and expenditures on the poor majority, we are seeking to humanize development. We have sought to provide for the people what they need in the short- and long-term- tools for self-emancipation. These policies have surely and sorely affected some people as we are reducing subsidy to the rich to subsidize the poor, as it should be. We believe gradually, every Nigerian and the international community would come to appreciate the

nobility of what this government has done for Nigeria.

Another critical dimension to sustainable development is education or better put, capacity development. Education in this context implies a functional, pragmatic transfer of applicable knowledge and tools to help indigenes drive their own development. One of the core objectives of this government is to promote digital capacity. As the Vice President, I have taken multiple tours to innovation hubs in Nigeria and outside and I have first-hand knowledge of the capability of our young people in IT. In this regard, what we as a government has been able to achieve in area of digital capacity include-

➢ Establishment of 80 digital jobs creation centres;
➢ Establishment of 86 e-learning centres;
➢ Establishment of 86 digital capacity building centres;
➢ Creation of 8 world-class Wide Area Networks in tertiary institutions;
➢ Establishment of 8 world class IT Hubs, one in each of the 6 Geo-political Zones and one in Lagos and Abuja respectively; and
➢ 92 Postgraduate scholarships to Nigerians to study ICT related courses etc.

As our development partners, we implore you to partner

with Ondo State and the Federal Government in fully exploiting these facilities for the benefit of all Nigerians.

We have not embarked on our actions without consideration of the power of global partnership for development. Goal 17 of the Sustainable Development Goals (SDGs) touches on partnerships to achieve the Goal. Take the Lake Chad for an example. The government realized that the restiveness in the Northeast region is partially caused by the drying lake, which has cut off economic opportunities for millions of people who depend on it for fishing, farming and cattle-rearing. The President has done some shuttle diplomacy to get partners to help recharge the lake. Our fight against corruption has also been largely successful due to the many cooperation agreements we have signed with partner countries. Surely if there is a nation and people that appreciate the power of global and local partnerships, Nigeria is one.

As our development partners, we want you to journey with us in this process of national rebirth. Our priorities are clear and we are convinced of the worthiness of our mission. We want to empower our people to be healthy, literate, employable and key drivers of their own development. Your presence at this DEVELOP ONDO WEEK is an attestation

to your continued confidence in the Nigerian people. As you deliberate and network, please feel free to point out to us as government and people areas we can improve, but also don't be gagged by the cacophony of the political environment from stating what we are getting right. By affirming the good and condemning the bad, you are playing a critical role as friends and partners for our Nation's development.

A GOODWILL MESSAGE/SPEECH DELIVERED

BY

DR. ISA ALI IBRAHIM (PANTAMI), *PhD, FBCS, FIIM*
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY (NITDA), NIGERIA

AT THE

2018 SKICAN/KOICA ANNUAL GATHERING EVENT

ON

THURSDAY, 22 NOVEMBER 2018

May Peace, Mercy and Blessings be upon you all.

[Protocol].

It is my pleasure and honour here today for attending this special invitation by the Korea International Cooperation Agency (KOICA) on the occasion of the 2018 Annual Gathering Event of the South Korea International Cooperation Association in Nigeria (SKICAN)/KOICA.
First of all, the Nigeria-Korea bilateral relationships are something worthy of celebration. The relationships have yielded good results in the areas of economy, science and information and communication technology (ICT) among others. Korean companies have added value and played tremendous role in energy, education, agriculture, health, electronics, heavy industries, constructions among many other sectors and fields.

Specifically, we recognize the tremendous role KOICA has played in the ICT sector, especially e-Government in Nigeria. We have seen your good presence on several social and developmental projects in the areas of education-building of Korea Model Schools, support for health care systems, e-Government programs and the set up of SKICAN to deepen Corporate Social Responsibilities on behalf of

KOICA.

Without taking much of our time I will like to briefly shed more light on the KOICA efforts on e-Government development. Nigeria, in pursuit of her national and economic development in 2012 recognized the need to adopt the use of ICT for effective governing processes especially in the area of control and administration of public policy. This recognition soon resulted in a special request for e-government development by the Federal Government of Nigeria in 2012 to South Korean Government based on their wealth of experience in technology advancement. e-Government has become a global phenomenon and an essential required feature of all governments in both the developed and developing societies.

The requests are aimed at ensuring South Korea's expertise and experiences in ICT are shared; technology is transferred; Nigeria capacity in e-government for public servants is built; assistance to the Federal Government and relevant stakeholders in developing and implementing Nigeria e-Government master plan is provided.

