



Info-communication for Development in Africa

The African Connection Initiative¹

*Africa needs to
'cheetah-pole-vault'
not 'leap-frog'*
—OLEKAMBAINEI

ICT in Africa—The Setting and the Challenge

The Setting

The development impact of ICT has two distinctive aspects. The first consists of the benefits of enhancement of the infrastructure and applications to users of information and communication services, who can be distinguished according to whether they use these services as an everyday tool for production, distribution or consumption, and for

their day-to-day activities. The second consists of the benefits derived by the economy from changes in the production, supply and operation of communications infrastructure, facilities, equipment, services and applications.

Improvements in info-communications,² and ICT in particular, lower the cost of information and knowledge exchange, the cost of dealing with others in the market (such as suppliers and customers), and the cost of business start-ups and of delivering social economic services, including governmental services. Through these processes, transaction costs in society drop, which improve overall efficiency and growth. Complementing this, the ability to transmit data, graphics, picture, and more, on communications networks contributes to increases in the quantity and quality of information available to service and productive enterprises, which opens up new opportunities and enables more thorough evaluation of the risks and returns associated with these opportunities. In many instances, the additional information that becomes accessible will contribute to the spatial expansion of markets, assisting producers to move from local into regional or national markets, and from domestic into international markets. Access (or the lack of it) to cheap and sufficient information is an important determinant of the competitive advantage of firms, sectors and countries. Furthermore, the efficient and easy access by citizens to up-to-date information on their local and central governments, NGOs and other civil society institutions, and corporate enterprises, improves interaction, mutual trust, confidence and participation. These, in turn, enhance empowerment, unity, democracy, peace and stability.

Evidence suggests that countries that have invested in info-communication infrastructure and applications have attracted high levels of foreign direct investment (FDI) as well as increased and efficient private and public domestic investments into other sectors. The value of the infrastructure is in the linkage effects to other sectors, more than in the infrastructure and applications *per se*.

Economic benefits also arise from changes in the supply of communications network infrastructure and applications, which contributes to

the emergence and growth of specialist firms, or new branches of existing firms, in a range of service sectors to take advantage of new market opportunities in the production and distribution of information itself. On the one hand, these will include software production firms and Internet service providers, who provide essential pieces of *machinery* for information production and distribution. On the other hand, there are firms who provide and/or facilitate the creation and adaptation of relevant *content* of the information, such as web marketing agencies, electronic news media, community and governmental agencies, and so on. The changes in information and communications technology have broken down barriers between different productive and service sectors in the economy, and opened up competition and collaboration within and between the sectors. This enhances efficiency in these sectors, and contributes to overall growth.

Much of existing economic data point to a high correlation between ICT and economic growth. In the past several decades this has been confirmed by the revolutionary impact of ICT on country economic performance, particularly in the areas of production, trade and market access, employment, and public and corporate governance. Converging and emerging technologies as well as new services and applications have allowed countries to accelerate economic growth, empower people and alleviate poverty through expansion in private and public business opportunities, to extend services to socially disadvantaged groups, to pervasively use and develop ICT for revenue and income generation purposes, and to enhance the participation of citizens in their communities, countries, regions, continent and global arena.

The Challenge

Africa's experience with ICT has unfortunately, and for the most part, taken a different path from most of the world. Poor ICT infrastructure, combined with weak policy and regulatory frameworks, low technological penetration and unimpressive human and institutional capacity,

have led to inadequate access to affordable telephones, broadcasting, computers, Internet and efficient postal services. This has hampered the continents' ability to capitalise on ICT as a central tool in creating new business opportunities. The combined constraints have also played a key role in creating rifts within and between nations, between sub-regional African markets, isolating African markets from global markets and preventing individual African markets from becoming strong and vibrant.

Significant progress has indeed been made in the ICT sector, and a number of African countries have embarked on policy reforms that have introduced competition and improved policy and regulatory frameworks. In fact, since 1990, approximately 40 countries have embarked on programmes to separate postal functions from telecommunications. Over 20 have privatised their state-owned national telephone companies. 30 have liberalised their markets and opened up to private cellular services, and over 20 have revised their regulatory frameworks to facilitate more effective private investment. Nearly over 45 have at least one cellular services provider, and at least 40 have achieved some level of connectivity and the presence of local full-service dialup ISPs, even though Internet service and other advanced services are limited by scarce bandwidth.

