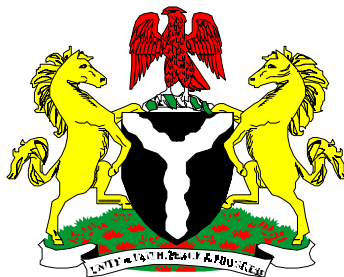


NIGERIAN NATIONAL
POLICY FOR INFORMATION
TECHNOLOGY (IT)

‘USE IT’



NATIONAL POLICY FOR INFORMATION TECHNOLOGY (IT)

EXECUTIVE SUMMARY

1 Preamble

Information Technology (IT) is the bedrock for national survival and development in a rapidly changing global environment, and challenges us to devise bold and courageous initiatives 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.

In addition, an Information Technology policy built on reliable human resources and infrastructure constitutes the fundamental tool and means of assessing, planning, managing development change and for achieving sustainable growth.

It is for this reason that every progressive country has a national IT policy and an implementation strategy to respond to the emerging global reality and thus avert becoming a victim of the digital divide.

A developing nation like Nigeria, that aspires to participate effectively and become a key player in the emerging Information Age needs to have in place, a highly efficient Information Technology system driven by a vibrant national IT policy.

2 Vision Statement

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.

3 Mission Statement

To **'USE IT'** for:

- (i) Education
- (ii) Creation of Wealth
- (iii) Poverty Eradication
- (iv) Job Creation.
- (v) Global Competitiveness

4 General Objectives

- i. To ensure that Information Technology resources are readily available to promote efficient national development.
- ii. To guarantee that the country benefits maximally, and contributes meaningfully by providing the global solutions to the challenges of the Information Age.
- iii. To empower Nigerians to participate in software and IT development.
- iv. To encourage local production and manufacture of IT components in a competitive manner.
- v. To improve accessibility to public administration for all citizens, bringing transparency to government processes.
- vi. To establish and develop IT infrastructure and maximize its use nationwide.
- vii. To improve judicial procedures and enhance the dispensation of justice.
- viii. To improve food production and food security.

- ix. To promote tourism and Nigerian arts & culture.
- x. To improve healthcare delivery systems nationwide.
- xi. To enhance planning mechanisms and forecasting for the development of local infrastructure.
- xii. To enhance the effectiveness of environmental monitoring and control systems.
- xiii. To re-engineer and improve urban and rural development schemes.
- xiv. To empower children, women and the disabled by providing special programs for the acquisition of IT skills.
- xv. To empower the youth with IT skills and prepare them for global competitiveness.
- xvi. To integrate IT into the mainstream of education and training.
- xvii. To create IT awareness and ensure universal access in order to promote IT diffusion in all sectors of our national life.
- xviii. To create an enabling environment and facilitate private sector (national and multinational) investment in the IT sector.
- xix. To stimulate the private sector to become the driving force for IT creativity and enhanced productivity and competitiveness.
- xx. To encourage government and private sector joint venture collaboration.
- xxi. To enhance national security and law enforcement.
- xxii. To endeavour to bring the defence and law enforcement agencies in line with accepted best practices in the national interest.
- xxiii. To promote legislation (Bills & Acts) for the protection of on-line, business transactions, privacy and security.
- xxiv. To establish new multi-faceted IT institutions as centres of excellence to ensure Nigeria's competitiveness in international markets.
- xxv. To develop human capital with emphasis on creating and supporting a knowledge-based society.

- xxvi. To create Special Incentive Programs (SIPs) to induce investment in the IT sector.
- xxvii. To generate additional foreign exchange earnings through expanded indigenous IT products and services.
- xxviii. To strengthen National identity and unity.
- xxix. To build a mass pool of IT literate manpower using the NYSC, NDE and other platforms as “train the trainer” Scheme (TTT) for capacity building.
- xxx. To set up Advisory standards for education, working practices and industry.
- xxxi. To establish appropriate institutional framework to achieve the goals stated above.

5 STRATEGIES

- i. Establishing a coordinated program for the development of a National Information Infrastructure (NII), State Information Infrastructure (SII) and Local Information Infrastructure (LII) backbone by using emerging technologies such as satellite including VSAT, fibre optic networks, high-speed gateways and broad band/multimedia technologies.
- ii. Providing adequate connectivity to the Global Information Infrastructure (GII).
- iii. Addressing open standards for further liberalization and the fiscal measures including incentives to substantially improve telephone tele-density and make IT more affordable to the citizenry.
- iv. Establishing IT Parks as incubating centres for the development of software applications at national, state and local levels.
- v. Restructuring the education system at all levels to respond effectively to the challenges and imagined impact of the information age and in particular, the allocation of a special IT development fund to education at all levels.
- vi. Restructuring the healthcare system by providing a national databank to provide on-line national healthcare information, administration and management at primary, secondary and tertiary levels.

- vii. Encouraging massive local and global IT skills acquisitions through training in the public and private sectors with the view to achieving a strategic medium-term milestone of at least 500,000 IT skilled personnel by the year 2004.
- viii. Empowering the labour force with IT skills and improving Small to Medium Enterprises (SMEs) productivity.
- ix. Establishing adequate institutional framework at the federal, state, and local government levels in order to effectively accomplish the objectives of the IT vision and mission.
- x. Establishing national IT awareness machinery at all levels of government and encouraging private sector participation in exposing Nigerians to the features and benefits of IT.
- xi. Strengthening government and private sector collaboration for the attainment of national self-reliance.
- xii. Utilising IT facilities to develop and transform the entertainment industry for wealth and job creation.
- xiii. Establishing appropriate mechanisms to accelerate and enhance trade and commerce transactions in the sector.
- xiv. Creating national database management systems as a tool for effective planning & communication between citizens at home and abroad.
- xv. Establishing national databases and other IT infrastructure to enhance defence and law enforcement.
- xvi. Enacting Bills & Acts to stimulate and protect the rights of users and developers including intellectual property rights.
- xvii. Bringing the government to the doorsteps of people by creating virtual forum and facilities to strengthen accessibility to government information and facilitating interaction between the governed and government leading to transparency, accountability and the strengthening of democracy.
- xviii. Utilizing IT opportunities to restructure government, citizens and business interfaces for better governance, improved trade and commerce and administrative effectiveness.

- xix. In order to achieve the short to medium term objectives of this policy with maximum effectiveness, Government will establish a National Information Technology Development Agency (NITDA) to implement the IT Policy, regulate, monitor, evaluate and verify progress on an on going basis under the supervision and coordination of the Federal Ministry of Science and Technology. Its operations will be funded amongst others with a start up grant of at least \$10 million.

- xx. Establishing a National Information Technology Development Fund (NITDEF) under the aegis of the National Information Technology Development Agency (NITDA) and funded as follows:
 - a. Start up grant of at least \$150m.
 - b. Two percent of the Federal Capital budget will be allocated to the fund until the articulated vision is attained.
 - c. 3% tax on all imported finished IT products will be directly paid to the fund.

Government recognizes IT as a strategic imperative for national development and taking cognisance of its immense benefits, government has resolved to provide considerable national resources, both financial and otherwise for the realization of the National IT Vision statement.

ACKNOWLEDGEMENTS

The necessity for a national Information Technology (IT) policy became more obvious after the participation of the Nigerian delegation in the first African Development Forum on the Challenge to Africa of Globalisation in the Information Age held in Addis Abba in October 1999. As a result, a national workshop on the National Information and Communication Infrastructure was held in Abuja in March 2000.

In parallel, professional bodies including Computer Association of Nigeria (COAN), Information Technology Association of Nigeria (ITAN) and the Institute of Software Practitioners of Nigeria (ISPN) submitted draft IT policy proposals. More efforts followed and culminated in the production of a master plan for the development of a national ICT program “ICT 2000” during the term of Chief Ebitimi Banigo as Honourable Minister of Science and Technology.

President Olusegun Obasanjo has identified Information Technology as a national priority and his enthusiastic commitment has helped tremendously in the timely production of this policy document. Likewise, the present Honourable Minister of Science and Technology, Professor Turner T. Isoun provided the motivation, support and mobilisation to complete this critical task in such a short time.

Special thanks to the chairman of the policy drafting committee, Professor G.O. Ajayi who provided able guidance and the members, Professor S.A. Sanni, Mr. Chris Uwaje, Mr. Abdul-Hakeem Ajijola and Mr. Alexej von Radloff who together worked very hard to produce this valuable document for our national development. Additionally thanks are extended to the various support staff involved in the process.

In case some names have been inadvertently missed out we would like to apologise in advance.

DEFINITIONS AND ACRONYMS

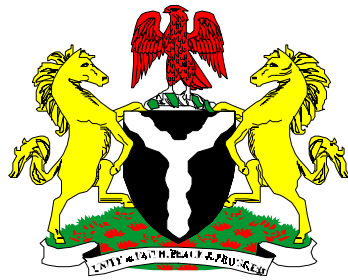
I. INFORMATION TECHNOLOGY – DEFINITION

- a. The term 'information technology' means computers, ancillary equipment, software and firmware (Hardware) and similar procedures, services (including support services) and related resources.
- b. The term information technology includes any equipment or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission or reception of data or information.

