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ISSUED AT THE END OF THE NIGERIA INTERNET GOVERNANCE FORUM

(NIGF 2023)

EVENT



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HELD ON

SEPTEMBER 13 -14, 2023

Introduction

The annual Nigeria Internet Governance Forum (NIGF) facilitates fruitful partnerships and dialogue between various stakeholders, aimed at redefining the position of Nigeria at regional and global IGF meetings. The twelfth NIGF was held as a hybrid event tagged Nigeria Internet Governance Forum (NIGF) 2023, with some stakeholders in the Nigerian Internet Community physically present at the Nigeria Communications Commission Annex Complex, Mbora, Abuja Nigeria, while other participants joined virtually.

The NIGF 2023 was organized by the Nigeria Internet Governance Forum Multistakeholder Advisory Group (NIGF-MAG) which is a collaborative effort of the Federal Ministry of Communications, Innovation and Digital Economy (FMCDE), the Nigeria Communications Commission (NCC), the National Information Technology Development Agency (NITDA), the Nigeria Internet Registration Association (NiRA), Internet Society (ISOC) Nigeria Chapter, with other Internet Stakeholders. The main event, which was held on 14th September 2023, focused on discussing the theme: "Towards a Secure and Inclusive Digital Future for Nigeria: Balancing Regulation, Cybersecurity, and Emerging Technologies". The NIGF 2023 was preceded by the Nigeria Youth Internet Governance Forum (NYIGF) and Women Nigeria Internet Governance Forum (WNIGF) which were held in parallel on 13th September 2023.

Nigeria Youth Internet Governance Forum (NYIGF): September 13, 2023.

Observations:

The theme for the 2023 NYIGF event "Shaping Nigeria's Digital Landscape: Internet Universality" addresses the need to encourage the integration and inclusion of Nigerian youths in national Internet-related public policy meetings and events, as well as to maximize Internet opportunities and manage risks and challenges that arise. It also addresses the need to learn about Internet governance principles and contribute to developing infrastructure, policies, and standards in Nigeria.

The Virtual NYIGF 2023 offered the following:

- ENGAGE with pathways to influence policy-making and contribute to priority setting in the public and private sectors.
- CONNECT with youth from across Nigeria working to map solutions to complex ICT and digital economy problems and find partners to help put them into action.

• LEARN through workshops and skill-building seminars with industry youth experts, and take advantage of recorded content to learn at your own pace.

Key Considerations and Recommendations from High-Level Panel:

- The internet plays a significant role in shaping businesses, innovation, and development in the current age.
- Its importance is evident in daily activities, and many aspects of society heavily rely on the internet.
- To effectively use the internet for innovation, entrepreneurship, and development, it must be universal and accessible to everyone.
- The UNESCO definition of internet universality is encapsulated in the acronym ROAM, signifying that it should be right-based, open, and accessible to all, with a multi-stakeholder approach in its evolution.
- In Nigeria, the internet is evolving, but challenges with assets and functionality persist due to limited opportunities for multi-stakeholder participation.
- Many companies in Nigeria leverage the internet for product development, deployment, and customer service.
- Despite the potential benefits, the lack of clear policies addressing internet facilitation for innovation, entrepreneurship, and development is a concern.
- The appointment of a technology expert as Minister of Communication and the Digital Economy is seen as a positive development.
- The approach to education is expanding beyond formal education to include digital literacy, awareness, and rights in secondary and primary school curriculums.
- Emphasis is placed on the importance of incorporating knowledge of digital rights, as these are deemed crucial for everyone.
- Local content agencies are observed to focus on curbing and suppressing rather than promoting the development of local content.
- There is an identified opportunity for EdTech (Educational Technology) to play a role in providing innovative solutions to address gaps in local content development.
- The content suggests a need for policy changes and increased awareness among regulators to address the identified gaps and needs in the education sector.