I am aware that the efforts have resulted in three major achievements which are: development of e-Government Master Plan, e-Government capacity building in which

about 1264 have been trained and the establishment of e-Government training centre.

Although, things are a bit slow, the approval of the master plan by the Federal Executive Council (FEC) is a great milestone that must leveraged. As you can testify, NITDA as the regulator of the IT sector in the country, played a major role in the development of the master plan. We have been supporting the e-government capacity building program in many ways. The Agency has been supporting one of its staff who benefited from the seven (7) slots for e-government Master programmes in Korea as a facilitator for e-government capacity building. The return on investment on these initiatives will be remarkable to the country in no time. The capacity building is creating the needed awareness for e-government as a development tool among the public servants. Under my leadership, as part of our strategy to implement part of the e-government master plan and develop e-government in Nigeria, I created a fully functional e-Government Development and Regulation Department (eGDR). I have been trying my best in supporting the department to successfully carry out its functions.

When the master plan is fully and effectively implemented among the stakeholders, the road to government digital

transformation will be a resounding success for Nigeria among the comity of Nations.

I want to commend KOICA for initiating the establishment and coordination of SKICAN. It is highly commendable. On that note, I will employ SKICAN to perform and live up to expectations for which it was created. I also encourage the alumni to keep supporting the growth and development of the country from different fields of study for which you have been trained. I hope your contributions and impact will immensely add to the cause of development of the country.

In conclusion, I want to reinstate our commitments and supports to the Korea Government and KOICA by ensuring their objectives for the country are met.

Thank you for your attention and have a successful annual gathering.

Isa Ali Ibrahim Pantami, PhD, FBCS, FIIM,

22nd NOVEMBER, 2018

REMARKS

BY

Dr ISA ALI IBRAHIM (PANTAMI), FBCS, FNCS, FIIM
DIRECTOR-GENERAL/CEO,
NATIONAL INFORMATION TECHNOLOGY
DEVELOPMENT AGENCY

THE 10TH EDITION OF STARTUP FRIDAY-SUF, ABUJA.
AT PTDF TOWER, 2 MEMORIAL CLOSE, CENTRAL BUSINESS DISTRICT, ABUJA

Creating an Enabling Environment for the Technology Entrepreneurial Ecosystem to Thrive

ON

TUESDAY, 04 DECEMBER 2018

May peace, mercy and blessing be upon you all.
All protocols duly observed. Good Morning

It gives me great pleasure to welcome you all to the 10th edition of NITDAs StartUP Friday (SUF)**.** Your presence here, shows how important ICT is and how dedicated we are in developing ICT for national growth.

One of Nigeria's key areas of strength is our young population; about 65% of Nigerians are youths and many of them ICT-savvy. The National Information Technology Development Agency (NITDA) established a special purpose vehicle, Office for ICT Innovation and Entrepreneurship (OIIE) to take advantage of the opportunity of empowering these creative young minds in order to drive our economy. The OIIE is focussed on identifying and supporting promising Nigerian startups in the ICT space. The activities of the OIIE have enabled the ICT startup innovation ecosystem in Nigeria to grow at a remarkable pace.

- Leading business personalities around the world have acknowledged the potential of our startups. One of such personalities is Mark Zuckerberg, the CEO of Facebook, Bill and Melinda Gates, President Macron of France and so on. These multinational

- have set up hubs, launch pads and funds to support the ecosystem.

- Many Nigerian startups have also won plaudits from home and abroad. For example, HopStop, an online city transit App acquired by Apple for a whopping $1billion, was owned by a Nigerian-born Entrepreneur. Jumia, a Nigerian company focussed on e- commerce is the first African Unicorn.

- Nigerian startups have raised a total of $9,241,196 in Q1, 2018. A total of $73,685,003 (about 26,567,127,831.65) was raised in Q2. This is almost 800% of the total funding for the first quarter of the year. In Q3 2018, a total of $35,552,585 (about 12,922,298,069.95) was raised, less than half of the total amount raised in Q2.

- The computer hardware industry is not left behind. The Ikeja Computer Village is the largest technology market cluster in West Africa and is estimated to contribute about $2billion to Nigeria's economy annually. We currently have 7 local OEMs but they can only meet about 20% of the local demand for computer hardware. We are happy to facilitate the establishment of world class Original Design Manufacturing (ODM) factories in Nigeria to guarantee quality components assembly locally.