II. ACRONYMS

<u>S/n</u>	<u>Acronym</u>	<u>Full Description</u>
1	Backbone	- A bulk data communication network
2	BIS	- Broadband Internet Services
3	CMD	- Centre for Management Development
4	CITO	- Chief Information Technology Officer
5	DPA	- Data Protection Act
6	GIS	- Geographical Information System
7	GII	- Global Information Infrastructure
8	HIS	- Health Information System
9	ITF	- Industrial Training Fund
10	IT	- Information Technology as well as Information Communication Technology

- 11 IAP - Internet Access Provider
- 12 ISP - Internet Service Provider
- 13 LII - Local Information Infrastructure
- 14 NDE - National Directorate of Employment
- 15 NECC - National Electronic Commerce Council
- 16 NII - National Information Infrastructure
- 17 NIIB - National Information Infrastructure Backbone
- 18 NITDA - National Information Technology Development Agency
- 19 NITDEF - National Information Technology Development Funds
- 20 NITMA - National IT Merit Awards
- 21 NYSC - National Youth Service Corps
- 22 NITC - Nigeria IT Corps
- 23 NCC - Nigerian Communications Commission
- 24 SMART - Simple Moral Accountable Responsive Transparent
- 25 SME - Small to Medium Enterprises
- 26 SDT - Software Development Tools
- 27 SII - State Information Infrastructure
- 28 TOKTEN - Transfer of Knowledge Through Expatriate Nationals
- 29 UBE - Universal Basic Education
- 30. POP - Point of Presence



SECTORAL APPLICATIONS

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CHAPTER 1: HUMAN RESOURCE DEVELOPMENT

1.1 Policy Statement

The nation will endeavour to develop globally competitive quality manpower in IT and related disciplines.

1.2 Objectives

- (i) To develop a pool of IT engineers, scientists, technicians and software developers.
- (ii) To increase the availability of trained personnel.
- (iii) To provide attractive career opportunities.
- (iv) To develop requisite skills in various aspects of IT.
- (v) To develop made in Nigeria software to earn foreign exchange.
- (vi) To develop domestic computer components.

1.3 Strategies

- (i) Making the use of IT mandatory at all levels of educational institutions through adequate financial provision for tools and resources.
- (ii) Developing relevant IT curricula for the primary, secondary and tertiary institutions. Such curricula will be based on the appropriate national syllabus at the selected level and other global certification syllabi, to tie into key elements of government's Universal Basic Education (UBE), the proposed digital virtual library scheme, and related educational initiatives. A virtual university system shall be established.
- (iii) Establishing facilities for electronic distance learning networks and ensure effective Internet connectivity, which will provide opportunities for educationally disadvantaged areas to educationally leapfrog into the modern era.
- (iv) Encouraging IT companies with appropriate incentives to compel them to invest in education and training through certification for tax

rebates through existing government bodies experienced in such matters such as the Industrial Training Fund (ITF) and Centre for Management Development (CMD).

- (v) Establishing study grants and scholarships to deserving Nigerians.
- (vi) Promoting “Training the Trainers” scheme using existing establishments such as the National Youth Service Corps (NYSC), the National Directorate of Employment (NDE) to boost capacity building in IT.
- (vii) Empowering IT institutions and development centres to develop IT capacities initially at zonal, state and local levels.
- (viii) Facilitating the growth of private and public sector dedicated primary secondary and tertiary IT educational institutions.
- (ix) Working in partnership with related domestic and international initiatives such as “Nigerian Human Professionals in the Diaspora”, and the United Nations “Transfer of Knowledge Through Expatriate Nationals” (TOKTEN) program.

CHAPTER 2: INFRASTRUCTURE

2.1 Policy Statement

The government, through ***National Information Technology Development Agency (NITDA)*** shall establish and develop a National Information Infrastructure (NII) 'backbone' as the gateway to the Global Information Infrastructure (GII) interconnecting it with State Information Infrastructure (SII) and the Local Information Infrastructure (LII).

2.2 Objectives

- (i) To provide leadership direction and vision to guide IT infrastructure development.
- (ii) To provide equitable access to all users and stakeholders.
- (iii) To guarantee the privacy, integrity, accuracy, confidentiality, security, availability and quality of personal information.
- (iv) To create an ubiquitous and affordable technology with an "open standard" approach, scalable and capable of adapting to changes.
- (v) To provide a reliable and secured gateway to the Global Information Infrastructure.
- (vi) To stimulate the creation and sharing of national and international knowledge.
- (vii) To encourage private sector investment in IT particularly in Information Infrastructure.
- (viii) To ensure that interoperability and openness are promoted through the utilization of efficient, high-capacity and multi-media technologies.
- (ix) To promote electronic trade, business and commerce.
- (x) To facilitate the opening of overseas markets for Nigerian businesses and enterprises.
- (xi) To encourage the private sector to invest, design, deploy and operate independent information infrastructure

- (xii) To close the continuous widening gap, with its attendant grave consequences between the rich and poor nations; otherwise known as the digital divide
- (xiii) To pursue and attain cultural diversity.
- (xiv) To empower the citizenry to better compete in the information societies.

2.3 Strategies

- (i) Government will establish a ***National Information Technology Development Agency (NITDA)*** that will foster the development and growth of IT in Nigeria. NITDA will in part be funded from the taxes levied on imported IT equipment.

2.3.1 National IT Backbone

- (i) Declaring the establishment of NII as a fundamental national mission.
- (ii) Planning, designing and configuring a scalable National Information Infrastructure Backbone (NIIB) to achieve a minimum capacity of 2.5Gbps, using combination of optical fibres, satellite communications and wireless technology.
- (iii) Adopting the open system approach in selecting an appropriate, easy-to-use and scalable Information Infrastructure Technology over a long period.
- (iv) Involving through consultations, the IT Professionals, Experts, Universities and Research Centres, industries and business enterprises in the establishment processes.
- (v) Promoting high bandwidth physical connectivity using broadband technologies as effective pipelines for large and multi-media applications.
- (vi) Using existing facilities such as power grids and Railways infrastructure to enhance the creation of NII Backbone.
- (vii) Encouraging the private sector, through relevant incentives to build interfacing NII of fibre transmission systems designed strictly to

provide transmission capacities on lease basis to service providers essentially for data transmission and not primarily for telephony.

- (viii) Ensuring that the entire country is linked by Information network systems by the year 2005.
- (ix) Utilizing private sector investment.
- (x) Establishing a “Backbone By Anyone” Project for a period of 5-8 years through tax-free incentives to accelerate and encourage investment in the development of NIIB.

CHAPTER 3: GOVERNANCE

3.1 Policy Statement

The nation shall use IT as the major driving force to re-engineer and rapidly transform governance to interface with the needs of its citizenry by establishing transparent "Government Wide Information System (GWIS)" at national, state and local government levels.

3.2 Objective

- (i) To replace traditional governance with electronic governance.
- (ii) To create knowledge-based and **Simple Moral Accountable Responsive** and **Transparent** (SMART) governance.
- (iii) To reduce bureaucracy.
- (iv) To maximize productivity and quality.
- (v) To eliminate waste.
- (vi) To increase efficiency.
- (vii) To create an easy and free access to government information.
- (viii) To reduce the cost of service delivery.

3.3 Strategies

- (i) Ratifying a Data Protection Act (DPA) for safeguarding privacy of National computerised records and electronic documents.
- (ii) Ensuring through NITDA, the implementation of compatible standards for networking of all government organisations to share data, information and reporting on-line; establish inter-agency support structures that build on existing successful inter-agency efforts and provide expertise and advice to other federal agencies;
- (iii) Expanding the skill and career development opportunities of information technology professionals in government; and improve the management and use of information technology within and among agencies by developing information technology procedures

and standards and by identifying and sharing experiences, ideas, and promising practices; and provide innovative, multi-disciplinary, project-specific support to agencies to enhance interoperability, minimize unnecessary duplication of effort, and capitalize on agency successes; supported by a Government IT Procedure Act (GITPA).

- (iv) Making IT skill acquisition mandatory for all government employees, by:
 - a. Requiring all civil servants to become functionally computer literate within 24 months of this policy coming into force.
 - b. All new entrants into the civil service from grade level 6 and above must be functionally computer literate prior to commencing their appointment; and
 - c. Tie eligibility requirements for all employees, of federally owned, funded and controlled organisations, nominated to attend overseas, advanced management or technical programs, or those being considered for promotion or special posting will henceforth include their being functionally computer literate.
- (v) Establishing clear accountability for information resources management activities by directing all federally owned, funded and controlled bodies to appoint **Chief Information Technology Officers** (CITOs) with the visibility and management responsibilities necessary to directly advise the Federal agency head on the design, development, and implementation of their information systems. These responsibilities include:
 - a. Participating in the investment review process for information systems;
 - b. Monitoring and evaluating the performance of those information systems on the basis of applicable performance measures; and,
 - c. As necessary, advising the agency head to modify or terminate those systems.
- (vi) Promoting through the National Information Technology Development Agency the self-sustained development of Nigerian IT

solution providers in areas such as training, software development and “service” houses by ensuring that not less than 30% of the values of all ICT contract awards are undertaken using local value added products, services or personnel.