- The youth are encouraged to think innovatively about building solutions that can address issues related to local content development.
- We must build on digital literacy, skill development, and gap assessment. Our policies need to be actually reviewed to cater to the needs of our growing population as well as increase the digital demands of the people.
- The government should invest more in the expansion of broadband infrastructure to ensure the availability of high-speed Internet across the country, including rural and underserved areas. The government should also encourage private sector participation in infrastructure development through public-private partnerships.
- The government has to develop and implement policies and programs that bridge the digital divide. By providing access to affordable Internet to marginalized communities. They need to support digital literacy initiatives to ensure that citizens have the skills to use digital technologies effectively.
- They can enact comprehensive data protection and privacy legislation that regulates the collection, storage, and use of personal data while processing individuals' privacy rights. The government can establish a data protection authority to oversee compliance and enforce data protection laws.
- We should have a national cybersecurity strategy to protect critical infrastructure and data from cyber threats. Also, invest in cybersecurity education and training programs so that we can have a skilled workforce capable of defending against cyber-attacks.
- Key government agencies need to be digitized to improve their efficiency, transparency, and accessibility for citizens. And implement strong cybersecurity measures to safeguard citizen data in the e-governance system.
- Create an enabling environment for the advancement of the digital economy by implementing policies that foster innovation and entrepreneurship. Offer incentives for tech start-ups.
- Our digital sector has to promote competition, protect consumers, and encourage investments. We have to engage in multi-stakeholder processes for Internet governance. Involving diverse stakeholders in policy development. Investment in research and developments in emerging technologies to ensure that our country remains competitive in the global landscape. We need international collaborations to foster the development of smart cities, the Internet of Things, and the improvement of urban services.

From the different breakout sessions of the NYIGF 2023, the following key

observations and recommendations were made:

Session 1: Universal Acceptance & Meaningful Connectivity

Key Considerations.

- The government-imposed tax on the installation of key Internet infrastructures (fiberlinks) is a key barrier hindering the universal acceptance and meaningful connectivity in Nigeria.
- Government support for Internet connectivity is very poor despite the growing efforts of NCC as a government agency which is sometimes posed with political interference in the disbursement of funds from the government to stakeholders in the deployment of Internet infrastructures.
- Inappropriate structure for the management of meaningful connectivity that is to ensure that everyone has meaningful connection irrespective of current locations.
- The complex and unclear regulatory framework of government. This can create uncertainty and discourage investment in new technologies. Intellectual property rights issues and regulations related to data privacy can also impact technology adoption.
- Inadequate and Unstable power supply, especially in rural areas, makes it difficult for individuals and businesses to utilize technology consistently. Infrastructure issues also extend to road networks and transportation, affecting the delivery of products and services.

Recommendations

- Partnership between government agencies and private telecommunications companies to expand network infrastructure and improve internet access in underserved areas.
- Partnerships between major tech companies and local startups or innovators to support technology development.
- Partnerships with local content creators to develop and promote culturally relevant content for digital platforms.
- Partnerships between major tech companies and local startups or innovators to support technology development.

Session 2: AI and emerging technologies

Key Considerations

• The concept of responsible AI emerged due to instances of irresponsible AI development, where certain private companies or governments release AI products and services with harmful effects on users.

- Irresponsible AI practices include using user data without a lawful basis and deploying AI that lacks fairness and transparency for users.
- Despite being called artificial intelligence, AI is not inherently intelligent; its quality is limited by the data on which it was trained.
- Responsible AI aims to ensure that AI systems are fair, transparent, and built on representative data to avoid bias and discrimination.
- Nigeria lacks a specific AI law, but there are relevant regulations such as the Nigeria Data Protection Act, Federal Competition and Consumer Protection Act, and the recently enacted Copyright Act.
- Currently, there is no comprehensive AI Act; instead, there are sector-specific regulations that may apply depending on the nature of the AI product or service.
- Bridging the digital divide in AI is a key focus, with an emphasis on ensuring that AI deployment does not disadvantage people.
- The primary goal of deploying new technology, including AI, is to enhance the wellbeing of individuals.
- In AI modeling, it is crucial to prioritize the people for whom the AI product or service is being developed.
- To prevent bias in modeling, protected attributes like personally identifiable information and sensitive data (e.g., gender, location, race, health data) should be excluded.
- Bias injected during modeling can persist and manifest after deployment, affecting outcomes.
- Bridging the digital divide in AI is viewed as a collaborative effort that requires involvement from the government, private sector, and civil society.
- The evolving world necessitates upskilling, particularly in the context of AI, which can only handle automatable tasks.
- Individuals should identify and focus on aspects of their jobs that are unique to human abilities, emphasizing the need for upskilling.
- AI is limited by the intelligence of the data used for its modeling and cannot replace human intelligence, emotional intelligence, or cognitive thinking.
- Individuals are encouraged to invest in skills that are not easily automatable and leave automatable tasks for machines.
- While leveraging AI, it is crucial to treat machines as machines and humans as humans, using machines to enhance human capabilities.
- To address bias in AI algorithms, there should be mandatory third-party audits for all AI tools in the Nigerian tech space, ensuring independence and unbiased assessment.
- The National Information Technology Development Agency (NITDA) has established the National Centre for AI and Robotics (NCAIR) to train people on AI, highlighting collaborative efforts in this direction.

