Information Technology Development in Nigeria

The Role of all Sectors

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Introduction

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Statistics on Nigeria

- Nigeria is a nation of about 120million people;

- There are 36 states and 774 local government areas.

- Only 15% of people over the age of 15 can read and write (English) - 67% male and 47% female. (1995 estimation);

- 54% of labour force works in agriculture, 40% in services and 6% in industry.

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- **Telephone Lines**
  - Fixed Lines: 750, 000 with only about 450,000 lines operational.
  - Mobile Lines: Less than 30,000 subscribers before the introduction of GSM in Aug. 2001. Presently there are about 350,000 mobile subscribers in the country.
- **Plans are on-line for a 2nd National Operator. Guidelines and Processes have been started**
- **NITEL, the incumbent National Telecoms Operator has been privatized with government relinquishing 51% of its holdings to the New Private Partner;**
- **Installation of an optical fibre network along the national power grid will soon take off;**
- **Large number of VSAT operations for Internet Services by both the public and the private sector.**

ICT Development in Nigeria.

- Launched the National telecommunications Policy in Sept. 2000.

- Developed a Comprehensive Science and Technology Policy (2001).

- Declaration of Biotechnology and ICT as National Priority Projects (2001);

- National Policy on Biotechnology developed and Launched (2001);

- National Policy on Information Technology developed and Launched (2001);

- Establishment of National Information Technology Development Agency (NITDA).

- National Space Research and Development Agency (NARSDA) launched a program for the Nigerian Satellite System.

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Need for an

Information Technology Policy

- The Federal government has recognized the importance of IT as a major key to economic growth and sustainability.
- That culminated in a Workshop on the IT Policy in Abuja in March, 2000.
- The workshop brought together major IT stakeholders like
  - COAN, IT Association of Nigeria, CPN, all major stake holders in the Public and the Private sector.
- With the collaboration of several committees the IT Policy was produced and was approved by the Federal Executive Council in March, 2001.
- NITDA is the implementation body of the IT policy.

Nigerian National IT Policy
The Vision

- **To make Nigeria an IT capable country in Africa and a key player in the Information Society by the year 2005, using IT as the engine for sustainable development and global competitiveness.**
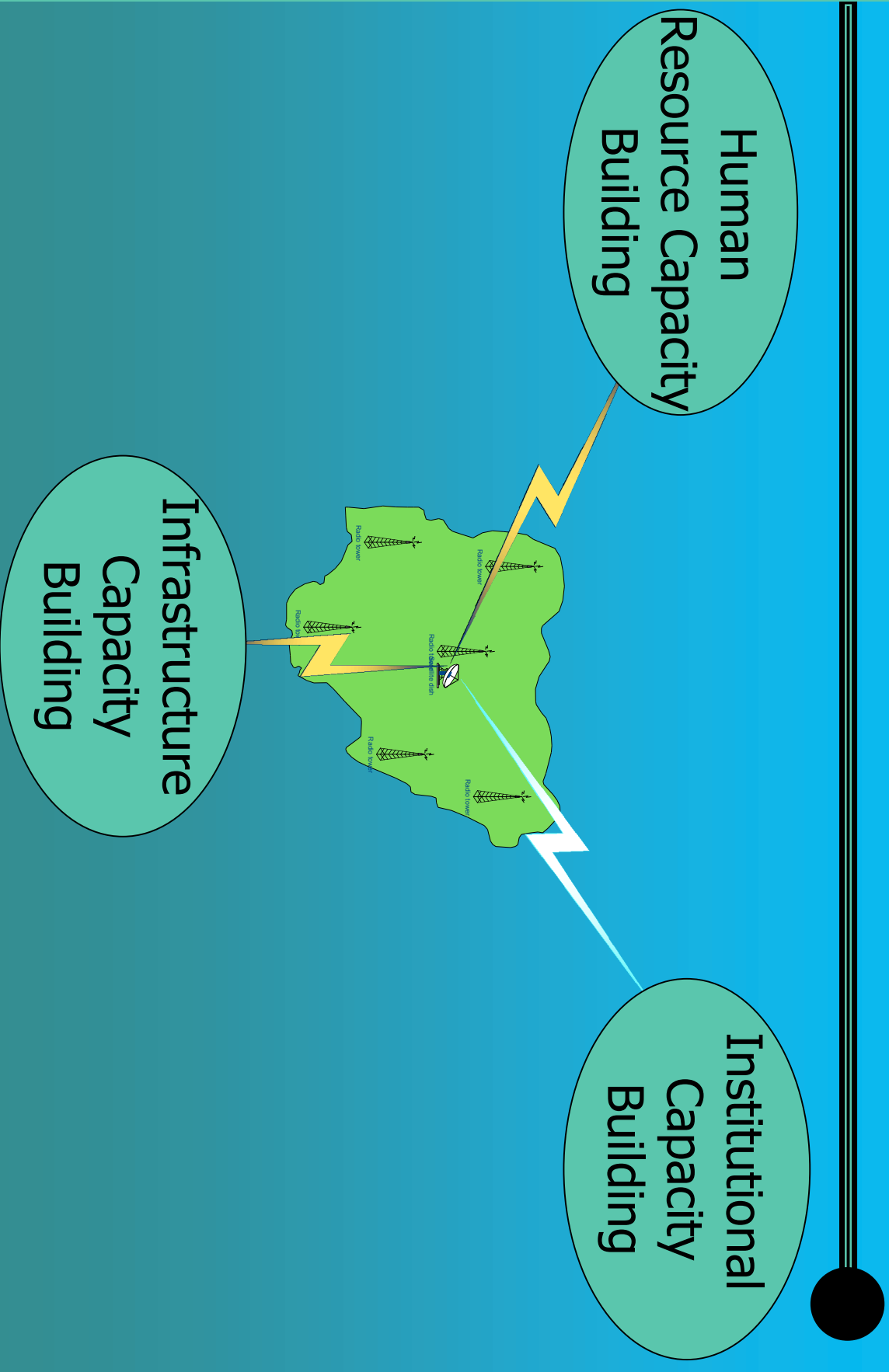
Nigerian National IT Policy

