Universal Access Policy and the Transformation of the Agriculture Sector

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INTRODUCTION: The Term-Universal Access

- The goal of universal access is to bring telecommunication infrastructure close to everyone irrespective of their geographical location, income level, age, gender or other discriminatory parameters.

The Rational for Universal Access

- Provision of universal-based Internet and broadband services towards agriculture sector transformation

- Internet access leads to innovation, and innovation brings about economic growth and better livelihood opportunities.

Benefits of Telecommunication Infrastructure deployment

- It can impact on rural education development by providing ICT-enabled centres and facilitates in social inclusion
- It enabled "smart farming" which is characterized with real-time information about weather updates, climate conditions, early disaster warnings, and pest outbreaks, soil nutrient needs, and other growing conditions.
- The use of smart phone applications facilitates in linking farmers to multimedia advisory content, Promote business transaction between farmers and buyers
- It will aid in reducing the uncertainty about farm management decisions and the variability and risks associated with agricultural production activities.

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Government Responsibility on Telecommunication Infrastructure Deployment

- Government is responsible in creating an **enabling environment** that includes the elaboration and deployment of **incentives** for investment in broadband infrastructure in unserved and underserved areas
- Government should provide subsidies through Universal Access/Service Fund (UAF) for universal access to telecommunications services in rural areas. The subsidies give private-sector operators incentives to provide telecommunications services in the rural and also in semi-urban areas.
- Government should promote investment– that is, public, private, partnership models (PPPs) – in relation to both supply and demand creation pertaining to broadband network infrastructure deployment for rural and remote areas.
- Government should make land available for installation of mobile towers and have clear policies and precision in the role of the government agencies in the document approval chain for facilitating installations.
- Inorder to reduce the cost of deployment, Government should encourage and implement infrastructure sharing.

Universal Access Policy

- The principles of Universal Access is to promote access to telecommunication infrastructure/ICT services by everyone.

Objectives

- The Universal Access Policy aims to:

1. Accelerate the penetration of affordable, good quality and efficient telecommunications services, including good quality access to Internet to the underserved and unserved regions.
2. Provide ICT services in unserved and underserved areas where operators are reluctant to operate, due to the uncertainty of recovering their investment.
3. Reduce the digital divide between urban and rural areas and ensuring a more balanced distribution of ICT services to all the population
4. Promote the development of local ICT-based businesses and contribution to the expansion of ICT networks coverage.
5. Stimulate the development of local private business communities by providing suitable communication tools to facilitate interaction and exchange of goods and services with remote business communities.
6. Promote the use of ICT applications in social, cultural and economic oriented programs to improve the standard of life of local communities particularly in rural areas in E-Health, E-Education and e-Learning, E-Governance and E-Commerce

Universal Access Policy Continues……..

7. Mobilise available resources in policy, regulation and funding to provide telecommunications access to the community.

8. Increase expansion of learning opportunities, the acquisition and the provision and sharing of information

9. Achieve increased access to the information and communications network by all people in a way that enhances economic inclusion and participation.

Tasks:

1. Create Proactive Universal Access Framework to:

i. Promote the adoption of measures such as suppression of duties and tax on ICT equipment.
ii. Promote competition among telecom operators in such a way as to foster universal access.
iii. Adopt Colocation approach in Telecommunication infrastructure deployment

2. Creation of Universal Access Fund

i. Provision by Federal Government: Provision of Universal Access Fund (UAF) to facilitate the quick rollout of Telecommunication Infrastructure in rural, un-served and under-served areas in Nigeria

ii. Private Sector Resources: The private sector could contribute to the fund in form of grants, donation, etc. This is more appropriate for promoting the expansion of access to new services

iii. Rural Development Funds Support: State governments, NGOs and corporate agencies should complement the efforts of UAF in contributing to the achievement of universal access objectives by providing local needs for basic ICT infrastructure development in their rural development programs.

3. Imposition of Universal access obligations on licensed operators to ensure delivery of services in under-served areas
4. Harnessing Terrestrial and satellite networks (NigComSat) to complement with the microwave and fibre optic broadband rollout especially in rural areas

Principles for Universal Access Service

- **Affordability**: telecommunication services should be provided at affordable rates
- **Quality of service**: services provided should be of good quality and acceptable standards
- **Availability**: telecommunications services should be accessible at all time.
- **Sustainability:** telecommunications services should be managed and maintained so that their sustainability is ensured. This requires the adoption of a process of periodic reviews and adjustment mechanisms.