- Forums and initiatives, such as NCAIR's training programs, play a role in creating awareness about AI.
- Internet accessibility is fundamental to AI awareness, and improvements in internet accessibility contribute to increased accessibility to AI technologies.

Recommendations

- Collaboration from the government, private sector, and civil society is important for ensuring access to AI and other emerging technologies.
- People should be at the core of the deployment of any AI product or service. The protected attributes of individuals must be left out during modeling to prevent bias that could occur after deployment.
- The future of work will require that everyone upskill and invest in skills that are non-automatable.
- It is recommended that there be a mandatory third-party AI audit to mitigate and eliminate biases and discrimination that may be posed by the deployment of an AI product.
- Internet accessibility remains at the core of the development of AI in Nigeria; there should be increased efforts geared towards improving meaningful and affordable internet access.

Session 3: Cybersecurity and online safety

Key Considerations.

- Key threats individuals should be aware of include phishing attacks, ransomware, spear phishing, and malware.
- Vigilance is crucial in handling emails, and users should avoid clicking links from unknown sources to mitigate these threats.
- Strategies for staying safe in the age of remote work include updating devices, protecting and duplicating files, using strong passwords, implementing 2-factor authentication, maintaining regular backups, and installing anti-virus and anti-malware software.
- Home internet security is essential, and emphasizing training and awareness for remote workers, both technical and non-technical, is impactful.
- Phishing attacks: Despite how widely spread they are, people still don't understand their intricacies. It isn't just by email; it can also be by text messages or phone calls, which is called **phishing.** It basically involves any way an attacker solicits information you are not supposed to divulge. This is why it is important to check the email addresses of the sender and scrutinize any links sent

- Ransomware is a very violent and malicious virus that comes through a link. Once clicked, it corrupts the file or data, and the attacker requires the victim to pay some money.
- Spear phishing: This form of attack is targeted at a particular audience, e.g., top officials at an organization. The purpose is the same as that of phishing, which is to steal information to use against you
- Malware: This sends a virus to your device that can corrupt your computer or files. In the rising age of AI, the rate at which malware can be created has improved and increased.

Recommendations

- Taking proactive measures of updating all devices, having files duplicated, using 2-factor authentication, installing anti-virus and anti-malware, backing up all devices, and physically protecting devices.
- For home internet security, it is best to change the default passwords of routers, have at least WPA2 security on all Wi-Fi, isolate all smart devices, and hide network names as they increase the barriers to your network. It is also best to have a separate network for guests to avoid easy access for hackers due to password sharing
- All workers should be trained and aware of the best practices regardless of their roles in the organizations.
- Cybersecurity is not something to do and forget about. It is important to check up on security measures put in place constantly, to ensure they are up to date and working well.
- To combat the usage of AI to create malware and other malicious attacks, researchers can use AI to develop AI tools that can recognize and prevent these malicious inventions.
- Organizations should be sure to employ trust architecture for all employees regardless of their positions. Each employee should be continuously monitored and access should be limited to only who is necessary.
- Choosing strong passwords seems like a basic strategy but there are tips to employ to ensure you choose the best. These include; using a minimum of 12 characters, including upper and lower case, and including numbers & symbols. These will make it difficult for password harvesters to easily guess passwords.

Nigeria Women Internet Governance Forum (NWIGF): September 13, 2023.

On the 13th of September, 2023 the Centre for Information Technology and Development (CITAD) in collaboration with Nigeria Internet Governance Forum held the 5th Women Internet Governance Forum (WIGF) as part of the 2023 Internet Governance Forum activities. The theme for this year was Bridging the Gender Gap in Digital Decision-Making Processes and Institutions. The aims of the forum were to:

- 1. Articulate responses to the challenges of women exclusion on the governance of the internet.
- 2. Identify policy suggestions to address the problems of women exclusion in internet decision making.
- 3. Develop campaign framework for the inclusion of women in the digital space decision making.

The objective of the forum was to encourage discussion, especially among women, on Internet governance and harvest strategies for addressing issues that tend to reinforce the marginalization of women in the digital space.