These developments reflect a growing belief that Africans are realising the enormous potential of ICT as a key driver for social and economic development and poverty reduction, particularly as reforming countries are reaping benefits through improved infrastructure, increased applications and better accessibility and affordability of ICT infrastructure, equipment and services. Even then, most of the reforms have been done without much coordination at the sub-regional level. The region as a whole does not have a consistent strategy to attract larger and higher-quality local and foreign capital and other resources for investment, or to remove the many barriers in order to accelerate development.

However, serious problems still persist despite the reforms. Africa's ICT sector remains characterised by low service penetration

and coverage, poor service quality and high investment costs and tariffs. Most calls and Internet traffic exchanged between African countries are still routed through Europe and cost Africa some \$400 million a year in transit fees. The direct result of this is the inability of most African ICT services providers to reduce settlement rates, high Internet costs and other ICT tariffs. Over fifty percent of ICT services are in urban areas where less than thirty percent of the population lives. Excluding South Africa, which constitutes over fifty percent of the African ICT market, the connectivity gap between Africa and the rest of the world is very exacerbated, pegging African tele-density still at less than one line per 100 people a decade after extensive reforms. The situation is no better (and in some cases, worse) in broadcasting, Internet access, computer and IT usage, multimedia access and production and distribution of print material.

Traditional radio broadcast, which has a far higher level of penetration in Africa, is still inadequate and stands at 20 per 100 people. Postal services, while they have received some attention following separation of a significant number from telecommunications operations, still remain fragile and lack requisite funds to modernise and expand.

A key challenge is for Africa to be able to attract the requisite local and foreign, as well as private and public, investment to develop low-cost information and communication infrastructure and applications for efficient delivery of high value-adding products in effective applications on a reliable and sustainable basis. Alliances and partnerships with and between the local and foreign private sector would need to be forged and sustained nationally, regionally, continentally and globally, with transparent criteria on rules of engagement within clear rationalised institutional arrangements and relationships at all levels.

Africa needs to be able to define and consistently monitor its own performance indicators to reflect effective universal service and access priorities. Policies on public ICT services access in particular need to be given priority in the face of all the above barriers and challenges. But perhaps even more challenging is for African governments to be able to go beyond national boundaries to synchronise policies, regulatory

frameworks, programmes and activities in order to derive synergies and economies of scale and scope from increased investments that often come with larger markets. Furthermore, there is a need to ensure effective and facilitative cooperation, coordination and collaboration (the three Cs) at all levels (horizontally and vertically) and between all the various initiatives in order to achieve the requisite synergies, complementarities, mutual re-enforcement, reduction of wasteful duplication and the efficiencies of scale and scope. This way, African ICT may develop the kick, momentum and acceleration to ‘cheetah-pole-vault’ not ‘leap-frog’ to catch-up and keep up with the rest of the world.

Meeting the Challenge at Regional and Continental Levels

While, as stated above, there is recognition and acceptance at national levels of the inevitable crucial role of ICT as a tool and catalyst for social and economic development and empowerment, the same is clearly apparent at both the regional and continental levels. In this effort, there have been local African initiatives. To mention a few, at the continental level are the various initiatives under the African Telecommunications Union (ATU), formerly PATU, the AISI under UNECA, the 1998 Ministerial initiative, known as African Connection and, more recently, the African Union and its comprehensive program, the New Partnership for African Development (NEPAD), which have all stressed the critical role of ICT in achieving their objectives. These are in addition to (and needing to be coordinated and integrated relevantly with) the many global initiatives in ICT (Bridging the Digital Divide, UN ICT for Development, Global Information Society, ICT for Education, Health, Agriculture, and many others). Vertical and horizontal (geographically) and inter-initiatives cooperation, coordination and collaboration are crucial for success in achieving the shared vision and intended objectives.

The African Connection Initiative

In 1998, African Ministers responsible for communications developed an initiative, called “The African Connection”, which was launched at the ITU Africa TELECOM in the same year in South Africa. The 1999 Conference of Plenipotentiaries of the Pan African Telecommunications Union (PATU, now ATU) adopted the initiative, which was endorsed in the same year by the Summit of the Organisation of African Unity (OAU) as a continental initiative for action. The vision, strategies and content of the initiative, has with time, been positively impacted upon by the changing realities of both the ICT and global environments, and now encompasses the whole of ICT development and applications as a tool and catalyst, cross-cutting sector and business in itself.

