ICT POLICY IN KENYA AND WAYS OF IMPROVING THE EXISTING ICT POLICY

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1.0 Preamble

ICT is a convergence of microelectronics, computing (hardware and software) and telecommunications. Modern trends in micro-processors and semiconductors has enable the processing and storage of enormous amount of data while integration of fibre optics and fast Ethernet technology in networks has facilitated rapid distribution of information through communication networks.

Linking computing devices and allowing them to communicate with each other creates networked information systems based on a common protocol. This has radically altered access to information and the structure of communication —extending the networked reach to many parts of the world More simply ICT refer to technologies and tools that people use to share, distribute, gather information, and to communicate with one another, one on one, or in groups, through the use of computers and interconnected computer networks. They are mediums that utilize both telecommunication and computer technologies to transmit information – remember that hand held devices like mobile phones are part of ICT

CONVERGENCE OF COMPUTERS AND TELECOMMUNICATION

In contemporary application, international telephone calls are increasingly made through the internet's network of networks, and television and radio are broadcast via the internet. Today's Local Area Networks must be connected to the internet and secure copies of data (backups) are now made through the internet rather than onto a local drive. Software, music and video can be rented through the internet, sometimes without even requiring a copy on the local computer. The internet is accessible through mobile phone networks, which use it to present content to the user, and digital movies will be soon distributed through the internet to cinemas. The list is long and getting longer by the day

ICTs can be grouped into three categories:

i) • Information technology uses **computers**, which have become indispensable in modern societies to process data and save time and effort

ii) **Telecommunications technologies** include telephones (with fax) and the broadcasting of radio and television, often through satellites

iii) **Networking technologies**, of which the best known is the internet, but which has extended to mobile phone technology, Voice Over IP telephony (VOIP), satellite communications, and other forms of communication that are still in their infancy.

A dependable information system is essential for efficient management and operation of the public and private sectors. But there is a shortage of locally generated information needed for efficient performance of these sectors. In order to meet this objective, ICT use in every sector shall have to be accelerated in terms in terms of information generation, utilization and applications. But this can only be realised if there are procedures put in place to facilitate adoption of relevant ICTs in every sector of the economy. This therefore calls for need of formulation of ICT policies both in organizational level and national level.

In my presentation, I will look at National ICT policies and specifically do an evaluation of our national ICT policy.

2.0 INTRODUCTION TO ICT POLICY

2.1 A POLICY CAN BE DEFINED AS :

1. A guiding principle designed to influence decisions, actions, etc. Typically, a policy designates a required process or procedure within an organization.
2. It is a plan of action to guide decisions and actions. The term may apply to government, private sector organizations and groups, and individuals. The policy process includes the identification of different alternatives, such as programs or spending priorities, and choosing among them on the basis of the impact they will have. Policies in short can be understood as political, management, financial, and administrative mechanisms arranged to reach explicit goals
3. The written statement of a contract effecting insurance, or certificates thereof, by whatever name called, and including all clauses, riders, endorsements, and papers attached thereto and made a part thereof.
4. AND from THE Webster Online Dictionary, it first looks at origin of the word policy: " *Etymology: Middle English **policie** government, policy, from Middle French, government, regulation, from Late Latin **politia***

1 a : *prudence or wisdom in the management of affairs* ***b :*** *management or procedure based primarily on material interest*

2 a : *a definite course or method of action selected from among alternatives and in light of given conditions to guide and determine present and future decisions* ***b :*** *a high-level overall plan embracing the general goals and acceptable procedures* especially of a governmental body

I must say this is a very elaborate definition that I would like us to adopt especially in line with a National policy like the ICT policy as this touches on governance In the light of these considerations we can provisionally define a policy as a set of decisions which are oriented towards a long-term purpose or to a particular problem. Such decisions by governments are often embodied in legislation and usually apply to a country as a whole rather than to one part of it. We should also understand that a policy is meant to provide proactive decision-making NOT reactive decision-making!