Dr. Jummai Umar Ajijola, Managing Director, Trade Modernization Project Limited served as the Keynote Speaker and spoke on the theme of this year. Madam Mary Uduma, Chair, West Africa IGF and Saudatu Mahdi MFR, Secretary General, Women's Rights Advancement and Protection Alternative (WRAPA) served as the chairs of the two technical sessions that were held. The two sessions featured six speakers and they spoke on;

1. Are Women Invisible in Digital Policy Making or are they Absent?

2. Tackling the Non-Presence of Women in Digital Policy Making Process and Institutions in Nigeria.

Observations:

The participants at the forum observed the followings:

- 1. Women are being marginalized in the digital space decision making processes.
- 2. Economic and disability factors are some of the issues eroding women participation in the internet decision making processes in the country.
- 3. Technology is a moving trend that gives ample opportunities to its users, so the need to ensure women are carry along and given adequate opportunities to participate.
- 4. Women suffered more with regard to cyber bullying and online harassment than men which led to many of them to avoid the internet.
- 5. There is economic disparity between women and men which hinders women access to internet and by extension their participation in decision making.

- 6. Women have the potential and capacity to lead in the technology industry if the spaces is equitable and favorable.
- 7. The online space is being dominated by men, and it is unfavorable for women to participate and take part in decision making.
- 8. It was also observed that with all the efforts being made, women are still not growing in the internet space as they ought to be.
- 9. It was observed that if men are not included in the discussion around the exclusion of women in decision-making, they will not understand the challenges women are facing in the online space.
- 10. Imposter syndrome was identified as one of the challenges that hinders the women participation in the internet decision making.
- 11. It was also observed that many women are at the helm of the affairs of the internet but their voice are not being heard.
- 12. Having women at the helm of the affairs is not always the case of women representation; it requires capacity and passion to ensure women get the benefits they deserve.
- 13. Participation is not decision making; many women are participating but are not allowed to make decision.
- 14. Women are not absent but inadequately represented in the internet decision making in the country.

Recommendations:

The participants after the forum recommended that:

- 1. There is need for policies reform and implementation in the area of women involvement in the internet decision making processes.
- 2. There is need for the development of more policies that will protect vulnerable groups on the internet from cyber bullying, harassment etc.
- 3. There is need for the development of policies that will ensure robust women participation and inclusion in the internet decision making process.
- 4. Government in conjunction with CSOs should mount a sustained public awareness on the digital ecosystem so that women in particular can be able to make an effective use of the

internet in the country, have access to educational materials and ability to use the internet without being harassed or intimidated.

- 5. CSO should develop and implement programs that will amplify voices of the marginalized women and girls especially in the area of decision making.
- 6. Men need to be put at forefront when discussing about the women exclusion on the internet decision making and participation.
- 7. The keynote speakers for the subsequent Women Internet Governance Forum should be men.
- 8. More men should be included in the speakers of the subsequent WIGF.
- 9. It was recommended that men should be put at forefront in every discussion on women exclusion participation and decision making on the internet.
- 10. Media should be involved in the efforts to bridge the gender digital divide and women participation in the internet decision making in the area of creating awareness and pushing for the actualization of it.
- 11. There is need to develop framework and intensify advocacy on the area of bridging gender digital divide and exclusion of women in the internet decision making.
- 12. Pastors and Imams need to be involved in the discussion of women exclusion in the internet decision making and in bridging the gender digital divide in the country.
- 13. There is need to ensure there is at least 50% of women in the internet decision making platforms.
- 14. CITAD need to collaborate with other CSOs to create a school or fellowship where young girls will be trained on internet policy decision making, and how to be involved on the internet decision making from the early stage.
- 15. It was also recommended that summer boot camp should not only be for men, but young girls also need to be taking part in it.
- 16. There is need to continue building the capacity of women and increase advocacy to ensure for an inclusive digital ecosystem that ensures the voices of women are being heard in the digital space.
- 17. There is need for local NGOs to ensure equitable sharing of roles in programming and activities in all of their affairs.

- 18. There is need for government to be at the forefront in championing for the women inclusion in the internet decision making.
- 19. Women should be given special consideration in every legislative position, executive and on the civil society space.
- 20. There is need for the multi stakeholder approach in addressing women exclusion in the internet decision making from the grassroots, to national, and to the global arena.
- 21. Create platforms such as "Girls for Digital Governance".
- 22. Women agencies, like the ministry of women affairs both at states and national level should be at the forefront in advocating for women inclusion in the internet decision making.