The Mission and Objectives of the African Connection

The African Connection Program is an African-driven effort to make Africa a full member of the global information and knowledge society through accelerated development of country, regional and continental information infrastructure and applications in the social and productive sectors.

The objectives of the African Connection include, among others:

- Support for accelerated country ICT reform programs and initiatives;
- Promotion of harmonised regional policies, regulations and standards anchored on effective national reform programs;
- Fostering effective regional capacity-building strategies;
- Facilitating technology development, transfer and use, and effective content development;
- Developing pilot ICT applications in productive social services for cross-border mainstreaming, particularly in LDCs and rural and disadvantaged communities;

- Facilitating innovative financing and public-private partnerships to accelerate ICT infrastructure and services development;
- Facilitating regional consensus building and donor and investor coordination for effective resource utilisation; and
- Promote partnerships and synergy through building a culture of cooperation, coordination and collaboration.

The African Connection Program is a critical component of the African Telecommunications Union (ATU) restructuring program and is endorsed by African Ministers of Information and Communication. It is also an important component of the New Partnership for Africa's Development (NEPAD), which has a clear objective to capitalise on the crosscutting and catalytic attributes of ICT to accelerate the continent's economic development and growth. The African Connection program strategy, in conformance with the larger NEPAD objectives, is to go beyond African national policies to African continental policies and programs.

An Overview of Activities

In its short history, the African Connection has undertaken a good number of important activities. These include:

Policy and Regulation: The African Connection has completed the First Phase of the Regulatory Study with the financial assistance of the European Union. The study identified key issues involved in the reform of Telecommunications policies and regulations in Africa. The study's report and similar reports are on the African Connection website.

ICT Policy Strategy Papers: The African Connection has developed several ICT Policy Strategy Papers and posted them on its website.

Universal and Rural Access: The African Connection has developed, with partners, a GMPCS licensing template (toolkit) posted on the website, and held follow-up workshops jointly with Schoolnet Africa and Worldlink (of the World Bank) that expanded the technology to cover all

wireless connectivity for education and development, and incorporate low-cost delivery devices and facilities. Furthermore, it is also currently carrying out a study on 'Rural ICT Status and Market opportunities' in ten countries selected from the five regions that will also come up with a pilot project and a draft rural ICT toolkit for Africa.

Human Resource and Capacity-building The African Connection is collaborating with USAID, TRASA and academia on the development of training modules for effective ICT development, and with the Markle Foundation on strategies to build capacity for effective involvement of African professionals in key international discussions on ICT.

Consensus-building and Regional Cooperation: It is working on various programs with four African regions (COMESA, EAC, ECOWAS, and SADC), especially on policy and regulatory harmonisation, the establishment of regulatory associations and others, as requested by the respective regions.

Strategic Studies: These occasional studies include a SADC e-Readiness strategic document now being presented to the authorities.

e-Africa Commission: Under the New Partnership for Africa's Development (NEPAD), the African Connection is exploring ways of working with the e-Africa Commission, ATU and other partners to develop strategies for continental institutional rationalisation and institutional arrangements and relationships that will provide the clarity of engagement to guide the sustainable and accelerated planning, development and resourcing of key ICT initiatives in Africa.

Regional and International Deliberations and Consensus-building: It provides professional inputs to various global initiatives, such as the G8 DotForce, the UN ICT Task Force, the World Summit on Information Society (WSIS) and the WEF/SADC e-Readiness Task Force at global and regional levels.

Funding and Partnerships for ICT Development: It is working with various partners to develop possible cross-border public/private partnerships for

programs and projects on the basis of “Countries of Mutual Interest (COMI)” to take advantage of the economy of scale of larger markets. This will be preceded by a study on “Policy and Regulatory Reforms for Market expansion in Africa”.

ICT Applications and Content Development: The African Connection website³ has been re-designed to allow more primary information and to facilitate user friendliness. There are ongoing efforts to synchronise this website with MIGA’s Investment Promotion Network and Privatisation website, amongst others. It organised a Content Development Workshop at the end of 2001, which brought together key content providers on the continent to discuss strategies for development, promotion, and the use and funding of African content. Networking and collaboration among the content development sector as well as requests for specific assistance are among the resultant follow-up activities from the workshop.

Direct Country Assistance: The African Connection provides advice and support to policy and regulatory authorities directly on request, depending on available financial and human resources, especially to LDCs and countries in special need, and those coming out of conflict situations.