2.1.1 BENEFITS OF POLICIES

i) Help save time
ii) Help prevent managerial mistakes
iii) Improve consistency of decision making
iv) Focus decisions towards our business goals

2.1.2 QUALITIES OF A GOOD POLICY

i) Support and be consistent with organizational strategies, objectives
ii) Practical and directly relevant to the business
iii) Be reviewed frequently and amended as needed
iv) Limit discretion of managers/employees
v) Precise, easy to understand and apply
vi) Be in writing
vii) Be applied and enforced
viii) Cascaded and interpreted to the lowest level
ix) Effective in meeting security requirements
x) Must involve all key personnel

2.2 AN ICT POLICY IS:

The Web Dictionary defines and ICT policy as:

> *"The rules and regulations set by the organization. Policy determines the type of internal and external information resources employees can access, the kinds of programs they may install on their own computers as well as their authority for reserving network resources. Policy is also related to network quality of service (QoS), because it can define priorities by user, workgroup or application with regard to reserving network bandwidth"*

2.3 NATIONAL ICT POLICIES

A national ICT policy sets out the nation's aims, principles and strategies for the delivery of Information and Communications Technology

If technology and industry are coming together around the internet, governments that decide policy and regulate industry must recognise this fact and adapt their policy-making accordingly.

For example

i) There is no point in regulating traditional broadcasting in the usual way if it is being replaced by internet broadcasting which follows a different set of rules.

ii) The notion of intellectual property and copyright changes when all information is digital and can be freely copied and transported. For example, legislation about recorded music must take this into account.

iii) Other questions arise: How should workers' rights to privacy in the workplace be regarded in the context of email and the World Wide Web?

iv) What will it mean to regulate telephone call costs when the ability to call via the internet at a much reduced rate becomes generalised?

2.4 OBJECTIVES OF AN ICT POLICY

The UN Economic and Social Commission for Asia and the Pacific further goes on to list the following as common objectives of ICT policies aspirations to meet:

i) Increasing the benefits from information technology

ii) Helping people and organizations to adapt to new circumstances and providing tools and models to respond rationally to challenges posed by ICT

iii) Providing information and communication facilities, services and management at a reasonable or reduced cost

iv) Improving the quality of services and products

v) Encouraging innovations in technology development, use of technology and general work flows

vi) Promoting information sharing, transparency and accountability and reducing bureaucracy within and between organizations, and towards the public at large

vii) Identifying priority areas for ICT development (areas that will have the greatest positive impact on programms, services and customers)

viii) Providing citizens with a chance to access information; they may further specify the quality of that access in terms of media, retrieval performance, and so on

ix) Attaining a specified minimum level of information technology resources for educational institutions and government agencies

x) Supporting the concept of lifelong learning

xi) Providing individuals and organizations with a minimum level of ICT knowledge, and the ability to keep it up to date

xii) Helping to understand information technology, its development and its cross-disciplinary impact

2.5 NATIONAL ICT POLICY FORMULATION

2.5.1 ROLE OF GOVERNMENT IN ICT POLICY FORMULATION

National governments should be model agents and consumers This can be realised by:

i) Promote ICT -The Government must be one of the most important ICT promoters and consumers, through e-government, education, Science & Technology Systems~ public health, social plans, and economic plans.

ii) Support Internet uses and applications in all governmental levels.

iii) Campaigns - Implement information and training campaigns about Internet's benefits and potentials

iv) Create National Agencies specialised on Information Society, integrating members of the public and private sector, the civil society, and the academia.

v) Create a "Regional Agency" specialised in Information Society matters, in order to coordinate and make compatible the policies and initiatives implemented by governments.

vi) Implement Collaboration between private, public and civil society, with a clear agenda and an informed strategy to build on and draw from local knowledge, experiences, and priorities.

vii) Providing a legal framework to make the policy acceptable

2.5.2 THE STAKE-HOLDERS IN NATIONAL ICT POLICY FORMAULATION

Although policies are formally put in place by governments, different stakeholders and in particular the private sector make inputs into the policy process and affect its out-comes. The government therefore provides an environment – this is providing resources eg time, money and logistics to start the process of a ICT policy development.

In its chapter on An information-based economy , the Tanzanian ICT policy notes that

> *Unfolding an information-based economy will therefore require the participation, contribution and partnership of a broad range of stakeholders including Government departments, regulatory authorities, broadcasters, telecom operators, private network operators, service providers, content providers, software developers, vendors, education providers and end-users. In this context, many cross-sectoral issues will also need to be addressed, notably to rapidly equip a whole generation of knowledge-workers with new skills that empower them to be productive in the changing ICT infrastructure. Clearly, this is not a challenge for the public sector alone, because it is evident that the private and non-profit sectors will also have a significant stake and can also make very distinct contributions to progress. And, at the same time, there are regional and global implications that need to be considered, because national infrastructures can no longer afford to grow in isolation from the surrounding world, especially when for a country that has as many neighbours as Tanzania*

This paragraph rightly captures the need to integrate other players in thinking of e-government. This therefore means stakeholders must be involved in ICT policy formulation

Who are the "stakeholders"?. According to The World Summit on the Information Society (sometimes referred to as "the Summit") which is a United Nations conference, led by the International Telecommunications Union, " Stakeholders refer to the three main actors within the WSIS process: governments, the private sector and civil society. In addition, there are many UN agencies and intergovernmental bodies participating in the process.