OIIE has several programs designed to coordinate the tech ecosystem and create an enabling environment for technology entrepreneurship to thrive. *STARTUP FRIDAY (SUF)* is one of the many programs of OIIE. SUF is a tech ecosystem meetup specially designed to create a platform to continuously build the relationship between key players (startups, investors, academics, Government and so on) in the tech entrepreneurial ecosystem. SUF is state based and 5 states (Abuja, Lagos, Kaduna, Gombe, AkwaIbom) have been visited from 10 editions. So far Five Thousand Eight Hundred and Fourty Thousand (5,840) participants have attended SUF, out of which I,557 are startup co-founders, 211 investors, 144 Government officials and a total of 77 pitches have been delivered on our stages by startups.

Under my administration, NITDA hosted *STAKEHOLDERS CONNECT-* the maiden edition of the ICT Innovation and Entrepreneurship stakeholders meeting on the 31st October 2017. The objective of the meeting was to collectively identify stakeholder challenges and strategies to address them in order to create an enabling environment. Furthermore, President Muhammadu Buhari at e-Nigeria 2018, charged NITDA to develop policies and strategies that will change Nigeria's narrative from being a tech-consuming to a tech-producing country.

NITDA through its subsidiary, the Office for ICT Innovation and Entrepreneurship (OIIE) has worked directly with entrepreneurs, hubs and hub networks to review the best practices across Africa and around the world to support digital transformation in Nigeria. This birthed the Nigeria ICT Innovation and Entrepreneurship Vision (NIIEV). NIIEV comprise of policy recommendations and incentives on the key components for building a tech ecosystem. These recommendations are categorised into 3 themes: (1) Digital Infrastructure; (2) Education Reform, skills Development and R&D; and (3) Supporting the Ecosystem for Innovative Entrepreneurship. NITDA is calling for input into NIIEV and will be presented to you today.

Todays SUF promises to be exciting, engaging and impactful with a fireside chat hosting key players in the ecosystem, pitching by startups and after lunch there will be *ENTREPOP* (an Entrepreneurship Policy Program), a platform to ask questions and give feedback on NIIEV. We are committed to ensuring that a digital economy is developed in Nigeria.

Finally, this speech is not complete without the acknowledgment of the Petroleum Technology Development Fund (PTDF). In our continuous effort for collaboration, we reached out to them and they gave us a befitting avenue to host SUF, Abuja. We thank you for this warm gesture.

I hope you will find it beneficial. Thank you for listening.

PAPER PRESENTATION

BY

ISA ALI IBRAHIM (PANTAMI), **PhD, FNCS, FBCS, FIIM, MCPN,**

DIRECTOR-GENERAL/CEO

NATIONAL INFORMATION TECHNOLOGY

DEVELOPMENT AGENCY (NITDA)

AT

THE 2ND NATIONAL ANTI-CORRUPTION

CONFERENCE AND AWARDS ORGANISED BY THE

YOUTH DEVELOPMENT AND MORAL REBIRTH

INITIATIVE

AT

AREWA HOUSE, UNGWAN SARKI, KADUNA

ON

SATURDAY, 8TH OF DECEMBER, 2018

All Protocols duly observed.

May Peace, Mercy, and Blessing be upon you!
It gives me a great pleasure to stand before you - the youths of our great nation - to deliver a lecture on Anti-corruption in Nigeria. This shows that we are charting a new course to win the war against corruption.

I am delighted to see youths like you coming together to brainstorm on how to change the narrative of our ugly past. I am confident that if this could be replicated by others, it will give assurance that in no distant future, Nigeria would have successfully won the war against corruption.

I want to appreciate the organizers, **Youth Development And Moral Rebirth Initiative** for this noble idea of coming up with this theme: **'18 Years of Anti-Corruption War in Nigeria, the Challenges and the Way Forward.'** The choice of the topic is very apt at this critical time that there is a renewed vigor to stem the scourge of corruption by President Muhammad Buhari's led administration.

Prior to this new democratic dispensation, our country was at the center of global attention because of our penchant for corrupt practices and the unprecedented and unenviable ranking in the global corruption index. Most countries of the world avoided us like a plague. However, at the return of the democratic dispensation, the then government established the Independent Corrupt Practices and Other related Offence Commission (ICPC) in year 2000. This was followed by the establishment of Economic and Financial Crime Commission (EFCC) and establishment of Anti-corruption Units in all MDAs.