The Mission

- **The Mission is to Use "IT" for:**
  - **Education**
  - **Creation of Wealth**
  - **Poverty Eradication**
  - **Job Creation**
  - **Global Competitiveness**

IT Policy: Strategies

Human Resource Capacity Building

Infrastructure Capacity Building

Institutional Capacity Building

Challenges of Information Technology Development in Nigeria

&

Solutions proffered by the IT Policy

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Human Capacity Development

- Inadequate number of trained IT personnel;

- Low requisite IT skills by most of the working population;

- Under-development of the IT industry;

- The wealth of the nation depends much on the natural resources than human resources;

- Inadequate facilities for the development of IT manpower in the nation's educational institutions;

- Mass exodus of skilled IT professionals to the developed world.

Human Capacity Development

- Making the use of IT mandatory at all levels of educational institutions through adequate financial provision for tools and resources;

- Establishing facilities for electronic distance learning networks and the ensuring effective Interne connectivity;

- Establishing study grants and scholarships to deserving Nigerians;

- Empowering IT institutions and development centre to develop IT capacities initially at zonal, state and local levels;

- Using ICTs to convert brain-drain to brain-grain (brain talent globalization).

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# Challenges to Infrastructural Capacity Development

- Inadequate telecommunication facilities;
- Poor telecommunication infrastructures;
- Non-scalable state of existing infrastructures;
- Uncoordinated development in the telecommunication sector;
- Lack of modern technologies like fibre optics, satellite and wireless technologies in our existing telecommunication infrastructure.

Infrastructural Capacity Development

- **Declaring the establishment of National Information Infrastructure Backbone (NIIB) as a fundamental national mission;**

- **Planning, designing and configuring a scalable (NIIB) to achieve a minimum capacity of 2.5Gbps, using combination of optical fibres, satellite communications and wireless technology;**

- **Involving through consultations, the IT Professionals, Experts, Universities and Research Centres, industries and business enterprises in the establishment processes;**

- **Promoting high bandwidth physical connectivity using broadband technologies as effective pipelines for large and multi-media applications.**

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The Nature of the
National Information Infrastructure Backbone (NIIB)
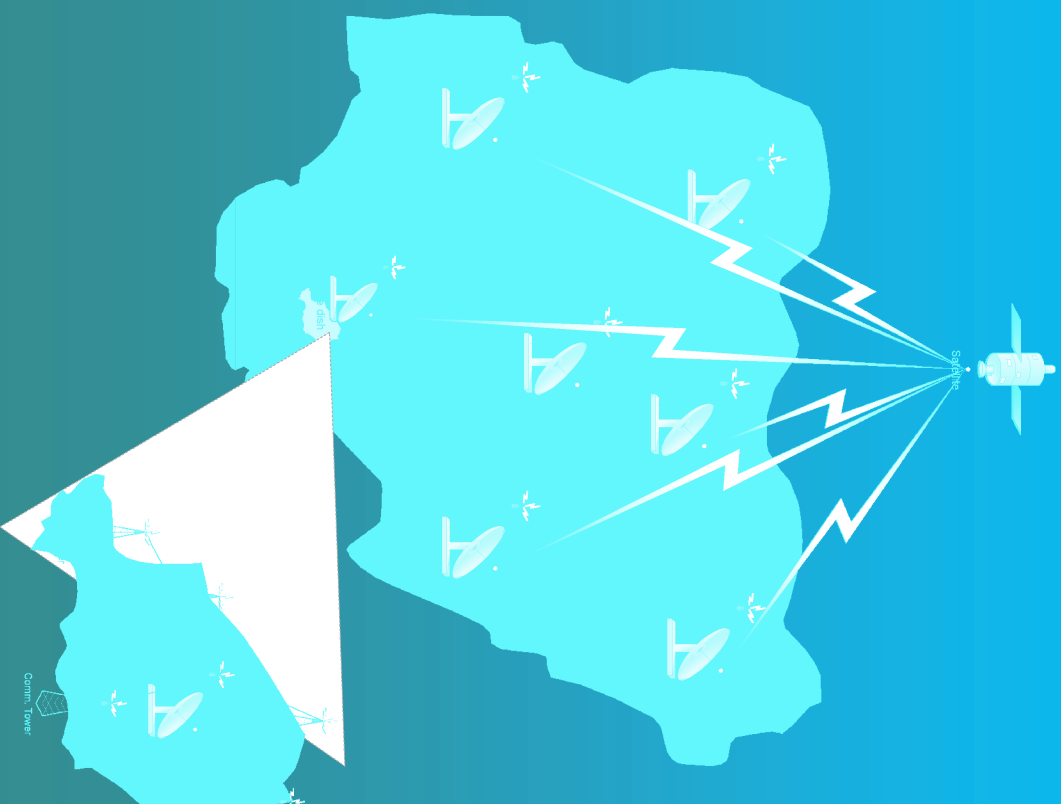
State Information Infrastructure Backbone (SIIB)