The government must include stakeholders in formulating ICT policies

Stakeholders may include among others:

i. Universities;
ii. Schools;
iii. NGO's
iv. Financial Institutions

v. ICT bodies eg Kenya ICT Federation
vi. Financing Institutions like banks
vii. Telecommunication Industry players eg Safaricom, Celtel , Telcom etc
viii. Sponsors eg IDRC (International development Research Centre from CANADA that sponsored the national ICT initiative in Kenya)
ix. International Telecommunication regulators eg International Telecommunications Union (ITU)

The National ICT Policy and Plan Development Committee of Ghana in its second phase of coming up with the national ICT policy identified the following stakeholders and approaches of their integration in their national ICT development process:

- meetings with each Cabinet Minister on a one to one basis
- meetings with key stakeholders in the public sector including organizations like: Bank of Ghana, Atomic Energy Commission, Media Commission, National Communications Authority, National Investment Promotion Center, CSIR, Private Enterprise Foundation, Ghana Academy of Arts and Science, State Enterprise Commission, Ghana Police Service, Ghana Immigration service among many others like the TUC, the Ghana Chamber of Commerce and Industry, Employers Associations etc
- series of meetings with key stakeholders in the Private Sector and the ICT industry
- public fora at all the nation's universities and other institutions of higher education
- meetings with key Civil Society Stakeholders and the Media
- meetings with a specific Parliamentary Select Committees
- consultative and technical briefing meetings with technical teams/parliamentary caucus of major Political Parties
- consultative meetings with key economic research institutions, including: ISSER, CEPA, IEA
- briefing sessions with the UN Systems and Development Partners
- series of dialog sessions with the National Development Planning Commission (NDPC)
- Also planned is a group meeting with all the Chief Directors of the Government Ministries and Public Sector Organisations where the following were expected to attend:
    - Cabinet Ministers, Members of the Council of State, Parliamentarians, key leaders from the Private Sector, Academia, and Labour Union and Members of the UN and Donor Community and the Media."

When all these stakeholders are consulted, then this is an all inclusive venture and ensures that the policy development process and final product is acceptable – all Kenyans I believe are now familiar with Wanjiku. The stakeholders are the Wanjiku's

2.5.2.1 EFFECTS OF A NATIONAL ICT POLICY TO CITIZENS

National ICT policies are like any other government policies in a country. They affect the lives of the citizens. We can therefore mention that, the lack of a coherent policy is likely to contribute to the development (or prolonged existence) of ineffective infrastructure and a waste of resources. ICTs are so central to contemporary society that they affect us continually in many ways. APS for example notes the following:

i) If a government decides to promote free software, we are more likely to enjoy the benefits of free software (better security, lower cost, easy adaptation to local conditions and needs, etc)

ii) If a government decides to introduce a new form of censorship on the internet, or fails to protect citizens' rights to privacy, then we will suffer too.

iii) If the telephone companies keep prices artificially high for broadband, or refuse to introduce a cheap flat rate for modem access, then we may have to pay too much to access the internet, the same as everyone else.

iv) If telecommunications companies are not encouraged or obliged by regulation to roll out services in rural areas, people there will have to rely on more expensive mobile phone services.

v) If governments do not make it legal for wireless internet services to operate, development and community workers in 'unconnected' parts of the world will not be able to benefit from the power of online communication and information access. The internet makes it possible for local voices to be heard throughout the world but, if policy and regulation limit their access, they will also limit their reach.

These self-interested reasons are not the main ones. Other reasons have to do with the nature of global society. If we want to promote social justice, then ICT policy will be a key factor in this battle, and we cannot afford to remain outside the ICT policy-making process.