- (vii) Establishing Internet connectivity and access for government employees at all levels.
- (viii) Establishing Web Sites for improved government image and as information centres for the citizenry.
- (ix) Safeguarding the effective use of the "dot NG (.ng)" Domain name for Nigeria, with NITDA as the operating agency.
- (x) Developing on-line forms for information collation.
- (xi) Simplifying citizens' access to the process of governance and government information by providing choices and options for interaction with government, and advance the use of electronic media for government contract tendering and procurement processes.
- (xii) All Federally owned, funded or controlled organisations will immediately embark on the following measures, namely:
 - a. Improving significantly the management of government statutory bodies information systems, including the acquisition of information technology, and facilitating the adoption of Information Technology (IT) solutions in all aspects of their operations where practicable;
 - b. Focussing information technology management to support directly statutory bodies strategic missions, implement an investment review process that drives budget formulation and execution for information systems, and rethink and restructure the way they perform their functions before investing in information technology to support that work;
 - c. Using of information technology to improve the productivity of federal programs and promote a coordinated, interoperable, secure and shared government wide infrastructure that is provided and supported by a diversity of private sector

suppliers and a well-trained corps of information technology professionals.

CHAPTER 4: RESEARCH AND DEVELOPMENT

4.1 Policy Statement

IT Research and Development will be used for sustainability, leap-frogging and competitiveness.

4.2 Objectives

- (i) To ensure Nigeria's contribution to IT development and her competitiveness in the international market.
- (ii) To guarantee sustainability of IT in Nigeria and use it to stimulate industrial growth.
- (iii) To promote self-reliance and export of IT products and services.
- (iv) To encourage joint R & D efforts between the private sector and the universities such as software development.
- (v) To identify key technological areas as well as others and provide fiscal support and incentives to encourage local technology development.
- (vi) To encourage transfer of technology through exchange of visits between expatriate IT experts and Nigerian IT experts in Diaspora on one hand and IT institutions and experts in Nigeria. Funding to be coordinated via NITDEF.

4.3 Strategies

- (i) Developing local expertise and resources through adaptation.
- (ii) Developing market-oriented software for local market and export.
- (iii) Cultivating/upgrading the maintenance culture.
- (iv) Developing low cost PCs, solutions, services and accessories in order to increase PC accessibility to at least 30% of the populace by year 2003.
- (v) Encouraging and funding R & D in identified universities. Industries (including those in the oil sector) are to be encouraged to set up R & D

centres at university level, through faculty chairs, matching grants and focused joint projects.

- (vi) Requesting for research projects that will be made open to both research institutes and universities in order to select good and innovative projects for national development.
- (vii) Funding vacation or sabbatical; visits of expatriate IT experts and educationists in order to transfer knowledge and share their experiences.
- (viii) Introducing “Innovative ideas” competitions, on countrywide basis covering all levels (from primary schools to tertiary institutions) and R & D centres to instil the spirit of innovation and excellence in our young professionals.
- (ix) Stimulating growth of local IT industries through government patronage of local IT industries, products and services.
- (x) Establishing R & D institutions in IT in Abuja and in each of the six geo-political zones of Nigeria with clear mandate. States shall be encouraged to establish similar institutions, which are to be properly funded.

CHAPTER 5: HEALTH

5.1 Policy Statement

The government shall invest in IT based healthcare systems to ensure that Nigerians have access to good healthcare delivery.

5.2 Objectives

- (i) To use IT for the establishment of Health-care Information Systems (HIS) cutting across primary, secondary and tertiary healthcare systems.
- (ii) To improve the efficiency of patient care and reduce cost of healthcare delivery.
- (iii) To deploy IT for the development of drug information, records and bibliographic records.
- (iv) To deploy IT for the study and control of epidemics.
- (v) To deploy IT as a research tool and means of disseminating information.
- (vi) To reduce costs and improve productivity of healthcare administration and delivery.
- (vii) To deploy IT for use in distance learning for medical professionals.
- (viii) To use IT-based healthcare information system to educate on preventable diseases.

5.3 Strategies

- (i) Capitalise on existing global IT infrastructure such as the free Healthnet Satelife “nearly real-time” email facilities that connect, via e-mail, medical personnel at all levels in the developing world to each other, and to select health experts in developed countries.
- (ii) Networking all healthcare institutions to collate information, share data and communicate on-line.

- (iii) Establishing full Internet connectivity and access for healthcare professionals at all levels (primary, secondary and tertiary).
- (iv) Making IT skills acquisition mandatory for all healthcare professionals thus achieving computer literacy within 24 months.
 - a. Including IT courses in the curricula of all medical and para-medical education institutions.
 - b. Establishing a network of co-operating centres/institutions for training education, software development and research to produce the software and necessary human resources needed.
- (iv) Developing Software packages for;
 - a. The three levels of healthcare delivery, primarily to support clinical work and hospital management within the health facilities, so that the state/federal information statistics is produced as a natural by-product of the daily operations.
 - b. Mandating local/state/federal government authorities to accumulate the information coming from all levels of healthcare delivery and also to produce the combined statistics primarily to support the decision making by the authorities.
- (v) Establishing in all hospitals, healthcare, epidemiological, and administrative records.
- (vi) Use IT to combat serious national health threats such as HIV/ AIDS, leprosy, physical disabilities among many others, by using IT:
 - i. To teach the youth on ways to prevent the transmission of HIV.
 - ii. To educate the victims of HIV and their families on palliative measures and provide them with information through on-line conferences so that they can share their fears and experiences.

CHAPTER 6: AGRICULTURE

6.1 Policy Statement

The nation shall use IT to re-engineer agriculture for the purposes of maximizing food production, improving food self-sufficiency and security, increasing output for industrial raw material utilization, providing employment, economic growth and minimising environmental abuse and degradation.

6.2 Objectives

- (I) To optimise land use for food production.
- (II) To provide employment for the citizenry.
- (III) To minimize urban migration.
- (iv) Develop and protect a sustainable agricultural environment.

6.3 Strategies

- (i) Developing Geographical Information Systems (GIS) to monitor the environment and plan sustainable environmental usage: IT is used in land and water management, offshore resource exploitation, yield assessment and livestock management. Government will revitalise agricultural extension services by empowering and equipping farm extension workers with IT skills to support farmers through the use of IT in areas such as:
 - a. Digital Mapping
 - b. Land Use
 - c. Soil types
 - d. Meteorology
 - e. Ecology
 - f. Oceanography particularly off-shore fisheries exploitation
 - g. Hydrology
 - h. Agricultural records

- (ii) Establishing an agricultural information system to provide support for planning, production, storage and distribution of horticultural crops, livestock, and fisheries products.
- (iii) Creating IT awareness for all types of farmers at all levels nationwide.

CHAPTER 7: URBAN AND RURAL DEVELOPMENT

7.1 Policy Statement

The government shall facilitate the development of the Geographical Information Systems (GIS) and its utilization with other IT facilities for urban and rural area development.

7.2 Objectives

- (i) To develop digital master plans for our cities.
- (ii) To improve rural area development and management.
- (iii) To reduce the trend of rural to urban migration.
- (iv) To achieve environmentally clean cities and rural areas.
- (v) To generate IT related jobs for urban and rural youths.
- (vi) To introduce the benefits of e-governance to urban and rural communities.
- (vii) To make tools available to predict environmental problems in advance for necessary action.
- (viii) To promote the development of rural IT facilities.
- (ix) To promote the proper documentation of ownership of land and property in urban and rural areas and the transformation of dead property assets to capital.

7.3 Strategies

- (i) Creating environmental networks.
- (ii) Organising enlightenment campaigns about IT amongst city and rural area planners.
- (iii) Developing the GIS technologies for use in urban and rural areas for planning and design.

- (iv) Re-training the present core designers and planners for relevance in the information era.
- (v) Establish rural internet resource centres with VSAT capability where such communities can have access to IT and the Internet and information on the following;
 - a. government programs,
 - b. local news and weather details,
 - c. land and related administrative records,
 - d. government license and related documentation application on-line,
 - e. local commodity prices and on-line transactions.
- (iii) Developing community tele-centres for boosting the socio-economic activities in the rural areas.
- (iv) Establishing IT facilities in rural areas through the use of Mobile Internet Unit, Community Tele-Centres, etc using satellite, wireless, HF-radio and cellular technologies.

CHAPTER 8: TRADE AND COMMERCE

8.1 Policy Statement

Create an enabling environment that empowers stakeholders in trade and commerce with the underlying infrastructure to improve productivity and positively position the nation for global competition.

8.2 Objectives

- (i) To develop a transparent, stable and effective legal operating environment that promotes private sector business and investment in IT.
- (ii) To cultivate a culture of electronic commerce, which makes business transactions easy, quick and cost effective, for both national and international transactions.
- (iii) To positively raise the local and international visibility of Nigerian businesses.
- (iv) To encourage foreign and domestic private sectors investment to build information infrastructure and related assets and develop subsequent downstream activities.
- (v) To stimulate the proliferation of private sector-led information technology services and consequently generates meaningful employment opportunities for Nigerians.