Academic Institutions/Research Centres

Category	Number	Enrolment	Graduate turnout
Universities	40	319,9	64,7
Polytechnics	40	219,7	58,2
College of Education	6	105,4	21,1
Secondary Schools	6,55	5,274,	607,0
Primary Schools	41,4	16,306,	2,174,

Additionally

- 40 major research centres in Science and Technology
- 20 major research centres in the Agricultural Sector.
- 4 major research centres in the Energy Sector.

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Institutional Capacity in IT

- More than 90% of these academic institutions in Nigeria do not have Internet connectivity;
- About 3% manage with unstable dial-up connectivity using the NITEL lines;
- Less than 2% have Internet bandwidth of more than 64Kbps.

Comparatively
- Over 200 universities in the US have 45Mbps Internet Connectivity;
- 85% of primary schools have 1.5Mbps Internet connectivity.

Strategies towards
Institutional Capacity Development

- Empowering IT institutions and development centres to develop IT capacities initially at zonal, state and local levels;

- Facilitating the growth of private and public sector dedicated primary, secondary and tertiary IT educational institutions;

- To establish joint Government/Private sector institutional framework for developing Advisory Standards and quality control;

- Restructuring the educational system at all levels with a view to developing relevant IT curricula for the primary, secondary and tertiary institutions that should respond effectively to the challenges of the information age;

- Allocation of IT development fund to education.

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Educational Sector

- NUNet is being scaled up to EDUnet – to provide connectivity to educational institutions at all levels (WorldBank financing expected);

- SchoolNet Nigeria has joined the SchoolNet Africa Initiative (funding by the Educational Task Force);

- Virtual library project – This will initially involve eleven universities with the provision of VSAT terminals;

- Distance Education using the Satellite technology is on the pipe-line.

Other Sectoral Application of

The IT Policy

- Re-engineering of Agriculture
- IT based Healthcare systems
- Transformation of Governance
- Urban and Rural Development
- Trade and Commerce
- Fiscal Measures, etc

Agriculture

- Nigeria can use IT to re-engineer agriculture for the purpose of
  - Maximizing food production
  - Improving food self-sufficiency and security
  - Increasing output for industrial raw materials utilization.
  - Providing employment etc.

- **Employing IT in the re-engineering of the agricultural sector include:**
  - Food Security
  - Introduction of technologies like biotechnology and genetic engineering
  - Aid in environmental monitoring and natural resource assessment.
  - Agrovision which involve the use of metrological information with agro-based statistical data to predict the best conditions for exploiting our rich agricultural potential.

Trade and Commerce

Old type
of
Trade and Commerce

Information Technology

Electronic Commerce
- E-business
- E-financing
- E-banking

Benefits of E-commerce

- On-line shopping
- Marketing on the Web
- On-line Advertising
- Global Market Place

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Arts, Culture and Tourism

- **NITDA will encourage the following through relevant strategies:**
  - Establishing more schools for the development of multimedia technology.
  - Providing Internet connectivity to major tourist areas with links to all popular search engines.
  - Creating Websites to Project Nigerian Culture
  - Providing facilities to sell Nigerian arts and cultural goods on the Internet
  - Developing multi-media virtual gallery
  - Developing low cost broadcast, video and film industry

Conclusion

- The development of Information and Communication Technologies in Nigeria in the past had not been very encouraging due the nations long history of military incursions in government;

- Little was done in terms of infrastructure, human resources and institutional developments;

- The achievement and the rate of diffusion of IT in Nigeria since the government approved the national IT policy in March 2001 clearly demonstrate that with the political will and determination developing countries can surely leapfrog in to the Information Age.

- Thank you and God Bless