2.6 BENEFITS OF HAVING A NATIONAL ICT POLICY

The UN Economic and Social Commission for Asia and the Pacific notes that most national ICT policies address the equitable:

(a) Development of ICT infrastructure

i) Infrastructure development
ii) Interoperation of information systems
iii) Enhancement of public services
iv) Cost savings in service delivery, purchasing, communication, etc.
v) Electronic commerce and secure transactions
Development of technological standards

(b) Development of skills - Capacity Building

i) Research and development
ii) ICT education and training

(c) Development of legislation and policies to correspond to the requirements of new ICT

i) Diffusion of information technology
ii) Development of ICT industries
iii) Trade policies for ICT-related goods and services
iv) Pricing and taxation of electronic services
v) Protection of intellectual property
vi) Privacy of personal data
vii) Protection of cultural and linguistic diversity
viii) Protection against illegal and harmful content
ix) Adoption of standards

(d) Institutional development and coordination

i) Institutional and regulatory structures
ii) National ICT development coordination
International interface and cooperation

(e) Access to ICT

i) Access to infrastructure

ii) Access to information

(f) Monitoring ICT

i) Monitoring the use of ICT

ii) Measurement of the impact of ICT

The UN body goes on to note that ,

> "ICT policies of necessity have also to take into account other policy areas, such as education policies, information policies, trade and investment policies, and cultural and linguistic policies. However, the mere establishment of a written national ICT policy has value in itself. At a minimum, it conveys the message that the government is forward-looking and intends to pursue the utilization of ICT in society. Governments should, of course, aspire to more by putting the policy content into actual practice and becoming a role model in applying ICT in their own administration and services." UN Economic and Social Commission for Asia and the Pacific.

The objectives and content of ICT policies have similarities and differences in international, national, local and organizational contexts. A comparison of some basic features and linkages between various ICT policy levels is given in table 1 below.

Table 1: Links between organizational, national and international policies

Feature	*Organizational policies*	*National-level policies*	*International policies*
Creator	Chief executives and chief information officers.	Government, government agencies, government agency coordinating national and/or government-wide ICT development.	Intergovernmental bodies organizations, international business alliances, large hardware and software manufacturers, multinational

			corporations.
Method of creation	Various methods in use, some leading to explicit articulated policies, others to ad hoc sets of instructions or to related insertions in sectoral policies.	Typically initiated by governments, triggered by models of other countries. A drafting agency is selected and a draft is circulated for comments among the rest of the government agencies.	Working groups, international meetings, research and development by large hardware and software manufacturers, standards development by international organizations.
Compre-hensiveness	Highly variable, from non-existent to very comprehensive.	Some developed countries are starting to have comprehensive national ICT policies, including national information infrastructure policies and government-wide policies. However, many developing countries have no articulated national ICT policies.	Concentrate on policies that are required in international transactions. Do not effectively address several areas, including impact on social development, access to information and effectiveness of technology transfer.

Main objectives	To support organizational business goals by improving operational efficiency and exchange of information. To maintain and improve competitiveness.	To provide all citizens with equitable access to information and information technologies. To ensure that ICT is part of national education programmes. To improve efficiency and transparency of civil service. To address national ICT issues, such as those arising from national languages.	To ensure that all countries can benefit from information and communication technologies. To develop and promote international technology standards.
Main problems in creating such policies	Resistance to change, especially when technology threatens conventional structures. Difficulty in deciding who is responsible for policy development.	Difficulty in making them pragmatic and meaningful. Setting of the balance between national policy and sectoral policies in which ICT plays a role.	Enormous variation in country conditions.
Links to global policies	Indirect link. Mainly through adoption of international ICT standards and observance of trading agreements.	Direct observance of international agreements and standards as applicable to country commitments. Global policies and standards provide material for	

		setting components of national policies.	
Links to national policies	Enterprises may be restricted by national laws and regulations, or may benefit from national development incentives, education programmes, and so on.	Models and experiences of other countries are useful in creating national policies.	International standards are promoted at national level. National policies may address international issues and identify participating agencies in international cooperation.
Links to enterprise policies	Models and experiences of others, especially business associates, are useful in the creation of policies.	Adoption of national standards at enterprise level.	Adoption of international standards at enterprise level.
Main deficiencies in current policies	Inadequate enterprise level adjustments necessitated by ICT development.	Lack of systematic approaches to ICT development in developing countries. Lack of understanding of the impact of ICT on society.	Lack of international mechanisms that could effectively help in the diffusion of ICT in developing countries. Lack of international laws and mechanisms to control undesirable aspects of ICT use.
Role of intergovernmental organizations in improvement	Mostly indirect, through effects on national and global-level policies. Direct advisory role in respect of counterpart	Being independent from ICT vendors, an advisory role in ICT development in central government, in various government sectors and	A central role in international standard setting, in coordinating rules and regulations.

	government agency policies.	agencies. International support for good governance usually includes ICT components.	