Government task to Enhance Digital literacy among farmers

- Raise advocacy for digital literacy in the rural areas, highlighting the empowerment opportunities as well as the benefits of being digitally literate to farmers and members of rural communities
- Establishing a National Digital Literacy programme for rural communities (Rural Digital Literacy Initiatives) (e.g. by NITDA) by building Community TeleResource Centre (CTRC).
  - **Functions of CTRC**:

- To train the farmers in the rural areas on the use of ICT for economic development
- The centre aims at ensuring that ICT is accessed within the community.
- The centre will facilitate farmers' access to markets, information centre for community development mobilization, small scale businesses, e-agric, and community health provision.
- The centre is meant to provide wireless connectivity and quality assured portals for farmers in the rural areas.
- The centre should be typically equipped with networked of computers, internet access and application software for ICT training and other e-services to the community in order to bridge the digital divide within the communities.

Challenges in Telecommunication Infrastructure Deployment in rural areas

- Poor/inadequate supporting infrastructure and access to basic amenities like road and electricity
- Difficult terrain
- High cost of installation ICT infrastructure
- Multiple taxation by the State and Local Government authorities in addition to that which is being paid to the Federal Government.
- Government policies
- Sources of funding
- Sustainability of the deployed infrastructures
- Security Issues

Suggested Remedies

- Government/policy makers would have to strive to build sustainable business models that support the investment in Telecommunication infrastructure in the rural areas.
- Government should create support mechanisms to support private sector investment in Telecommunication infrastructure deployment in rural areas through the provision of ancillary tool for funding.
- Sharing of mobile infrastructure (Co-location) would be an alternative that would lower the cost of network deployment, especially in rural areas. This will cut down the cost of building and maintaining the infrastructure (CAPEX and OPEX)
- Use of Terrestrial satellite networks to complement with the fibre optic broadband rollout especially in rural areas.

Potential Agriculture Ecosystem Players

1. Relevant agencies of Federal Government e.g. Federal Ministry of Agriculture and Rural Development, Federal Ministry of Communication and Digital Economy and National Information Technology Development Agency (NITDA)

- **Federal Ministry of Agriculture and Rural Development**: Provides overall policy directions for agriculture sector.
- **Federal Ministry of Communications and Digital Economy**: Provides overall policy directions for implementation of digital technologies and innovations in agriculture
- **National Information Technology Development Agency(NITDA)**: Regulate and coordinate the use of digital technologies and innovations for agriculture.
- **Nigerian Communications Satellite (NigComSat) limited**: Responsible in Managing, Controlling and operating communications in Nigeria. Provides high speed broadband coverage over areas terrestrial network operators cannot reach

2. **State and Local Governments**: Provides the right political and business environment for digital agriculture and support the Federal Government in implementation.
3. Licensed Telecommunication Operators in Nigeria

Suggested Incentives to farmers on the use of Digital tools

Farmers are often either not willing or do not have the means to pay extra for digital services

- Government and Private sectors, should cover the costs on the use of digital tools including provision of low-cost data access. This is a measure to bridge the digital divide and encourage farmers to adopt the approach, which will facilitate their wiliness in the continuous use of the tools.
- Public financing should be implemented as one way to cover fixed costs and enable digital tools to be developed and implemented by the farmers.
- Development of a workable model whose activities shall be based on a cordial partnership agreement with the Local Government, National and or International research agencies, the national meteorological agency, private weather service providers and mobile network providers.
- Translation to the local language for some farmers in rural areas who could find it difficult to interpret
- Research centres (CTRC) could help by providing a universal framework for evaluating and standardising digital tools, and consolidating a systematic review process to inform governments and the private sector about gaps and investment opportunities.

Conclusion

- Agriculture production is a key to economic development.
- Provision of universal telecommunication access in rural areas remains an essential tool for agriculture development
- The implementation of Universal Access Fund (UAF) is pivotal to universal telecommunication infrastructure access to underserved and unserved areas.
- Government should develop encouraging modalities to enable the use of digital tools among farmers

THANK YOU