Pressing Issues

There are many issues, which the African Connection considers to be of a pressing nature with regard to the fulfillment of its terms of reference, and which require dedicated attention. These include:

- Ensuring follow-up and implementation of proposals and recommendations arising from the work of the last two years;
- Participating in institutional rationalisation and defining effective and sustainable institutional arrangements and relationships for the achievement of the ICT objectives under AU and NEPAD;
- Seeing to it that existing and follow-up activities continue with the continuity, momentum and buy-in required to ensure achievement of the desired deliverables; and

- Finally, and of the utmost importance, getting a sustainable 'home' for the African Connection Initiative when the present Secretariat closes at the end of September 2003.

The Perspective on Info-Communication of the African Connection for Africa Development

Over the last two years of the existence of the African Connection Secretariat, otherwise known as African Connection Centre for Strategic Planning (ACCSP), we have developed some perspectives on many regional, continental and global issues. We would like to share, here, one such view on ICT for development in Africa.

Sector Strategy

The challenge for Africa is obviously a daunting one. A short-term objective of achieving the traditional tele-density measure of 2 by the year 2005 with a reasonable level of universal access would require investments in excess of US\$8 billion in the core information infrastructure, according to World Bank estimates. Achieving this target is critical to the success of any attempt to improve African connectivity within and between African countries, and it would require a comprehensive, integrated and well-coordinated strategy, which is founded on:

- i. policy, legal and regulatory strategies to promote higher rates of return on infrastructure and applications investments, particularly in rural areas;
- ii. effective public/private sector partnerships that can capitalise on conducive environments to promote higher levels of investment and private sector participation in infrastructure development;
- iii. ICT applications and content, which add value to policies; and

- iv. a formidable human resource and institutional support base that can foster the sustained development, diffusion and use of ICT in Africa.

The most crucial action by Governments is setting up independent, autonomous and facilitative, well-resourced, credible and accountable regulatory agencies (authorities) to ensure the creation and enforcement of conducive, consistent and transparent regulatory environment and frameworks. There is also a need to give priority to the synchronisation and coordination of both local and external initiatives and programs at local, national, regional and continental levels, so as to achieve synergy, scale and scope in Africa's development objectives.

Policy and Regulatory Frameworks

Sustainable, long-term infrastructure development will not be possible or optimal without policies that are conducive to efficiency, business activities and investment, and regulatory frameworks that are transparent, certain and ensure fair competition and open markets. This is particularly so in view of the changes in ownership, structure and consolidation of the information and communications sector, convergence of technologies and markets, and the reduced role and capacity of governments to manage the sector. Two key factors dictate the need for new ways of managing the sector. First is the inordinate task of managing the increased regulatory processes associated with sector liberalisation, increased competition, new technologies and services, and converging technologies. The second, and perhaps more tasking, is the convergence of trade and telecommunications policies under WTO agreements. Regulators need to be well established and equipped to deal with potential abuses by incumbent operators in the new competitive environments, to facilitate entry of new technologies and services and to keep abreast of the demands of the rapidly changing ICT sector.

While many African markets are not individually attractive for high-level capital-intensive development, together they could provide

the critical mass, and scale and scope economies to attract local and foreign investors. What is required is harmonised policy and regulatory frameworks from interconnection and spectrum planning to licensing and e-commerce strategies. Tactically, it might be better to start with the policy and regulatory gaps that exist rather than forcing countries with different standards and procedures to change and comply. Furthermore, integrating ICT as a tool and crosscutting sector into development and development agendas can go a long way in efforts geared towards sustainable development, poverty alleviation and national competitiveness.

Consistent and proactive e-Readiness assessments should be carried out for all countries in order to articulate current gaps, constraints and opportunities. Approximately fifty percent of African countries have had some assessment done of their readiness to integrate information technology and e-commerce. The results of such assessments should form the basis of more comprehensive ICT strategies to fill these gaps, resolve constraints and effectively package and market opportunities. These assessments would also go a long way to facilitate planning, identification and allocation of resources.

e-Commerce policy has already been identified both as a gap and a priority, and could be used as the first phase of a more general harmonisation program. An e-Commerce model policy and legislation adopted by African countries could provide a cohesive tool towards intra-African and global trade. It may include sub-projects around using ICT tools for SMME development, e-Government service delivery, and the creation of jobs and wealth.

Infrastructure Financing

Most of Africa's main telecommunications operators (public and private) do not have the requisite resources to expand their networks to competitive levels. This is even more so as revenues from the telecommunications sector still constitute a significant component of most of the countries' gross national product.