2.7 OUR NATIONAL ICT POLICY

The ICT policy process has for a long time lacked political leadership, which has been reflected in the absence of a national ICT strategy and ineffective coordination between different government departments and agencies with ICT responsibilities. This for a long while also included the absence of ICT policy process open to participation by all stakeholders and based on public discussion and debate uuntil recently.

A number of civil society Organisations (CSOs) and private sector and media groups, in Kenya, had been actively contributing to the development of an ICT regulatory framework, even prior to the WSIS global process. Initial key concerns were fundamental issues of access and removal of monopoly in telecommunications service provision as well as integration of telecommunications into national economic development programming. As Mike Eldon notices, the following groups came in to fill the gap due to lack of ICT policy in Kenya: CSK, TESPOK, ITSA, KIS, ISACA, CCOAK, KISE, E-Commerce Association, NSE, KEPSA, ICT Board/KIF, Civil society, Research and academic institutions, Development partners

The first national ICT policy was released in late 2003 , just prior to World Summit on the Information Society (WSIS) in Geneva. The copy was however not officially available and was more of a document just to give Kenya a face during the world summit. It is right to note that the WSIS involved the national ICT development process.

In November 2004, Kenya ICT Policy project (KIP) of the Canadian Interantional Development and Research Centre (IDRC) organised a visioning in collaboration with KICTANET network members and the government. The workshop aimed at visioning the kind of ICT enabled country Kenyans desire as a backdrop for preparing sectoral roadmaps, which would serve as the entry point for implementation planning, considered the next logical step after a policy is drawn up. During the visioning exercise participants from civil society, private, media and government attempted to approach some consensus on the country they envision, enabled by ICTs. The timing of this exercise was particularly significant because national plans and planning for the sector were

weak, unclear and broadly un-negotiated. The Minister of Information and Communications had observed in that the draft policy document which has been circulating in government did not have a strong vision and promised that "the government would fast track the development of an enabling National ICT Policy through a multi-stakeholder consultative process" during this workshop. The outcomes of the workshop were a National vision document.

2.7.1 ICT CONVENTION KENYA MARCH 2005

On March 8th and 9th, the Kenya ICT Action multi-stakeholder network organised a national ICT convention, which focussed on evaluating progress of Kenya's national ICT policy process. Participants included representatives from civil society, the media, academia, and the private sector as well as development partners. The heavy presence of diverse interest groups underscored the participatory multi stakeholder nature of the national ICT policy process. This was the Second National ICT Convention. The first was held in March 2004.

The 2005 convention emphasised a consensus building approach that values all sectors' contribution by bringing together a multiplicity of stakeholders from civil society, the private sector the media and government who had been working closely for a number of years to support the government's efforts in developing and finalising Kenya's ICT policy. The aim of the convention was the beginning of a detailed process of analysis, critique and public input into Kenya's ICT Draft Policy with an eye to finalising the policy and pursuing future legislative action for implementation. Further, the Convention launched sector specific working groups, which commented on specific segments of the Draft ICT Policy through the online mailing list discussion forums launched after the convention.

The first day of the Convention was held against the backdrop of a recent disbanding of the board of the Communications Commission of Kenya (CCK) and the suspension of its Director General. Numerous participants from all sectors joined private sector bodies, most notably TESPOK in expressing concern over the ministers actions, which threatened to throw the ICT Sector into disarray and weaken the credibility of the CCK as an independent regulatory institution.

Other Highlights of the convention were:

- The official launch of KICTANet and the pledge by many organisations to join this network to make real impact.

- The real and collective beginnings of the process of gathering comments for the ICT Policy improvement, which included a gender analysis of the ICT Policy and a media and ICT policy Workshop, held on the second day of the convention.

The Kenya National ICT Convention gave an opportunity to move an ICT agenda. Here, there was the coming together of the private sector reps, civil society, academia and development partners. The sessions addressed the following:

i) Sector polices and ICT;

ii) National ICT policy
   - The strategy and e-commerce
   - The strategy and human resource

iii) National ICT infrastructure;

iv) ICT projects: Investment opportunities

v) ICT professional bodies

Many other sessions were held which culminated in coming up with a national ICT policy.