8.3 Strategies

- (i) Firmly address the protection of intellectual rights by bringing the copyright laws in line with the needs of a globally competitive economy.
- (ii) Government, through NITDA, will collaborate with the private sector in the development of information infrastructure.
- (iii) Permitting the private sector to establish Internet communication “backbone” facilities stimulated on market demand with minimal governmental encumbrance.

- (iv) Encouraging the development of alliances of communities and non-governmental organisations to enhance efficient and appropriate grass-roots development efforts.
- (v) Raising the profile of Small and Medium-Scale Enterprises (SMEs) in exports through e-commerce by providing low cost accessibility to markets and services.
- (vi) Encouraging manufacturers and suppliers to utilise bar codes on items sold in the country.
- (vii) Establish a high profile National Electronic Commerce Council (NECC), to govern all the electronic commerce (e-commerce) affairs in Nigeria, and facilitate international trade through an e-commerce infrastructure. The NECC will be operated and supervised by NITDA with the cooperation of relevant Ministries and organisations.

CHAPTER 9: FISCAL MEASURES

9.1 Policy Statement

The government shall introduce a series of fiscal measures, in order to stimulate further investment and growth in the IT sector with the creation of a favourable investment climate for the development of a globally competitive IT enabled economy.

9.2 Objectives

- (i) To develop fiscal mechanisms that quickly respond to the fast changing needs of an IT based economy.
- (ii) To position the economy to secure capital inflow, retain capital and encourage local and foreign direct investment.
- (iii) To use favourable fiscal policies to ensure that Nigerian IT products and services are globally competitive.
- (iv) To establish and operate duty free IT zones to attract investment.
- (v) Fuel the development of economic sub-sectors, asset accumulation, and fiscal activities that arise from IT use.
- (vi) Endow the nation and its citizens with high margin employment opportunities.

9.3 Strategies:

- (i) Provide a sound, responsive and efficient regulatory environment.
- (ii) Encourage the development of the professional services sub-sector, where manpower is provided to work on customer's sites on a time-charge basis.
- (iii) Promote the growth of alliances and partnerships among local firms and with foreign firms through the establishment of joint ventures and strategic alliances based in tax-free technology parks.

- (iv) Imported IT components and software tools, for industries set up for the sole purpose of exporting finished IT products and services, will be duty free.
- (v) The import duty on IT “knocked down” components for the domestic market will be 1.5% whereas import duty on imported finished IT goods for the domestic market will be 7.5%. Three percent of the accrued duty will be paid directly to the National Information Technology Development Fund.
- (vi) Tax holidays will be accorded to all enterprises that demonstrate substantial financial commitment to the advancement of IT capacity and training for its staff as an extension of the Industrial Training Fund (ITF) and Centre for Management Development (CMD) mandates in collaboration with the NITDA.
- (vii) Federally owned, funded or controlled organisations for a period of 3 years from the effective date of this policy will not deduct the statutory with-holding taxes from payments to Nigerian IT solution providers for the following services:
 - a. One hundred percent locally developed software
 - b. Locally assembled or manufactured ICT equipment
 - c. Internet access services, local web hosting, and local web-site design
 - d. ICT equipment maintenance
- (viii) Government through its statutory bodies will promote the self-sustained development of Nigerian IT solution providers in areas such as training, software development and “service” houses by ensuring that not less than 30% of the value of all ICT contract awards are undertaken using local value added products, services or personnel.
- (ix) Stimulate the proliferation of high-speed internet gateways through a less stringent licensing regimen towards Internet Service Provider’s (ISP’s) and Internet Access Provider’s (IAP’s), and a reduction of the licensing processing time to seven working days and reduction of licensing fees to only cover administrative costs.

- (x) Providing legal safeguards for the privacy of individuals and the confidentiality of transactions against misuse.
- (xi) Government through the Central Bank of Nigeria (CBN) will set a deadline for the conversion of transactions such as Letters of Credit (L/C), Form-M, Bills of Lading and related import-export documentation to electronic formats by importers and exporters; and empower banks to engage in, manage, and finance e-commerce transactions.
- (xii) Adopting a Tax exemption on Export Profits for 5 years.
- (xiii) Establishing various IT parks across the country to be designated as duty free IT Zones. All companies located in the IT zone and science parks are to be granted the same incentives as those in the Export Processing or Free Zones, such as:
 - a. **Pioneer Status** that guarantees firms Tax exemption for a period of 5 years.
 - b. **Export Incentives** that are similar to the incentives in the Export Processing Zones (Export Processing Decree No. 34 of 1991) - Zero levies; zero-rates for states and LGA's.
 - c. **Other Incentives** include 50% Tax rebate on interest paid by IT companies on loans to local banks. This will reduce interest rates significantly and make lending to such companies more attractive..
- (xiv) Accelerated capital allowances over half of the approved life of the IT equipment, which will enable investment in such equipment.
- (xv) Establishing a National Information Technology Development Fund (NITDEF) managed by the NITDA.
- (xvi) 50% Tax rebate on dividends accruing from shares in IT and Biotechnology companies.
- (xvii) Access to special development funds such as the NITDEF or other funds to be approved by government from time to time.

- (xviii) Remitting proceeds (Net of all taxes) and other obligations in the event of a sale or liquidation of the enterprise or any interest attributable to an offshore investment.
- (xix) Enacting laws for the protection of investments and property from expropriation.
- (xx) Promoting government procurement policies to favour IT and enterprises located in the Parks.

9.4 Conditionality

In order to take full advantage of the favourable incentives offered in the IT Park free zones, appropriate conditionalities are to be worked out by NITDA. The key objective is to stimulate technological growth and development, IT literacy and R & D efforts. Companies must employ at least 75% local staff and invest at least 15% of profit tax on R & D.

CHAPTER 10: GOVERNMENT & PRIVATE SECTOR PARTNERSHIPS

10.1 Policy Statement

Recognizing that the IT should be private sector driven, government shall engage joint venture investment with the private sector, in addition to the provision of an enabling environment for investment.

10.2 Objectives

- (i) To provide an enabling environment so that private ventures can flourish.
- (ii) To use favourable fiscal policies to make Nigerian IT products and services globally competitive.
- (iii) To ensure that NITDA in collaboration with the private sector develops a large pool of IT professionals with wide range of state of-the-art IT skills for internal and international redress of shortages.
- (iv) To establish joint Government/Private sector institutional framework for developing Advisory Standards and quality control.
- (v) To encourage local capacity building by providing guaranteed markets in specialized and strategic IT sectors.

10.3 Strategies

- (i) Establishing and operation of Information technology free zones also known as IT Parks to attract IT investment. All companies located within the IT free zones or Export Processing zones (EPZ) are to be granted the same incentives.
- (ii) The IT parks may be set-up by Federal or State Governments, public or private sector undertakings or any combination thereof. The IT parks will greatly enhance the ease of doing business by providing favourable access to the Nigerian domestic markets and providing incentive for export production. All IT Parks will be subject to certification as designated Free Zones by the National Information Technology Development Agency (NITDA).

- (iii) Developing government/private sector R & D partnerships through equitable facilities sharing and by establishment of Pilot Schemes in software and hardware development within/outside designated IT Parks.
- (iv) Establishing and supporting the National IT Development Trust Fund (NITDEF), which amongst its other activities, will provide venture capital finance to the start up of SMEs in the IT sector. The National Information Technology Development Agency (NITDA) will manage this fund.
- (v) Promoting equity participation with IT investors both locally and internationally.
- (vi) Establishing an export promotion drive to sponsor participation of Nigerian IT solutions and service providers in national and international IT exhibitions.
- (vii) Setting up "power corridors" to the IT parks to ensure consistent and reliable power supply.
- (viii) Removing all bureaucratic bottlenecks to the development of local capacity building.

CHAPTER 11: ARTS, CULTURE & TOURISM

11.1 Policy Statement

IT shall be used to project a positive image of Nigeria's arts and culture and create wealth.

11.2 Objectives

- (i) To safeguard manuscript and preserve cultural artefacts.
- (ii) To promote Nigerian cultural heritage on the digital superhighway.
- (iii) To promote business and tourist activities and generate revenue.
- (iv) To enable Nigerian to become a net provider of Internet content on the World Wide Web, as opposed to its status of being a net recipient of Internet content.

11.3 Strategies

- (i) Creating websites to project Nigerian culture.
 - a. Use web technology to attract tourist to Nigeria,
 - b. Providing facilities to sell Nigerian arts and cultural goods on the Internet,
 - c. Encouraging Internet access services, local web hosting, and local web-site design,
 - d. Developing a multi-media virtual gallery, and
 - e. Developing low cost broadcast, video and film industry.
- (ii) Introducing state-of-the-art gadgets in the production process.
- (iii) Capitalise on existing infrastructure such as the Worldspace digital FM broadcasting satellite with its footprint over Africa to develop low cost home office West Africa wide broadcasting stations.
- (iv) Establishing more schools for the development of manpower for the multimedia industry.