NIGF 2023 Event: September 14, 2023.

The theme for the NIGF 2023 was "Towards a Secure and Inclusive Digital Future for Nigeria: Balancing Regulation, Cybersecurity, and Emerging Technologies". The NIGF addressed the following subthemes:

- (i) Building a Trusted Internet: A focus on Cybersecurity and Child Online Safety.
- (ii) Strengthening Digital Infrastructure for Inclusive Services in Nigeria.
- (iii) Emerging Technologies: Insights for Nigeria.
- (iv) Navigating Data Governance and Privacy in the Digital Economy of Nigeria.

The Chairperson of the Nigeria Internet Governance Forum Multistakeholder Advisory Group (NIGF-MAG) and President, of Nigeria Internet Registration Association (NiRA) Mr. Adesola Akinsanya gave the welcome remarks. He stated that the NIGF 2023 would leverage the multi-stakeholder nature of the Forum to consolidate and harness innovative concepts aimed at fostering a more efficient strategy for constructing a secure, inclusive, and digitally progressive future for Nigeria. In doing so, it will judiciously address the intricate considerations surrounding regulatory frameworks, cybersecurity, and the burgeoning realm of emerging technologies. He assured that the outcome of the forum will be shared with academia, civil society, and all stakeholders for adoption and implementation as applicable.

Mrs. Mary Uduma, West Africa IGF Coordinator stated that the West Africa IGF looks forward to receiving reports from the deliberation of the day's event, including the actionable recommendations to Nigerian Internet stakeholders, and stated that West African IGF will report the recommendations at the forthcoming African Internet Governance Forum (AfIGF).

Mr. Bernard Ewah delivered the goodwill message on behalf of Mr. Kashifu Inuwa Abdullahithe Director General of the National Information Technology Development Agency (NITDA) who was unavoidably absent. He highlighted that the multistakeholder nature of the NIGF makes it very objective as it gives different players in Nigeria the opportunity to address Internet Issues in a way that recognizes the broad role that different stakeholders play in the digital development of the country.

Prof. Umar Garba Danbatta - Executive Vice-Chairman, Nigerian Communications Commission (N.C.C) ably represented by Dr. Ibiso Kingsley-George, Head of Media, in his remarks, stated that the theme of the 12th edition of the NIGF is not only timely but also well-encompassing of Nigeria's Digital Transformation journey. He stated that though the country has attained remarkable milestones in recent years, we must not fail to recognize the challenges that have emerged including cybersecurity threats, data privacy threats, and bridging the digital divide.

Dr. William Alo - Permanent Secretary, Federal Ministry of Communications, Innovation and Digital Economy (FMCDE). Dr. Alo expressed his delight at the forum's initiative to gather various stakeholders to deliberate on issues pertaining to the Internet in Nigeria to harness and aggregate ideas and best practices towards a secure and inclusive digital future. He affirmed belief in the forum's ability to generate new ideas, innovations, and strategies to address the setbacks faced by the country. He assured the forum that the government is willing to partner with the private sector to develop and promote meaningful connectivity and digital inclusion. He further stated that the outcome of the forum will facilitate and build consensus on actionable recommendations for the nation's internet ecosystem.

Dr. William Alo, the permanent secretary of the Federal Ministry of Communication, Innovation and Digital Economy (FMCDE), on behalf of the Honourable Minister, Dr. Bosun Tijani gave the keynote address highlighting his willingness to collaborate with the private sectors in the country to bring about digital transformation much needed in the country.

Engr. Kunle Olorundare – Ag. President, Internet Society, Nigeria Chapter gave the vote of thanks to round off the Opening Ceremony of the NIGF 2023. He appreciated all the speakers and various internet stakeholders for their presence and constant support to the Nigeria Internet Governance Forum over the years. He also commended all participants for their presence and contributions to the Nigerian Internet Space.

In all, there were about 373 participants (online and onsite) who attended the NIGF 2023, including participants from public/state institutions, private sector groups, civil societies, professional bodies, students and youths, media, and the public.