The National ICT policy noted the stakeholders' roles as below:

i) **Government:** Enabling policies, conducive to private sector investment

ii) **Development partners:** Build capacity, in collaboration with GoK

iii) **Civil society:** Inform policy making (access, learning, poverty, governance)

iv) **Consumers:** Participate in development, application, setting standards; ensuring consumer protection

v) **Regulator:** Issue licenses, Tariffs, interconnections, Standards, Frequency management; numbering;. ke domain

vi) **Investors, operators, service providers:** Develop an efficient ICT sector, Commercial integrity , Strong corporate governance, High quality standards, Participate in provision of universal access

Here, Mike notes that the government plays the role of policy maker and operators to operate!

2.7.2 COMPOSITION OF PROPOSED PRESIDENTIAL COMMSION

- 11 Permanent Secretaries
- CEOs of major ICT companies
- NGO representatives
- Other relevant individuals

Here, we see that bodies like TESPOK are no where!

2.7.3 EVALUATING OUR NATIONAL ICT POLICY

In evaluating the National ICT policy, I intend to use the "benefits of a national ICT policy " above as stipulated by UN. I will then refer to Bangladesh, Tanzania, Ghanaian and Canadian national ICT policies

In evaluating the national ICT policy, I will use the objectives as stipulated by the UN Economic and Social Commission for Asia and the Pacific guidelines on content of ICT policy and also other National ICT policies - these are Bangladesh, Canada, Ghana and Tanzania

(a) *Development of ICT infrastructure : Infrastructure development, Interoperation of information systems, Enhancement of public services, Cost savings in service delivery, purchasing, communication, Electronic commerce and secure transactions, Development of technological standards*

The national ICT policy recognizes that the current ICT infrastructure is poor and in need of improvement. The policy goes on to mention need for provision of infrusturure eg energy and roads, support software development, promotion of local manufacturing among others. A good point to note here is the policy recognition of power of open source software .

BUT

Here, the policy is just generic. For example, how will it promote local software development? The Ghanaian Policy proposes no duty on computer hardware. The Bangladesh one is even more explicit on how to go about. Here, it states that " foreign owned and multinationals who will establish such production facilities in Bangladesh and employ our workforce, shall be offered special incentives" This, as the policy notes, will be part of technology transfer.

On power, the Bangladesh policy states " Solar power will be encouraged specially in those inaccessible areas where use of ICT is constrained due to lack of electricity. On software, the Bangladesh ICT policy " This is a source of energy Kenya can also aim to harness

On Software, again the Banglash policy is very explicit. It proposes among others, giving preference to locally developed software during any public and private sector procurement, setting up incubators for software development, and also proposes setting up of "The Export Promotion Bureau (EPB) and Commercial wing of Bangladesh Missions abroad"

(b) Development of skills - Capacity Building: Research and development, ICT education and training

This is part of development of skilled IT workforce. The policy talks of government support of integration of IT training in schools, establishment of education networks, establishing ICT centres, enhancing capacity for R&D. The policy therefore appreciate the need for competence in ICT.

Again, to me these are just generic statement. The what lacks here is the how-to. I want to revisit the Bangladesh policy. It is very clear on how these will be done . It introduces the chapter on human resource as follows:

"Widespread introduction of ICT education in public and private educational institutions is a prerequisite for producing skilled ICT manpower. Facilities shall be built to promote ICT training and computer aided training at all levels of education including Primary Schools and Madrasahs. Donor agencies, non-government organizations and other development partners of the country shall be encouraged to help build the necessary capacity in this area"

It continues to specify need for course in IT in all universities and colleges, establishment of multimedia institutions upto district level, introducing Training-of-Trainers (TOT) to address the bottleneck of limited ICT trainers. In fact, part 3.1.7 states

"… As it would be difficult to train teachers in ICT in large number using the present infrastructure, deploy virtual ICT trainers wherever possible. CD and web based courseware development and use shall be encouraged to promote computer-aided education at all level of education."

The policy also recognizes change in IT field and therefore recommends the revision of computer science subject to deal with contemporary issues in IT.

On R & D, the Bangladesh policy notes very explicitly, "

> *3.3.1 Research and development in ICT will focus on need-based fundamental and applied research contributing to the improvement of quality and efficiency of the application to our ICT industry.*

3.3.2 Bangladesh Computer Council will encourage ICT R&D activities carried out by the public and private sector organizations.