- (v) Establishing community broadcast networks where information can be channelled.
- (vi) Promoting rapid growth in the use of personal computers for playing indigenous games for example:
 - a. Local games like ayo, etc, could be programmed into the computer and sold to the outside world.
 - b. Gaming with diversity - games betting via the Internet.
- (vii) Facilitating the use of the Internet by people with particular hobby and leisure interests.
- (viii) Developing the trend of interfacing the above development on a multi-media architecture allowing for a range of IT activities to be selected using an array of equipment.
- (ix) Strengthening infrastructure and related facilities for interactive and reliable networked airline/transport/hotel reservation.
- (x) Providing Internet connectivity to major tourist areas with access links to popular search engines for global visibility.

CHAPTER 12: NATIONAL SECURITY AND LAW ENFORCEMENT

12.1 Policy Statement

Protect and promote the interest, assets and safety of Nigeria, Nigerians and those we work with in the global environment, by developing knowledgeable manpower with commensurate discipline and IT skills-set capable of efficiently generating and effectively utilizing information in a timely manner, for national decision making.

12.2 Objectives

- (i) To safeguard life and property of all Nigerian both at home and abroad.
- (ii) To preserve the territorial integrity of our borders and assets.
- (iii) To provide attractive career opportunities for our citizens.

12.3 Strategies

- (i) Using IT to combat contemporary and emerging security threats and challenges that are being re-defined by Information Technology.
- (ii) Raising awareness and educating National Security and Law Enforcement personnel at all levels on the use, benefit and risks of new IT environment.
- (iii) Appropriately informing and protecting our citizens, government, infrastructure and assets from illegal and destructive activities found in the global electronic environment thus enhancing the confidence of our nation and its partners in our citizens, government and infrastructure.
- (iv) Government through the Federal Ministry of Justice, in collaboration with the NITDA, and after due deliberation with IT and sectoral experts, will frame appropriate legislation in the following areas, namely;
 - a. **Computer Crimes,**
 - b. **Digital Signature**

- c. ***Tele-Medicine***
- d. ***Tele-Education***
- e. ***Intellectual Property/ Copyright***
- f. ***Consumer Protection***
- g. ***Media Convergence***
- h. ***Electronic Government***
- i. ***Electronic Commerce***

12.4 Regulations

- (i) A regulatory framework is essential to avoid violating policy goals and direction, while incorporating social and consumer concerns in the deployment of new products and services, and to safeguard national resources. A continuous balance must be achieved between under-regulation that breeds sharp practices and excessive regulations that stifle industry investment and growth.
- (ii) In devising a useful regulatory framework, the following steps shall be taken:
 - a. Focus on creating an equitable, fair, just and competitive environment, based on the principles of the free market and open unfettered access to products and services.
 - b. Make optimum use of existing Information Communication Technology investments, and removal of restrictions on voice and video transmission via the Internet, Intranet, or other data communication media.
 - c. Allow network operators the freedom to build their own backbone and local access, and encourage collaborative private sector efforts in this regard.
 - d. Facilitate deployment of infrastructure for advancement of IT and related services.

- e. Review government management and procurement policies to ensure that they encourage competition among IT service providers.
- f. Promote the self-sustained development of Nigerian IT solution providers in areas such as training, software development and “service” houses by ensuring that not less than 30% of the value of all IT contract awards by government are undertaken using local value added products, services or personnel.

12.5 Standards

- (i) The government through NITDA shall adopt standards on an ongoing basis as part of a continuing IT planning process by initially determining what and where to standardize and the costs versus benefits of standardization. Issues to be considered include:
 - a. Compatibility in sharing of data and information.
 - b. Effective and efficient sharing of skills and knowledge.
 - c. Efficient usage of resources.
 - d. Improved product quality.
 - e. Avoiding the stifling of creativity and development of new products and ideas.
- (ii) The relevant Policy and Technical committee shall study, review and produce advisory standards to be adopted in the use of IT by the government and the private sector.
- (iii) For the public sector the government will ensure that federally owned, funded or controlled organisations (federal agencies); cooperate in the use of information technology to improve the productivity of Federal programs and to promote a coordinated, interoperable, secure and shared Government - wide infrastructure.
- (iv) Establish inter-agency support structures that builds on existing successful inter-agency efforts and shall provide expertise and advice to agencies.

- (v) Recommended Standards shall be reviewed and published on a regular basis. The publications shall be used as guidelines by government, public and private sector organizations throughout the country. Where specific standards are identified as critical to the development and deployment of a countrywide infrastructure, compliance with these shall be made mandatory.

CHAPTER 13: LEGISLATION

13.1 Policy Statement

The nation shall promote and guarantee freedom and rights to information and its use, protect individual privacy and secure justice for all by passing relevant Bills and Acts.

13.2 Objectives

- (i) To facilitate electronic communication and electronic governance (e- governance).
- (ii) To facilitate electronic communication and electronic commerce (e-commerce).
- (iii) To promote and secure electronic fund transfer and digital transaction payment system.
- (iv) To protect government data, records and information in digital form.
- (v) To establish and enforce Cyber laws to combat computer crime.
- (vi) To enthrone public confidence in the use, application and sharing of information.
- (vii) To promote acceptable standard, authenticity and integrity in IT use nationwide.
- (viii) To enhance freedom and access to digital information at all levels while protecting personal privacy.
- (ix) To promote intellectual property and copy rights.
- (x) To address critical ethical issues of the digital culture and protect the rights of the child and under-privileged.

13.3 Strategies

- (i) NITDA in collaboration with the Ministry of Justice, with inputs from the private sector advisory committee (where deemed necessary) shall sponsor and promote the establishment of the following IT Bills and Acts to realize objectives such as: freedom of access and

rights to information, on-line transaction, service, payment systems, privacy and confidentiality, digital signatories, and intellectual property rights:

- (ii) Ensure the protection of individual and collective privacy, security, and confidentiality of information.
- (iii) Introducing the machinery for verification and admissibility of copies of electronic records and digital evidence in administrative or legal proceedings, and promote the digitalisation of court proceedings.
- (iv) Review of relevant existing laws to take care of any impediments that may hinder the implementation of IT policy.
- (v) Training and re-training all judiciary personnel, including Judges, Magistrates, Lawyers, Prosecutors and Court Clerks to apply and use computers and other IT tools to improve the delivery of justice.
- (vi) Computerizing and networking all arms of law enforcement and converting existing relevant records into digital format.
- (vii) Enacting legislation on the following;
 - a. Establishing a National IT Policy.
 - b. Establishing a National Information Technology Agency.
 - c. Government workforce restructuring in the IT era.
 - d. Commercial transactions using IT media and digital signature technologies.
 - e. Computer crime and Cyber laws (CCCL)
- (viii) Re-structuring Decree 49 of 1995, which established the Computer Professionals Registration Council of Nigeria as well the decree establishing Council Of Registered Engineers of Nigeria, and other pertinent decrees to effectively respond to the challenges of the Information Age.
- (ix) Encouraging "Made in Nigeria IT products and services" such as software and professional services through incentives

- (x) Updating the existing National Copy Rights Act to protect IT related intellectual property rights (IPR).

CHAPTER 14: GLOBAL CONSIDERATIONS

14.1 Policy Statement

Recognizing that the subject of globalisation is indeed an issue of internationalisation of technology, government shall encourage international collaboration in IT knowledge sharing, investment and security.

14.2 Objectives

- (i) To encourage national and regional co-operation in the applications and development of IT to strengthen co-operation and integration in Africa.
- (ii) To position Nigeria as an IT capable country in Africa.
- (iii) To respond to the challenges of the IT globalisation in goods, services and human capital.
- (iv) To transform IT brain drain from Nigeria to brain gain.
- (v) To encourage the participation of Nigeria in the Internet Society activities at the international and regional levels.

14.3 Strategies

- (i) Creating IT departments, headed by Chief Information Technology Officers (CITO), in our missions abroad and related establishments.
- (ii) Establishing an international relations department in the National Information Technology Development Agency with special inter-agency links to the Presidency and the Ministry of Foreign Affairs.

CHAPTER 15: IT POPULARIZATION AND AWARENESS

15.1 Policy Statement

A comprehensive promotion and awareness campaign shall be undertaken in order to create an information society with cutting edge technologies in which every citizen is empowered to contribute positively to national development and wealth creation.

15.2 Objectives

- (i) To promote IT diffusion, utilization and applications within and across sectors.
- (ii) To promote the use of IT by the heads of the three tiers of government; Ministers and all other key officers who can influence public opinion.
- (iii) To encourage the performing arts (home video, artists, musicians etc) and other similar media sources to integrate IT popularisation into their programmes.
- (iv) To use the electronic and print media extensively for the popularisation of IT.
- (v) To encourage the development of simple IT tools designed for local language interactions.
- (vi) To draw on the intrinsic ability of women to propagate positive values within the society at large as an instrument for IT diffusion and promotion.

15.3 Strategies

- (i) Deploying Mobile Internet Units (MIU) with varying multimedia aids to tour rural areas in order to educate the populace on IT features and benefits in addition to the community telecentres.
- (ii) Encourage IT skills acquisition for all officers at all tiers of government within 24 months of this policy going in to effect.
- (iii) Establishing interactive websites for all key government offices within 12 months as information centres for the populace.