Corruption has many negative effects, exposing the nation to greater dangers. It is the bane of our underdevelopment. It has caused the nation the loss of confidence, credibility and integrity among the comity of nations. The country was known and blacklisted as a nation that has no regards for integrity and transparency and a place where you could not get a transaction carried out without cutting corners or bribing the officials. Our schools, hospitals and other public infrastructure were in a state of comatose because of our penchant for corruption. Many lives were being lost due to corruption while 80 percent of our population lived below the

poverty line and in grievous penury, others were feeding fat on our commonwealth. Our public procurement processes were shrouded in secrecy and contracts are done haphazardly.

The recent efforts by the present administration to reinvigorate the fight against corruption have begun to yield the desired results. Arguably, a lot still needs to be done but the anti-corruption agencies especially the EFCC have recorded some landmark achievements.

In a recent disclosure by the Acting Chairman of the EFCC, Ibrahim Magu in November 2018 while giving the account of his stewardship in the last three years, he revealed that the Commission has so far recovered N794 billion, over $261 million, £1.115 million, €8.16 million and 86,500 CFA. Furthermore, that the Commission also secured 703 convictions while hundreds of properties have been forfeited to the Federal Government. The Commission is now putting action to the mantra of President Muhammadu Buhari that says "if we don't kill corruption, corruption will kill Nigeria".

We are all aware of the efforts by the current administration to eradicate corruption in Nigeria,

especially the Public Sector, the fight against corruption is a collective effort, we must all come together to eradicate this menace.

Although irrespective of what the country has been able to achieve in injecting sanity into our system, a lot still needs to be done. There are challenges hindering the successful execution of the war against corruption in Nigeria. These include:

- Lack of Special Courts - Using regular courts to try corruption cases slows down the process of trials. The country needs to establish special courts to avoid unnecessary delay in the administration of justice so as to facilitate speedy dispensation of cases. Currently, only the Code of Conduct Bureau that has a special court.

- Lack of financial support to prosecute corruption cases or carry out diligent investigation serves as a constraint to fighting corruption in Nigeria. Other countries inject huge funds in the fight against corruption as in British Government's handling the case of James Ibori, former Delta State Governor.

- Our laws need to be amended to reflect recent reality. Some of these laws were promulgated

during the colonial era. For instance, both penal code and criminal code have been in existence for over the last 50 years. Most corruption cases cannot be prosecuted under these outdated laws with fines as low as N200. This serves as a challenge to the successful prosecution of corruption cases in Nigeria. Similarly, the National Assembly should also give quick passage to the Assets Forfeiture bill. Anti-corruption Agencies still face the challenge of confiscating assets traceable to proceeds of corruption without court order challenging the locus standi of the agencies.

- The culpabilities of some of the foreign countries to serve as a safe haven to laundered money have significant negative influence on the war against corruption. The challenges of recovering looted fund slushed in other countries, repatriation of suspected corrupt persons are some of the hindrances to the fight against corruption. The effort of the present administration in signing treaties with some countries on the recovery of looted funds and repatriation of suspected persons linked with corruption is highly commendable and right way to go.

- Media trial and unnecessary sentiments. Most people device several strategies to water down their charges by renting crowd and engage them to blackmail or engage in a campaign of calumny against the government. Most time, this demoralises the anti-corruption agencies and consequently backtrack or soft-pedal on such cases. The media are also culpable by always giving undue publicity to high profile cases. These strategies are geared towards distracting the anti-corruption agencies.
- Lack of exhibit to prosecute. Most corrupt persons in Nigeria are so smart that they clean their tracks very well and you can hardly trace any exhibit to them. Since the onus to provide proof lies with the prosecutors, the challenge of gathering exhibit become serious tasks that hinder the fight against corruption.

With all these challenges of fighting corruption in Nigeria, no doubt there is light on the horizon and the country stands to win the war. Although total elimination corruption in Nigeria seems very daunting or unattainable, it can be drastically reduced if some measures are taking into cognisance. Some of these

include:

- National rebirth: As a people, we need to reawaken ourselves to the danger inherent in corrupt practices and be more patriotic to the development of our country. Charity they say begins at home. Our homes as the first agent of socialisation should try to imbibe discipline among us. We need to inculcate the habit of morality and exhibit high sense integrity so our children can emulate us. Each home is a microcosm of the larger society; we need to demonstrate the culture of honesty and transparency to our children and at the same time frown at immoral and unethical behaviour among them.