3.3.3 BCC along with ICT industries will assist in formulating plans to conduct need-based R&D activities in the Universities, BITs and public & private sector R&D institutions and encourage the younger generation in these activities. The ICT industry may fund for R&D activities for new ICT products and services through Industry Academia collaboration

3.3.6 Technology Corporations such as Microsoft, IBM, Computer Associated, Oracle, SAP etc. will be approached to set up their R&D Centers in Bangladesh.

(c) Development of legislation and policies to correspond to the requirements of new ICT : Diffusion of information technology, Development of ICT industries, Trade policies for ICT-related goods and services, Pricing and taxation of electronic services, Protection of intellectual property, Privacy of personal data, Protection of cultural and linguistic diversity, Protection against illegal and harmful content, Adoption of standards

The National ICT policy digresses on this area and starts talking of promotion of local content. Though the issue of legislation is mentioned in e-commerce. The policy talks of enacting of legislation to support e-commerce. It goes ahead to address need for promotion of e-learning in institutions. It is very clear on protection of cultural and linguistic diversity under 3.3.6 (Local Content).

BUT,

The policy is silent on the security challenge, the pricing issue, the intellectual property issue, protection of harmful content among others. To me it seems the draft were not aware of the security and copyright and ethical challenge posed by ICT. In fact, am not surprised the drafters were not doing some CUT-N-PASTE work. Enacting of a legal framework to ensure the entrenchment of the policy is not mentioned.

The Bangladesh policy is very clear on legal issues. Some extracts from 3.7 are :

3.7.1 Software copyright provisions embodied in the Copyright Act 2000 ….

3.7.2 ICT Act should be enacted immediately to protect against computer crimes such as computer fraud, hacking, piracy, damage to programs and data and introducing/spreading computer viruses.

3.7.3 Data security and compatibility should be ensured through actions such as setting of encryption standards and international agreements on compatibility.

3.7.4 With the increase in the use of Internet and Information Technology in every sphere of human activities, formulation of new laws or amendment to the existing ones should be done as deemed necessary, to ensure security of data freedom of information.

3.7.5 ICT will be used by the law enforcing agencies to ensure safety and security of life and property of the citizen.

3.7.6 Agencies like Police, NBR and BAC shall use ICT for quick disposal and monitoring of investigation of cases.

3.7.7 Bangladesh Armed forces should use ICT to the fullest extent to increase their efficiency and effectiveness.

(d) Institutional development and coordination :Institutional and regulatory structures , National ICT development coordination, International interface and cooperation

On institutions, the policy still quotes the CCK and KEBS as the regulatory bodies. It talks of strengthening the mandates of the two bodies to " .. ensure quality and compatibility of IT products and services"

This again I find it very generic. For example, since the policy is quiet after that, what are these modes of strengthening that will be done?

The policy seems to ignore the importance of other standard bodies and professional groups that assist here. Where for example does TESPOK fall?

The Bangladesh policy states "***3.4.1.5 Joint ventures between local and foreign entrepreneurs in the ICT sector will be vigorously promoted."***

(e) Access to ICT : Access to infrastructure, Access to information

Access to ICT is addresses under the chapter Telecommunication. This chapter thus introduces " The Government recognizes that the provision of modern telecommunications infrustrure and information networks is key to rapid economic and social development of the country…" The need for modern and efficient telecoms systems is noted here. In this chapter also, the need for R & D in this area is mentioned. Good points to note here is nooed for government to :

i) establish technology- neutral licensing framework

ii) Restructure Telcom Kenya

iii) Promote public-private partnership

iv) Improve fixed line tele-density

v) Provide all primary schools with affordable internet access by 2015 and all secondary schools by 2010 and

vi) Liberalization of telecommunication

The Bangladesh policy has more potential for ICT access by including a clause on cyber café's" To ensure public access to information, Cyber Kiosks will be set up in all Post offices, Union complex and Upzila complex. Private sector participation will be encouraged to set up these facilities."

(f) Monitoring ICT : Monitoring the use of ICT, Measurement of the impact of ICT

The issue of monitoring again is left to CCK and KEBS.