Observations from the High-level panel session:

The following were observed during the Plenary of the 12th Nigeria Internet Governance Forum:

- Obstacles such as inadequate investment, security concerns, and infrastructure neglect, hinder the inclusivity of digital technologies.
- Stakeholders have a responsibility to dismantle these barriers, paving a path towards accessible and secure digital infrastructure.
- As emerging technologies continue their path to disrupting the way humans live work, Nigeria has a strategic position to place themselves and it could be either "Leading" or "Following".
- The potential for economic growth, social progress, and enhanced governance can be harnessed by applying emerging technologies to solve current issues.
- The collective wisdom of stakeholders will be tested while navigating the challenges of technology adoption, data privacy, security, regulation and governance.
 - The era of data proliferation has brought the challenge of harmonizing data utilization and the sanctity of individual privacy.
- There is a delicate balancing act that Nigeria is expected to strike like how we leverage data for growth while safeguarding the rights of our citizens.
- The National Data Protection Regulation (NDPR) has provisions to capture online child safety policies. Numerous organisations such as the NCC, are working tirelessly on policy framework focused on Child online safety.
- It's not just about data protection and data control, but also data safety in the value chain and data products and their possibilities. The regulatory instruments used in EU are very broad, addressing different angles but is consistent from a global standpoint with focus on EU requirements.
- Infrastructure usually comes with a two faceted challenge. Infrastructure coverage issues, and infrastructure usage issues.
- The idea of capacity building, or the lack thereof, is a key factor to the slower rate of internet usage.
- Sensitive issues are not raised in the discourse amongst the youth in Nigeria.

- Finding the right regulatory balance will greatly facilitate digital adoption.
- Transparency and openness in decision making is key for inclusivity in the digital space.
- Youth engagement will go a long way to develop policies that will encourage young people to use internet properly and develop modalities to protect minors online.
- Inclusive regulation in areas like the EU has aided in keeping up with rapid infrastructure evolution and the challenges it brings.
- Competitive markets that have evolved to a level to address challenges such as coverage, customer reach and affordability to a certain extent are quite close to non-existent. Competition is therefore essential to improve accessibility.
- It's not just about data protection and data control, but also data safety in the value chain and data products and their possibilities. The regulatory instruments used in EU are very broad, addressing different angles but is consistent from a global standpoint with focus on EU requirements.
- Promoting a safe internet space for Nigerian children requires a multi-faceted approach that involves education, technology, and collaboration between various stakeholders.
- Striking a balance between the benefits of data sharing and the protection of individual privacy rights in the digital economy is essential for Nigeria's sustainable development.
- Ensuring an inclusive, accessible, and secure digital infrastructure in Nigeria requires a holistic approach that involves government policies, private sector participation, and collaboration with various multi stakeholders.

Recommendations from the High-level Panel Session:

• A multistakeholder discourse approach must be taken to illuminate pathways to responsible data management and monetization, cultivating a digital landscape founded on integrity and accountability.

- Investment should transcend beyond just infrastructure deployment and policies that enable that, towards internet affordability, internet inclusivity.
- There must be synergetic unification of government bodies, private enterprises, civil societies, academia and citizens, to amplify a collective impact.
- In order to empower Nigerian citizens towards responsible digital navigation, cybersecurity education must be prioritized.
- Policies that bridge digital divides must be championed, enabling equitable digital progress.
- Policies such as reducing right of way access fees and more should be placed on policies to facilitate infrastructure usage.
- By harnessing emerging technologies while implementing agile regulatory frameworks that safeguard against risks, it becomes highly feasible to mitigate risks of adopting these technologies. A strategic framework would include the creation of safe reporting spaces by regulators.
 - Data privacy partnerships must be forged with the goal of upholding the balance between data utilization and rights data owners.
 - Youths, entrepreneurs, and innovators must be nurtured to catalyze Nigeria's digital economy.
- This discourse must be translated to action, with each voice representing a spark of change and shaping out digital future.
- Sensitization needs to be enhanced, with content created and developed to cater for specific demographics.
- Capacity building should be integrated into the educational sector, where institutions partner with academia to put sensitive material on internet awareness into their curriculum.
- The Data protection act by the National Data Protection Regulation must be put into immediate implementation. Accountability is key amongst data storage providers and other data handlers and policies must be put into place to enforce this.

Session 1: Building a Trusted Internet: A focus on Cybersecurity and Child Online Safety.