- Our judicial system needs to be reformed for the successful prosecution of corruption in Nigeria. The composition of the present judicial system will always be a stumbling block to our resolve to end the scourge of corruption in Nigeria. There is no time you fight corruption that it does not fight back, both the bar and the bench have crucial roles to play in helping the country to rid itself of corruption. The recent Administration of Justice Act has indeed helped a lot but a lot still needs to

be done like the appointment of incorruptible judges, punishment for the corrupt ones and sanctions of lawyers that engage in frivolous injunctions aimed at delaying justice in order to strengthen the war.

- Our educational system also has roles to play in reshaping and remoulding the minds of our young ones to see corruption as an endemic that requires total clampdown. There is also the need to review our educational curriculum to include the introduction of ethics and moral values of the society at every level - primary to university.

- To fight corruption, the anti-corruption Agencies have to embark on continuous enlightenment campaign and reorientation of public sector employees. The public official should be taught the dangers, effects and consequences of corruption in our society.

The National Information Technology Development Agency (NITDA) has embraced the Federal Government's anti-corruption crusade by setting up the Anti-Corruption and Transparency Unit (ACTU) to prevent corruption in its workforce. Under my leadership, the management of NITDA produced a

handbook called **"Corruption Prevention Guide"** to serve as a guide against the temptation of corrupt practices.

In a similar manner, NITDA being the IT clearing house for all IT projects in the country has also put measures in place to tackle the menace in IT procurement by MDAs. In the last 2 years, we have redoubled our efforts in IT Clearance, we have been actively engaging all Agencies of government and have developed guidelines on IT Project Clearance for MDAs. Through our IT Project Clearance activity, we have saved the Federal Government over 13 billion Naira. We are also being proactive, offering advisory services to MDAs at the early stages of their budgeting cycle to ensure that whatever project they propose provides value for money, avoids duplication and eschews waste.

We have also intensified our efforts in regulating and developing the ICT sector as we seek to be the prime catalyst for transforming Nigeria into an Information Technology (IT) driven economy. As part of these efforts, we have developed a 2017-2020 Strategic Roadmap for the Agency as well as an Action Plan for the attainment of the goals outlined in the Roadmap.

The Roadmap is based on the following 7 pillars:

1.   IT Regulation
2.   Capacity Building
3.   Digital Inclusion
4.   Digital Job Creation
5.   Government Digital Service Promotion
6.   Cyber Security
7.   Local Content Development & Promotion

These pillars have the potential of determining the structure upon which a successful IT sector can be built. Our aim has been to achieve the objectives of the strategic roadmap in a uniform, consistent and coordinated manner by:

i)   Repositioning NITDA to effectively regulate the Nigerian IT sector and deliver its statutory mandate;

ii) Fostering local content, building IT capacity and creating jobs to enable the development of a sustainable knowledge-based economy; and

iii) Fostering transparency and accountability in government through the use of IT for governance.

THE ROLE OF IT IN THE FIGHT AGAINST CORRUPTION

The role the deployment of Information Technology (IT) plays in the fight against corruption cannot be overemphasised. We are all living witnesses to what the introduction of the Single Treasury Account (TSA) has done in the fight against corruption. The implementation of the policy along with the implementation of the Integrated Personnel Payroll Information System (IPPIS) is saving the Federal Government 24.7 billion naira monthly.

Similarly, the implementation of NUBAN account/BVN has made the slushing of money into different accounts by one person very difficult. Accounts are now linked together and gone are the days when one can open an account with different names.

As indicated earlier, we at NITDA are also helping the government to reduce corruption in the IT sector. We are making concerted efforts to see that there is value for money in the award and execution of IT Projects in the country. We have strengthened our regulatory function to make IT Project Clearance a condition before any IT

Projects can be executed. Now the Federal Executive Council (FEC) cannot approve any IT project without NITDA clearance. We have also formed a strategic partnership with both the EFCC and the Office of Auditor General of the Federation.

In conclusion, the war against corruption is a must-win battle if we must develop as a nation. Collectively, we must all resolve to fight and win. The government and the various anti-corruption agencies need our support. I therefore enjoin each and everyone of you to 'say something when you see something' as that is the only way we can come out of the doldrums.

God bless you all and thank you for your attention.

Isa Ali Ibrahim Pantami, PhD, FNC, FBCS, FIIM, NCPN
8th December, 2018