But , the role of other stakeholders is ignored. The government looks like its everything! I would have expected some stakeholders like Kenya ICT Action Network – KICTANet which incorporates APC CATIA project in Kenya, TESPOK, the International development and Research Centre (IDRC), the Kenya ICT Federation (KIF), and the Kenya WSIS Civil Society Caucus to feature somewhere.

Note what the Bangladesh policy states, "3.4.3.2 NGOs interested to contribute for the expansion of ICT sector will be provided with facilities." It continues to state ". Donor agencies, non-government organizations and other development partners of the country shall be encouraged to help build the necessary capacity in this area"

2.7.4 WHAT CAN BE DONE TO ENHANCE THE NATIONAL ICT POLICY

i. HAVE VISION AND STRATEGY. The Kenya national ICT policy is very generic. It eliminates strategy from the vision where the **Policy looks at** Vision, principles and

guidelines, the **Strategy should look at** Implementation plan , who's got to do what by when, benefits and cost

ii. IMPLEMENTATION AND MONITORING: The implementation part of it is ignored. There is not action plan mentioned

Though the policy was launched the other day and uploaded in the Ministry of Information and Comm website, not mention of its implementation, funding, and maintenance is done. This therefore means our ICT doc is just another of the many papers. Question is, did the drafters realise why they were carrying out the task? Remember even our draft constitution had this chapter – even though contentious.

iii. INSTITUTIONAL ARRANGEMENT FOR ICT POLICY UPDATING, STANDARDIZING, IMPLEMENTING AND MONITORING: This is again is ignored in our ICT policy. The Bangladesh policy is very clear on this. It goes on to recognise role of Universities, and private sector in ensuring a realistic policy. It states "*In order to make best utilization of ICT and exploit its immense potential in the economic, social, commercial, and scientific fields a National ICT Task Force headed by the Hon'ble Prime Minister has already been formed. This apex national body will guide in updating, standardizing, implementing, and monitoring the ICT policy.*

4.2.2 The Ministry of Science and Information & Communication Technology will collaborate with all Ministries/Divisions/Departments/Autonomous Bodies including Banks and Insurances to promote and use ICT in respective areas of operation"

iv. VIEW ICT AS AN ENADBLER: Recognition of ICT as an enabler but not an independent discipline. ICT can be a powerful tool for development, both because of ICT's inherent characteristics and the mounting empirical evidence that suggests it can in fact contribute a great deal to development goals. It can do so at both the micro and national level by increasing the effectiveness and reach of development interventions, enhancing good governance and lowering the costs of service delivery. Moreover, the right complement of targeted ICT interventions has the potential to play an even more substantial role in accelerating a sustainable dynamic of social and economic development in developing countries. This means therefore that ICT can not be looked in isolation without looking at other sectors of the economy. Our ICT policy fully ignores this aspect. The Bangladesh policy goes to an extent to talk of ICT integration in all sectors of economy :

- Healthcare;

- Investigating cases, national security and defense
- Social welfare;
- Transportation;
- Tourism ;
- Environment, eg using information systems to collect information on existing flora and fauna;
- Agricultural eg use of GIS fro agricultural crop estimation;
- Judiciary; here an MIS will have a case management module, a legal framework module and a court admin module.
- Regional and Internal corporation
- Implementation and monitoring;
- The police and army are not left behind (I have mentioned this before

3.0 CONCLUSION

ICT policies may encourage or discourage the application of ICTs. If ICTs are to be part of a sustainable activity there will need to be a suitable policy environment. In opening the Ministerial Conference for West Africa on the Integration of Information and Communication Technologies (ICTs) held in 2004 in Abuja , Nigeria's Education Minister Professor Osuji. That the consequences of poor implementation of ICT policy would see Africans become relegated to consumer status of technology instead of innovators and producers, poor ICT policy will also make Africa loose advantage of its diverse cultural heritage that should form technological development. He continued to note that "… poor ICT policy will mean that the trend of imported technology solution will continue to pervade the continents' market and put a barrier to developing innovations for African solutions", this in essence, the minister noted will mean that the confidence of African people will be eroded. He says this of Africa "Africa is becoming dump for high-tech products"

He therefore called for a strong and properly implemented ICT policy.

I want to use the ministers words to conclude my presentation and by saying, our national ICT policy should aim to :

i) Support ICT innovation in Kenya by providing incentives for locally produced software and hardware

ii) Provide quality ICT infrastructure

iii) The government should "Walk the talk!" by coming up with workable implementation plans

Thank you and I welcome questions

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