Observations:

- Awareness and capacity building are crucial in addressing issues of cybersecurity.
- There is a lack of enforcement of regulations regarding child online protection in Nigeria.
- Enforcement of regulations set up by government is key to making sure policies are adhered to.
- There are lots of policies being made on cybersecurity and child online protection but very low adherence.
- Trust is crucial and it must be built from the bottom-up. The grassroots and vulnerable communities must be informed in matters of cybersecurity. Emphasis should be placed on underserved communities.
- Trust can be viewed from three perspectives; digital trust, technical trust and behavioral trust. All three must be considered in making any kind of intervention.
- Child pornography and its spread is a major cause of concern in the use of the internet in Nigeria.
- Enforcing cybersecurity education, policies and digital literacy is crucial in seeing real change.
- There is a large knowledge gap on citizens' rights on the internet and the laws put in place to protect them hence the need for awareness and sensitization.
- Toolkits providing guidelines on how business owners can protect themselves online are available for SMEs.
- Rural and underserved communities are being left out of the awareness and sensitization on cybersecurity.
- The "Shine your Eyes" project by the Nigeria Communication Commission projects awareness to vulnerable communities.
- Empowering local community leaders will drive home this awareness better due to since people at the grassroots have more trust in their leaders than even the government.

Recommendations from Session 1:

- More constructive content should be created to push out the harmful content online.
- Advocacy for implementation should be focused on rather than on creating more policies.
- Cybersecurity should be implemented as a compulsory education in schools.
- Community leaders should be trained in cybersecurity. The grassroots must not be left out in the awareness.
- Incentives can be given to business owners who adhere to COP policies.

Session 2: Strengthening Digital Infrastructure for Inclusive Services in Nigeria.

Observations:

- Cybersecurity is a challenge surrounding internet accessibility. Citizens need to know that they are safe while using these digital infrastructures.
- Concerning physical infrastructure, vandalism is a challenge that must be addressed.
- Power supply is a major challenge for internet accessibility in the country.
- Content localization is another challenge that must be tackled. Nigerian organizations should utilize the .ng domain.
- Stable connectivity especially in rural areas must also be looked at.
- The .ng domain, Nigeria's identity on the internet needs to be promoted to enable better adoption.
- There is a reluctance among Nigerians to use the .ng domain due to imaging and how other countries are hesitant to interact with Nigerian owned organizations.
- Digital infrastructure in Nigeria is poorly utilized from internet bandwidth to physical infrastructure.
- The National Information Technology Development Agency has devised a strategy to promote use of the .ng domain by placing priority on organizations that use the domain over organizations that don't.
- Nigeria has one of the largest numbers of users of the internet considering that it is the 7th biggest user in the world and the 1st in Africa. This shows the amount of data being generated by the country with very little benefit to the country.
- The Federal Ministry of Communication, Innovation and Digital Economy and the National Information Technology Development Agency have been implementing strategies to increase the use of the .ng domain name so that data can be hosted within the country to add value. Presently, the internet is fetched from other countries and brought to Nigeria hence, its increased cost.
- Domesticating data means more data centers in Nigeria spread across different states and regulatory bodies should take this into consideration when making policies. More data centers mean reduced cost and better accessibility.
- Data protection laws can also only be effective if data is domesticated.

Recommendations from Session 2:

- Regulators should ensure developmental regulation like infrastructure sharing between organizations to make these infrastructures more affordable.
- Internet Service Providers and telecommunication providers should also collaborate to reduce duplication of infrastructure then the regulatory bodies can come in to ensure a seamless and affordable usage. This practice has been implemented in other countries and it has worked for them.
- Enforcement of regulations by the country on operators must also be looked at in strengthening digital infrastructure.
- Models should be put in place to improve digital infrastructure in rural and underserved areas.
- There are about 46 taxes that telcos pay to the government. Government should reduce the price of some of these fees to enable these telcos able to move their operations to more areas. The process of setting up is also cumbersome and this is disadvantageous to the citizens. The internet is crucial to the nation and the government must realize that they need to work to aid these companies make internet more accessible and affordable.
- Capacity building for the citizens, especially the older generation, is also a right step towards strengthening the nation's digital infrastructure.
- Right of way regulations need to be improved to enable better synergy between operators.
- Investor-friendly policies are highly needed for strengthening digital infrastructure in the country.

Session 3: Emerging Technologies: Insights for Nigeria.

