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**SMART CITIES AND INFRASTRUCTURE: A DEVELOPMENTAL PATHWAY FOR
NIGERIA**
A POSITION PAPER ON POLICIES AND STRATEGIES UNDERTAKEN IN NIGERIA

1.0 Introduction:

Smart cities and Infrastructures are investments in human, social, capital, transport and modern (ICT) communication infrastructure that fuels sustainable economic development and a high quality of life, with a wise management of natural resources through participatory action and engagement by excelling in areas such as mobility, people, living, economy and government. In order to excel and achieved the desired output, smart cities can be built through strong human and social capital including ICT Infrastructure.

The importance and enormous contribution of the housing and urban development sector to the realization of sustainable economic growth and development in many nations are well proven. Well planned cities in general are regarded as the engines that drive any national economy with the housing sector being a major contributor to developed and developing nations contributing between 30-70% of the GDP in developed countries like the USA, UK and Canada.

With the recognition of smart cities and infrastructures, the utilisation of ICT through the provision of essential services cannot be over-emphasised. Nigeria, as a country is trying to key into this to have well planned sustainable smart cities in the country.

2.0 Overview of Current Status of Policies and Programmes For Smart Cities and Infrastructures in Nigeria

The Nigeria government at all levels had embarked on concrete actions to eradicate deficits in housing and urban development. These are exemplified by the formulation of Policies and programmes aimed at improving the sector. Some of the Programmes include:

- i. National Financial System Strategy (FSS) 2020: It projects that the housing sector will drive the financial system contributing about 20% to the GDP by year 2020.
- ii. The Transformation Agenda which projects that having one million houses per year to address the deficit in the country.
- iii. Revised National Science, Technology and Innovation (STI) Policy.
- iv. National Information Technology Policy.

All the policies covers various sectors and sub-sectors of technology penetration in our cities. Prominent amongst the policies is the STI Policy which had made provisions for the deployment of technology in the Land, Housing and Urban Development through the following interventions:

- Research and review existing codes/standards and strengthen R&D capacity for effective design, management and production of relevant technologies in building construction and urban development;
- Promoting the application of ST&I in the production and utilisation of local materials for building and construction to facilitate mass housing delivery;
- Promoting effective linkages and collaborations among knowledge based institutions, professionals bodies and the construction industries;
- Promoting R&D and innovative scheme evolution of green construction culture in Nigeria (Green Homes and Green technology);
- Encourage activities and regulatory roles that promote public safety in building and construction and mitigating effects of natural disasters;
- Promoting the development of standards for the design and specification of materials used in building and construction;
- Defining the roles of Federal, State, Local Governments and other stakeholders in dealing with issues of city/urban development, housing and land administration;
- Institutionalising strategies for funding R&D activities in building, land and Urban Development including extra steps like duties and tariffs and
- Establishing framework for ICT based administration and management of land of land ownership and mitigating effects of environmental disasters through best use of land and resource.

3.0 Status of Smart Cities in Nigeria

Presently, Nigeria is making efforts at developing its own smart cities in some states of the Federation including the Federal Capital Territory (FCT), Abuja through coordinated and concerted opportunities by the government in partnership with the Private Sector. Prominent amongst the cities being developed is the Eko Atlantic City and that of Lekki which is jointly being handled by the Lagos State Government, Commercial Banks and Private Investors.

In the FCT, one of such smart city being constructed is the Centenary City currently being built by the Federal Capital Development Authority in collaboration with the Private Sector. The city, as conceived will host a residential population of over 150,000 people

with strong attraction on investments from multinational firms. The city will have 20% of its space reserved for residential accommodation, while the remaining 80% will serve as Tourism, Leisure, Sports and commercial sectors. It will attract up to \$15 billion worth of foreign investors in five years, mainly done through the Land Swap Agreement of the government.

Other States are currently at different stages of design and development of smart cities and had reached appreciable levels in the country. Rivers and Delta States are still negotiating with the private sector on how to develop their own smart cities.

4.0 Action Taken by Nigeria Towards the Development of Smart Cities and Infrastructure through Institutional Framework

The Science and Technology sector contribution to the development of smart cities cannot be overemphasised. It is in recognition of this that the Federal Government of Nigeria put in place policies, programmes and Institutional Framework that will directly assist to create technology infrastructure to facilitate wider application and knowledge. One area of focus is the review of the National Policies and establishment of some Institutional Framework, which include:

- i. Federal Ministry of Science and Technology
- ii. Federal Ministry of Communication
- iii. Galaxy Backbone Plc
- iv. National Information Technology Development Agency (NITDA)
- v. Nigerian Communications Commission (NCC)
- vi. Nigeria Communication Satellite Limited (NIGCOMSAT)

5.0 Challenges to the Development of Smart Cities in Nigeria

It is a known fact that Nigeria has a growing housing deficit which had been estimated at between 17 – 23 million homes. Unfortunately, the housing deficit is fast expanding mired with a lot of challenges which include:

- Poor access to land for development.
- Inadequate and non-availability of medium to long term finance for housing development.
- Inadequate coordination and policy changes.
- Lack of adequate land use planning
- Inadequate power for driving cities
- Inadequate penetration of broadband for major cities in the country.

6.0 Recommendations

The Nigeria Government and Nigerians supports the development of smart cities and infrastructures, however, a lot still needs to be done to make most of cities sustainable with required amenities. It is pertinent that the provision of infrastructures in cities cannot be over-emphasised, the following are however recommended in conjunction with those that the government had put in place.

In the realisation of the above, the country requires.

- i. Most of our cities must be with the necessary technology infrastructure for the right investment to be attracted.
- ii. Government roles for the provision of the enabling environment for the private sector to thrive, this government is currently doing, it is thus important for the private sector to take up the challenge to continue to see the potentials in having smart cities and also in the transport sectors.
- iii. Smart cities, no doubt are money spinning avenues for government at all levels, the opportunity must be explored to address the problem of slums in our cities.
- iv. The requisite human capital development must be built for smart cities to evolve, this should be done.

7.0 Conclusion

The Nigeria government as a way of encouraging the development of smart cities and infrastructure had initiated various steps including the reduction of Right of Way (RoW) fees and the standardization of state levies and taxes on Information and Communication Technology (ICT) infrastructure. It is expected that this gesture will spur development across the country as well as provide other benefits which include adequate pricing on RoW, taxes and levies. Thereby increasing the predictability of cost for infrastructural development in the ICT and ST&I sectors.

Following the development, Nigeria had declared three states of Bayelsa, Cross Rivers, Lagos and Abuja as Smart states after the signing of a Memorandum of Understanding with relevant Stakeholders towards improving the ST&I growth for the fulfilment of Nigeria's quest for digital economy.

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