- (iv) Organizing workshops to demonstrate the features and benefits of IT for performing artists through the Ministry of Youth, Sports and Culture.
- (v) Collaborating with the Ministry of Women Affairs to organize workshops and training in IT skills for women and other special groups.
- (vi) Collaborating with the Ministry of Information as well as its agencies such National Broadcasting Commission, NTA, the Federal Radio Corporation of Nigeria and others at the state level to popularise IT through the slogan '**Use Information Technology**' (**USE IT**) via television and radio.

CHAPTER 16: POLICY IMPLEMENTATION

16.1 Policy Statement

Recognizing IT as a strategic imperative for national development and taking cognisance of its immense benefits, Government shall provide considerable national resources, both financial and otherwise, for the realization of the National IT Vision Statement.

16.2 Objectives

- (i) To develop an efficient and cost-effective infrastructure that provides equitable access to national and international networks and markets.
- (ii) To develop an extensive pool of trained IT manpower at all levels to meet local and export requirements.
- (iii) To promote the widespread use of IT applications in governance.
- (iv) To provide business incentives for both local and foreign investors to ensure the development of Nigeria's IT sector, including the software, hardware and service industries, and the use of its products.
- (v) To develop an encouraging legislative and regulatory framework for IT related issues.
- (vi) To give maximum opportunity to the private sector to lead the thrust in the development of IT in Nigeria.
- (vii) To establish a tradition of electronic commerce for both national and international transactions.
- (viii) To establish institutional mechanisms for the control, regulation and monitoring of IT activities in Nigeria.

16.3 Strategies

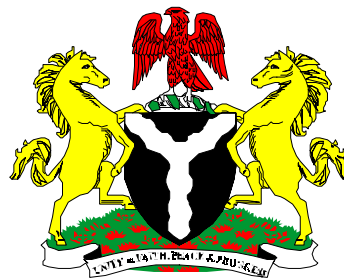
- (i) Establishing a coordinated program for the development of a National, State and Local Information Infrastructure Backbone by using emerging technologies, such as satellite including VSAT, fibre optic networks, high-speed gateways and broad band/multimedia within the next eighteen months but not later than the fourth quarter of 2002

- (ii) Providing high-speed connectivity to the global information infrastructure by 2002.
- (iii) Increasing the telephone line penetration rate by expanding the existing Telecom network and providing new networks by employing modern technologies in order to minimize the cost of expansion.
- (iv) Removing the barriers to the introduction of new technologies such as Wireless Local Loop (WLL) by the private sector in order to ensure the spread of Telecom services to under-served areas of the country.
- (v) Developing an integrated, flexible, robust and reliable transmission network covering the entire country and capable of voice and data by 2003.
- (vi) Establishing IT Parks as incubating centres for the development of software/hardware applications at national, state and local levels.
- (vii) Encouraging further deregulating of the Telecom industry with a view to providing affordable, competitively priced Internet connectivity (low and high bandwidth) for a larger community of users by the end of 2002.
- (viii) Communication with Internet PoPs should be regarded as local calls, to reduce the costs and make such services affordable to the populace.
- (ix) Reducing the rates and tariff for all Telecom services to a level reasonable and consistent with economic realities of the country and the global trends.
- (x) Reducing the bandwidth rates, both domestic and international, dramatically to encourage the rapid launch of new services and distance learning and also provide a competitive edge to local companies trying to break into established international markets.
- (xi) Restructuring the educational system at all levels with a view to developing relevant IT curricula for the primary, secondary and tertiary institutions in order to respond effectively to the challenges and imagined impact of the information age and in particular the allocation of IT development fund to education.
- (xii) Encouraging massive local and global IT skills acquisitions through training in the public and private sectors as well through joint venture and

alliances with a view to achieving a strategic medium-term milestone of at least 500,000 IT skilled personnel by the year 2003.

- (xiii) Bringing Government to the doorsteps of the people by creating virtual forum and facilities to strengthen accessibility to government information and facilitating interaction between the governed and Government leading of transparency, accountability and strengthening of democracy.
- (xiv) Making IT skill acquisition mandatory for all government employees and achieving computer literacy for all civil servants by the end of 2002.
- (xv) Networking all government organizations to share data, information and reporting on-line by the end of 2002.
- (xvi) Establishing full Internet connectivity and access for most government employees by the end of 2002.
- (xvii) Establishing Web Sites for improved government image and as information centres for the citizenry.
- (xviii) Establishing an Overseas Strategic Advisory Board of Nigerians in Diaspora in IT and related industries not only for advice but also for investment and participation in IT projects and activities in the country.
- (xix) Giving ISPs approval to develop high-speed gateways with no licensing fees.
- (xx) Encouraging the private sector to develop software for government and non/classified defence projects.
- (xxi) Enacting Bills and Acts to stimulate and protect the right of users and developers including intellectual property rights.
- (xxii) Establishing Government IT Procedure Act (GITPA) to enhance equipment standards, performance and security.
- (xxiii) Establishing a Data Protection Act (DPA) for safeguarding privacy of National computerized records and electronic documents.
- (xxiv) Establishing a National Information Technology Development Agency (NITDA) to implement, monitor, evaluate, regulate and verify IT activities on an on-going basis under the supervision and coordination of the Federal Ministry of Science and Technology.

- (xxv) Establishing a National Information Technology Development Fund (NITDEF) with a view to achieving the short to medium term objectives of the policy by earmarking, in the first instance, at least 2% of the Federal Capital Budget (with effect from 2002) for the implementation of the policy thrust to be administered by the National Information Technology Development Agency.
- (xxvi) Encouraging Internet telephony as well as Voice over Internet Protocol (VoIP), to reduce the cost of telephony and make such services affordable to the populace.



**NATIONAL POLICY
FOR
INFORMATION TECHNOLOGY (IT)**

APPENDICES

Appendix A: National Information Technology Development Agency (NITDA)

Purpose:

This Body is to be set up to:

- i. ensure the achievement of the articulated National IT vision;
- ii. foster and co-ordinate the accelerated development of IT in Nigeria;
- iii. promote the efficiency and international competitiveness of the IT industry in Nigeria;
- iv. facilitate universal access to IT at affordable prices;
- v. promote and maintain fair and efficient IT business practices;
- vi. advise government on national IT needs and policies;
- vii. act internationally as the national body of Nigeria with respect to IT matters;
- viii. further the advancement of IT through R&D;
- ix. exercise licensing and regulatory functions in respect of IT systems and services;
- x. encourage, facilitate and promote the greatest practicable use of IT industry self-regulation;
- xi. encourage investment, development and expansion of the IT industry in Nigeria;
- xii. promote broad based IT human resource development;
- xiii. support the application of IT in all economic sectors;
- xiv. provide IT consulting and advisory services;
- xv. popularise IT at all levels;
- xvi. cost-effectively provide pooled IT resources to government;
- xvii. act as repository of IT standards and register, classify and document all locally developed and imported software for the purpose of testing and benchmarking its claims;
- xviii. act as a secure government information clearing house, data repository, and central electronic archive facility;
- xix. develop and maintain an inventory of government's assets, projects, and resources particularly human and material investment;

- xx. manage the National Information Technology Development Fund (NITDEF).

Composition of NITDA Board of Directors:

The Board is to provide the policy guidelines for the NITDA, and the Board will meet quarterly. Membership of the Board shall be for a term not exceeding two years. Changes in membership shall be staggered such that at least 35% of the members are retained. Individual membership of the Board can be renewed at the discretion of the President.

- i. The suggested members of NITDA Board of Directors shall include;
1. The Chairman who will be appointed by the President on the recommendation of the Honourable Minister for Science and Technology.
 2. Representative of the Ministry of Communications - Member
 3. Representative of the Ministry of Information - Member
 4. Representative of the Ministry of Finance - Member
 5. Representative of the Ministry of Education - Member
 6. Representative of the Ministry of Science and Technology - Member
 7. Representative of the Presidency - Member
 8. Representative of Information Technology (Industries) Association of Nigeria (ITAN) - Member.
 9. Representative of Computer Association of Nigeria (COAN) - Member
 10. Chairman of Nigerian Internet Group (NIG) - Member
 11. Representative, Institute of Software Practitioners of Nigeria – Member
 12. Computer Professionals Registration Council of Nigeria (CPN)
 13. Two representatives from the tertiary educational system - Members

14. Three distinguished persons to be nominated by the President - Members
 15. A Managing Director to be appointed by the President on the recommendation of the Honourable Minister of Science and Technology
- ii. In the interim period, the Inter-Ministerial Committee on IT will midwife the NITDA until such a time as the law establishing the Agency is enacted, for the following reasons;
 - a. to give the major stakeholders a role in the development of the Agency;
 - b. to maximize the commitment of the major stakeholders to the development of the Agency;
 - c. to facilitate access to wider consultation and establish inter-agency interfaces for the coordinated development of the Agency;
 - d. to ensure the adherence to the vision of the IT Policy.