Observations:

- Emerging technologies has great benefits, but they also involve huge risks. Nigeria must identify and develop ways to manage risks in the adoption of these technologies.
- Emerging technologies in this discuss include Artificial intelligence (AI), blockchain/cryptocurrency, robotics, 4D Printing, Internet of Things (IoT) and cloud computing (Augmented Reality, Virtual Reality, Mixed Reality).
- A lot of Nigerian data is not digitized causing a bias in the data fed into AI technologies since AI only works on the exact dataset that is fed into it.
- A major risk with AI is ethics. Ensuring that AI will respect certain human rights, is neutral and unbiased is very important.
- Access is also a major issue. Some areas have better and more reliable internet access than others causing a digital divide.

- Policies and regulations should be made to ensure equitable spread and availability across the country.
- Emerging technologies like AI and Robotics could lead to labour loss and on the other hand, it will lead to more opportunities for people with the needed capacity.
- Consumer protection such as child online protection and data privacy are concerns that must be looked into as we embrace emerging technologies.
- Issues around mental health must also be addressed as more people become attached to these technologies.
- Culture preservation is needed as citizens become more exposed to foreign cultures in the use of emerging technologies.
- The lack of centralization especially in blockchain makes regulation difficult in that aspect.
- There should be a synergy between academia and industry.
- Education platforms like the Unity board and STEAM education kits developed in Nigeria have been used in some tertiary institutions to train tutors.
- The National University Commission (NUC) has given a 30% liberty to tertiary institutions to introduce customized curriculums. With this development, the academia can integrate the study of emerging technologies into their education.
- Upskilling and reskilling of the workforce is essential.
- Multisectoral partnerships could also aid the easy adoption of emerging technologies.
- Academic research should be geared towards meeting valid industry needs.
- NITDA's Strategic Roadmap and Action Points (STRAP) document for Nigeria's IT sector encourages the "Produce what you consume and consume what you produce" approach to encourage indigenous content patronage.
- ISO, ITU and IEEE have developed standards for blockchain technologies and other emerging technologies.
- Data privacy is a crucial aspect to be considered in the adoption of emerging technologies. The NPDR has a data protection act in respect to this issue.

Recommendations from Session 3:

- Combining two or more of these technologies together is able to give more value. They should not be looked at in isolation.
- Security of users must be considered also in the use of these emerging technologies.
- Nigeria must look to how it can be a global player.
- There should be more patronage of local content and more collaboration between the academia and industries.
- Nigeria should also look into global organizations to understand their strategies and to adopt it.

- Project-based learning methodology should be employed in tertiary institutions where there should be a lot of field application of what is being taught.
- Nigeria should take on adoption and subsequent adaptation of technology for sustainability.
- Besides the Academia, talents in informal spaces in the country should be identified and harnessed.
- Capacity building at different levels from the private to the public sector must be done if Nigeria is to be become a global player in emerging technologies.
- The use of emerging technologies should be encouraged and not shunned. Monitoring and regulation of this use is important.

Session 4: Navigating Data Governance and Privacy in the Digital Economy of Nigeria.

Observations:

- AI and robotics is an emerging technology and can be used to greatly improve the digital economy. The involvement of all age groups and gender in the use technology for various field will boost the digital economy of the country.
- The greatest risk in the present and future emerging technology is privacy.
- Citizens should be sensitized on the use of the internet and the dos and don'ts of the internet.
- Capacity building is also a key subject in emerging technology. It keeps people informed of what is happening and how to adopt the positive aspects while avoiding the negative aspects of emerging technology.
- Artificial Intelligence and robotics is major driver of technological transformation and digital economy.
- Privacy is the greatest threat emerging technology is facing and will face in the future.
- Capacity building is the main point of discussion because this is the only concept that can bridge the technology gap.
- More sensitization and awareness should be carried out on all levels on the risks of sharing personal data online.
- Multistakeholderism is the way to go to bring everyone into decision making for the growth of entrepreneur and innovative ideas in the country.

Recommendations:

- Amendments must be made on the Data Protection Act such that the data of individuals will not be shared to third parties without the consent of the individual.
- The Nigeria Internet Governance Forum (NIGF) must raise more awareness about Data rights and privacy.
- Users of apps must take their time to thoroughly read through the Terms and Conditions of any app before keying in personal information.
- Government should be charged towards a high level of commitment in protecting the privacy of data of Nigerians.
- Government regulations must be stable and articulated so as to create a reliable and flexible environment for the economy to thrive.
- Continuous capacity building must be embraced by all relevant authorities so as to stay in consonance with emerging trends.

For further information, please refer to the full NIGF 2023 Report on the NIGF

website: www.igf.ng or contact the Desk Officer, NIGF Secretariat via desk@nigf.org.ng.