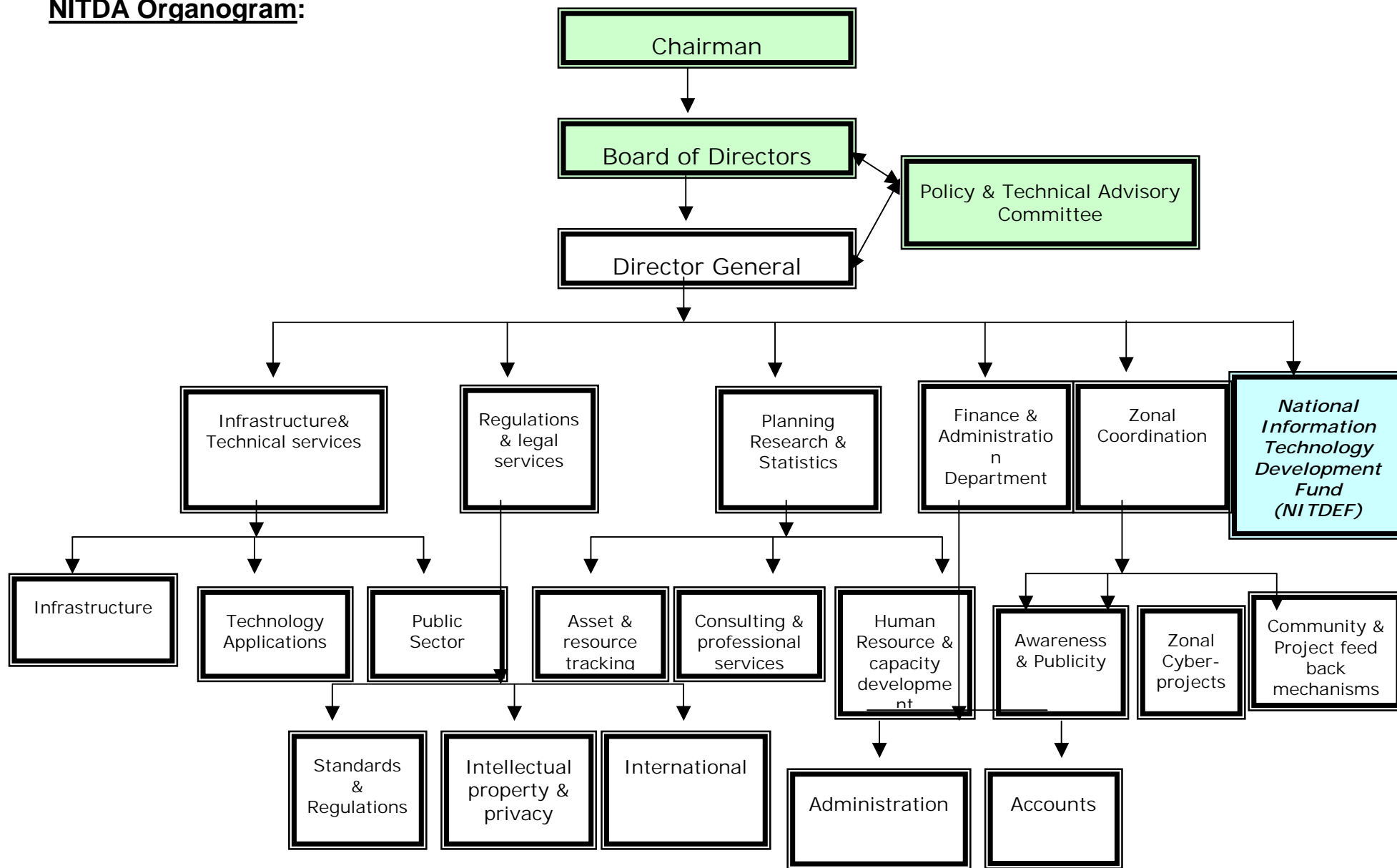
ICT Technical Assistance Group

There is a need to have an ICT Technical Assistance Group to give technical support to NITDA. This Group will be supervised by NITDA. Details of composition can be spelt out at the level of implementation.

Computer-Ready Smart Buildings

There is need to ensure that Government and other public buildings including facilities at the IT Parts are computer-ready smart buildings. This issue of ensuring smart buildings to meet this requirement. Details of this should be worked out at the level of implementation.

NITDA Organogram:



Appendix B: Details on the Legal Areas that Must be Addressed

Government through the Federal Ministry of Justice, after due deliberation with IT and sectoral experts, will frame appropriate legislation, using technology-neutral statutory definitions in the following areas, namely:

- (i) **Computer crimes**: -Reducing fraud and the cost of fraud through laws making the following federal offences with stiff penalties: “Internet 419”, fake advance fee loans, fraudulent pyramid and related investment schemes, deceitful advertising of products, sham internet access services, counterfeit computer equipment and software and deceptive work-at-home schemes, spurious magazines, phoney adult services, paedophilia and related scourges, and bogus travel and vacation schemes; while empowering the appropriate law enforcement agencies to investigate and prosecute as required;
- (ii) **Information technology law**: Criminalize the use of computers and related technologies for the commission of crimes or to facilitate criminal behaviour, wrongful access, and deceitful usage; and criminalize the targeting of computers and the data contained within them through unauthorised access, unlawful copying of information, damage or tampering with such information, and/or depriving the legitimate owner of data of the benefits of such data;
- (iii) **Amend generalist provisions in existing laws**: Expand the concept, definition and jurisdiction of existing statutes such that they have relevant application in the IT environment;
- (iv) **Personal privacy**: Enact laws that protect the accessibility, availability and usages of individual personal details by the public and private sector;
- (v) **Digital signature**: Recognition in law of digital identities, signature certification, and electronic authentication and verification mechanisms;

- (vi) **Tele-medicine**: Defining lines of responsibility, extent of liability, and the process of arbitration for the provision of professional health services provided electronically by practitioners in another country to beneficiaries in Nigeria or vice-versa. Adequate provision should be made for covering liabilities associated with directly accessed information and services such as medical information or advice;
- (vii) **Tele-education**: Enact rules supporting, co-ordinating and guiding educational and training certification mechanisms for private sector vocational IT establishments;
- (viii) **Intellectual Property/Copyright**: The existing copyright laws should be strengthened, targeted to the vagaries of the IT environment, brought in line with internationally accepted best practices and strictly enforced to protect intellectual property rights of local and foreign IT service providers so as to stimulate the growth of IT industry in Nigeria;
- (ix) **Consumer Protection**: Laws must be enacted to prevent the dumping of obsolete IT equipment and protection of our nascent IT efforts from price gauging, monopolistic or unfair business practices and other infringements of the rights of consumers;
- (x) **Media Convergence**: Review all existing laws on communications, broadcasting, publishing, information availability and dissemination, and information technology; and bring them in line with the new realities of the digital convergence of these sectors;
- (xi) **Electronic Government**: Broaden the declassification process and make available documents that provide insight into government thinking and planned actions, particularly the policy formulation process, contract tendering and procurement process, and government accounting in line with democratic principles of governance.
- (xii) **Electronic Commerce**: Put in place the legal ground rules to enable e-commerce to flourish, and review existing banking and commercial statutes and upgrade, repeal, or re-enact

them as required to bring them in line with current global commercial and internet realities.

Appendix C

Outline of Short-term to Medium-term Implementation Strategy

Establish the National IT Development Agency as a coordinating body immediately (within 2 months)



From 3 – 36 Months (on-going)

- I. Establish IT departments in selected tertiary institutions**
- II. Create IT and Science & Technology Parks**
- III. Initiate Phase 1 of computerisation and internet connectivity of the Federal Civil Service**
- IV. Begin Phase 1 of IT infrastructure backbone**
- V. Set up IT Task Force**
- VI. Implement import tariff reductions**
- VII. Start Phase 1 of Training Government Officials**
- VIII. Commence Phase 1 of developing IT Acts and Bills**
- IX. Institute training facilities for NYSC and NDE**
- X. Design and carry out initial introduction stage of software development for civil service automation**
- XI. Set up a model IT Development Centre in Abuja**
- XII. Launch community internet resource centres**
- XIII. Commence utilisation of mobile internet units**

Appendix D Budgetary Estimates

Short- and Medium-term Estimated Projected Capital Cost Implications of Proposed Projects and Activities.

Budget Items:

1. Establishing the National Information Technology Development Fund (NITDEF)
2. Establishing the National Information Technology Development Agency (NITDA)
3. Establishing Scalable IT and Science Parks Pilot Schemes in the Six Geopolitical Zones and FCT
4. IT Educational and Training Sector
 - 4a. Centres for IT Development in IT Parks
 - 4b. IT Facilities for Educational System
5. IT Grants to Tertiary Institutions for IT Departments and R&D Facilities
6. Mobile Internet Units (MIUs)
7. Rural Internet Resource Centres
8. State VSAT Terminals and Facilities (NIIB Infrastructure)

1. Establishing the National IT Development Fund (NITDEF): US\$ 150 m**2. Establishing the National IT Development Agency (NITDA)**

S/n	Description	Amount (US\$ million)
1	Purchase of sufficient office space with ample parking space	4.5
2	Office furniture and fittings (60% local manufacture)	1.2
3	Computerisation: WANS, software, LAN, PCs, servers, and HUBs with at least 35% local servicing	2.5
4	VSAT and communications	1.2
5	UPS/Back-up power	0.4
6	Operational vehicles	0.7
	Total:	10.5

3. Establishing Scalable IT and Science Park Pilot Schemes in the Six Geopolitical Zones and FCT.

State	Cost of 100 ha land (US\$) million	Cost of utilities (US\$ million)	VSAT and IT services (US\$ million)	Offices and Warehouses (US\$ million)	Total (US\$ million)
Sokoto	1.5	3.0	2.0	6.0	12.5
Yola	1.5	3.0	2.0	6.0	12.5
Jos	1.5	3.0	2.0	6.0	12.5
Lagos	4.0	3.0	4.0	9.0	20.0
Yenagoa	4.0	3.0	2.0	6.0	15.0
Enugu	1.5	3.0	2.0	6.0	12.5
Abuja	S&T Park	3.0	3.0	8.0	14.0
Total:					99.0

The IT and Science Parks will provide a highly supportive environment where new ideas can be nurtured and brought to the market quickly. Government-backed venture capital and government-endorsed business incubators are designed to attract talent and help entrepreneurs develop their ideas into commercially viable business by providing a range of financial, legal and technical services.

4. IT Educational and Training Sector

Government-backed training and education schemes onsite are designed to ensure increasing PC literacy and a viable skills pool for absorption onsite.

4a. Centres for IT Development in IT Parks

S/No	Centres for IT Development in IT Parks	Estimated Cost (in US\$ million)
1	Physical infrastructure	1.2
2	IT facilities	0.5
3	Utilities	0.5
4	Sub-total	2.3
	7 Centres located in each IT Park	16.0

4b. IT Facilities for the Educational System

The successful implementation of the IT vision depends to a large extent on human resource development, made up of education and training. Facilities have to be provided for IT for the various levels of the educational system to support the necessary restructuring to cater for the challenges of the information age. IT facilities shall therefore be provided at the primary (including the UBE programme), secondary and tertiary institutions as follows:

	Description	Number of Units
1	100 secondary schools each with 10 PC systems	1,000
2	25 universities and centres each with 100 PC systems	2,500
3	40 polytechnics each with 50 PC systems	2,000
4	20 technical colleges each with 10 PC systems	200
	Total number of units:	5,700
	Total cost of 5,700 PC systems (including UPSs) @ \$1,500 per PC system	85.5 million US\$

The selected tertiary institutions for skills development as well as research and development shall be provided with adequate funding to discharge their duties. In addition the Centres for IT development shall be established and mobilised financially. Research and Development funds will be provided and shall be disbursed on competitive basis.

Other Budget Items		Rate	Total Cost
5. IT Grants to specially selected tertiary institutions for setting up IT Departments and R&D Facilities	One in each of the six geo-political zones and FCT	Seven @ US\$1.55m	US\$10.85 m
6. Mobile Internet Units (MIUs) for IT training in rural training schemes	One in each of the six geopolitical zones and FCT	Seven @ US\$550,000	US\$3.85m
7. Rural Internet Resource Centres fitted with HF/VSAT Communications	Ten units each per geographical zone and in FCT	62 units @ US\$62,000 each	US\$21.7 m
8. State VSAT Terminals and Facilities.	In order to extend the National Information infrastructure (NII) to the States, one each in each of 30 states	US\$600,000 each	US\$18 m

Total Estimated Budget

Item	Project/Activity	Cost (US\$ million)
1	National Information Technology Development Fund (NITDEF)	150.00
2	National Information Technology Development Agency (NITDA)	10.50
3	Establishing Scalable IT and Science Parks Pilot Schemes in the Six Geo-political Zones and FCT	99.00
4a	Centres for IT Development in IT Parks	8.50
4b	IT Facilities for Educational System	16.10
5	IT Grants to Tertiary Institutions for IT Departments and R&D Facilities	10.85
6	Mobile Internet Units (MIUs)	3.85
7	Rural Internet Resource Centres	21.70
8	State VSAT Terminals and Facilities (NIIB)	18.00
	Total	332.40

Appendix E:

LIST OF PAPERS CONSULTED

1. Proceedings of the Workshop on National Information Communication Infrastructures, Policy, Plans and Strategies, Organized by Cooperative Information Network, under the Federal Ministry of Science and Technology, March 28-30, 2000
2. The National Information Technology (IT) Policy Document, submitted by the Computer association Of Nigeria (COAN)
3. Proposal for the Adoption and Implementation of National Information Technology Development Policy for Nigeria, submitted by the Computer Vendors Association of Nigeria (COVAN).
4. Report of The National Committee on the Acquisition of Computer and Electronics Technology (NACACET).
5. National Policy on Science and Technology (Second Edition in Draft).
6. Master Plan for the Development of a National ICT Programme “ICT Global 2000” Bridging the “Digital Divide” Achieving Global Connectivity by the Federal Ministry of Science and Technology, Abuja.
7. Report of the Sub-Committee on Information Technology Research and Development, FMST.
8. National Information Technology Policy: Report of the IT Awareness Sub-Committee to the National IT Policy Committee, December 2000, FMST.
9. Investment Opportunities in Electronics and Information Technology (<http://www.mit.gov.in/advantage>).
10. Info-Communications Development Authority of Singapore ACT. 1999 (No. 41 of 1999).
11. Ideas on National Information Technology (IT) Policy Thrust – Modified Monday 27/12/99, Submitted by A.H. Ajijola.
12. E-Information Technology Management Reform Act (or The Clinger/Cohen Act) tagged “The National Defence Authorization Act for Fiscal Year 1996”.
13. E-mail message from Mr. Yahaya Yusuf to Prof. G. O. Ajayi: U.K.: “Government Policy for the Information Age”.
14. E-mail message from Mr. Yahaya Yusuf to Prof. G.O. Ajayi: Singapore: “Multimedia: The Next Frontier in Convergence.
15. INFLANET: Strategic Utilization of Internet: Singapore’s IT 2000 and Library 2000 Plans”.
16. Risk E-Business: Seizing the Opportunity of Global E-Readiness- (August 200).
17. The Power of the Internet for Learning: Moving from Promise to Practice. “Report of the Web-based Education Commission to the President and Congress of the United States”.
18. Rules for Information Act 2000 by Government of India, Ministry of Information Technology.
19. INDIA: Ministry of Information Technology: Policy Organogram
20. INDIA: Ministry of Information Technology: Organizational Structure
21. AISI – Connect National ICT Profile NIGERIA
22. OAK Correspondence on National Information Technology Policy.

23. Part of Report of Sub-Committee on ICT Policy (FMST).
24. NICI applications to Sectoral Ministries (UN-ECA Addis Ababa, Ethiopia).
25. Framework and Strategy for the Establishment of high-performance Info-Communications Infrastructure and solutions (FBN Y2K Project, Supplementary Report – Feyita Company Ltd).
26. Framework for IT Revolution Report of Study Group on the Next Generation Internet Policy.
27. Framework for IT Research, Design & Development (IT RD & D), CoVAN.
28. Software Sub-Committee – Report Outline, (FMST).
29. Elements of a National Information Technology –IT Policies and Institutions (Singapore’s IT Plan).
30. National Telecommunications Policy (Federal Ministry of Communications).
31. E-Japan Initiative for the IT Revolution Report of Study Group on the Next Generation Internet Policy.
32. Policy Paradigm, Development, Manufacture and Export of Information Technology Hardware: Indian Experience.
33. U.S.A.: IT LEGISLATIONS OVERVIEW: Senate Bills and Acts on Electronic Commerce, Internet on-line Laws, Consumer Protection Government Paperwork, Congress Hearing.
34. Developing a National IT Policy & Strategy Blueprint for Nigeria- Implications for Policy Makers” Position Paper on the Role of Software By Institute of Software Practitioners of Nigeria (ISPON) November, 2000”.
35. Proceedings of ITAN National Conference/Exhibition on IT Development in the 21st century-Imperative for a National I. T. Policy.

ADF Theme Papers:

1. Information and Communication Technologies for Improved Governance in Africa;
2. Policies and Strategies for Accelerating Africa’s Information Infrastructure Development.
3. The Process of Developing National Information and Communications Infrastructure (NICI) in Africa.
4. Country Profiles.
5. Globalisation and the Information Economy: Challenges and Opportunities for Africa.
6. Introduction to Globalisation and the Information Age.
7. Africa on the Internet; An annotated guide to Africa web sites.

Appendix F:

Consultation with IT Experts

P. J. Daly – “Father of Ireland’s Celtic Tiger” High Tech Success.

Kelvin John Smythe – Ireland’s IT Policy

Yahaya Yusuf – Nigerian in Diaspora in the UK and expert in IT Policy

John Agbinya – Nigerian in Diaspora in Australia – Co-founder of Braouncfoun – Broungain Inc.

Wiebe Boer – Yale Doctoral Student (USAID/OTI)

In the USA, young, innovative and selfless Nigerians whose love for their fatherland culminated in the setting up of an IT Brain Trust providing information and submissions for the IT policy.

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