Emphasis should be on developing partnerships to finance new and existing national, sub-regional and regional programs and projects with the objective to improve connectivity, thereby increasing access and lowering costs. African development and investment banks should be encouraged to participate fully in these partnerships. The success of such partnerships will, however, depend extensively on comprehensive and credible Market Statistics on Africa's ICT sector. This is lacking, and serious efforts should be made to rectify this constraint.

Competitive mechanisms to generate and award 'Smart Subsidies' to private operators willing to connect rural communities should be integral in universal service access, social services delivery (especially education and health), and financing strategies. Such subsidies could also be extended to content developers to boost growth in the sector.

A number of countries, such as South Africa, Mauritius, Morocco and Uganda, are already operating Universal Service Funds, which finance rural and disadvantaged community infrastructure with revenue contributions and license fees from telecom operators. Such best practices should be mainstreamed to the rest of the continent to ensure universal service to all Africans.

Financing strategies should also include innovative and phased plans to connect all African countries through existing excess satellite and fiber optic cable capacity, as well as undersea cable and satellite capacity currently under construction. 'Instant' national coverage could be achieved through use of new technologies (such as VSAT, GMPCS and WLL), which will provide access to all schools, hospitals, libraries and community centres on flat rates. Cost-effective Internet access could be developed through Internet Exchange Points (IXP) to aggregate traffic and create economies of scale. Further efforts should be put into upgrading the capacity (bandwidth) and extending the reach of existing networks to make them able to act as reliable backbone for present and future demands for advanced and varied ICT services. These initiatives could all be financed through effective public-private sector partnerships with significant local participation and international donor assistance.

ICT Applications, Content Development & Internet Access

Provision of ICT infrastructure and services is mutually re-enforcing with ICT applications accompanied by local content development. As the 21st century is by its nature the century governed by knowledge exchange and use of information, ICT, as a cross-cutting sector, value-adding and facilitator of such exchange and use, becomes as crucial to national, regional, continental and global trade, development and interaction as the utilities of water and energy are to all human activities. In this case, all initiatives, programs and projects in all sectors and at all levels should incorporate relevant ICT applications on the one hand and, on the other, ICT initiatives and programs should take into cognisance the needs of all other sectors for sustainable development.

Through partnerships at local, national, regional and continental levels coupled with cross-border ICT connectivity, Africa can consciously and successfully develop and exchange local content. To achieve this, the use of local languages, the exchange of local cultures and the development of local programs have to be aggressively pursued and supported by governments, businesses and civil society. Africa has a rich legacy of cultural products that could be developed and packaged for new media dissemination on the continent and outside. Furthermore, ICT should be used extensively to increase general and digital literacy and expertise, especially among the youth and children, while using them to enhance the development of local content. When ordinary people can relate to ICTs in their languages, and when these reflect and are reflective of their cultures and traditions, ICTs are more likely to be embraced and become an integral part of the lives of Africans, thus enabling them to benefit more fully from ICT applications.

But before content development can be made viable, Africa must take a serious approach to developing business models for transforming content to viable e-business. Incubators and stimulating content industry spin-offs should be promoted, and training programmes developed to improve the entrepreneurial skills of content developers.

Specific programs and projects utilising ICT applications in areas like education and skills development, health, agriculture, culture and governance would go a long way in making accelerated progress towards increasing general literacy, health and productivity, and enhance sustainable development.

The commitment to provide faster and cheaper Internet access to schools, libraries, research institutions and health facilities should be paramount and could be achieved through active promotion of alternative infrastructure, such as wireless, satellite and cable networks.

Extensive focus should also be placed on developing goods for the advanced markets of the North. With significant pockets of programming and IT skills, the development of R&D and ICT hubs to develop software that addresses the needs of developing countries (tele-health, tele-education, translation software, and more), and services to provide back-office support to international clients may still be untapped markets. These hubs often act as magnets in attracting additional investment into relevant countries.

Capacity and Institutional Development

The availability of the appropriate skills base is an important determinant of the growth of information supply activities, and these contribute to human resource development. At the same time, the skills base must be understood as an important risk factor in appraising communications network infrastructure expansion and ICT applications projects. Without available skills to operate and maintain the physical infrastructure, as well as develop and maintain software, users or potential users will naturally be unable to take advantage of the infrastructure, which itself will therefore not be used to its full potential.

Currently in Africa, the availability of specialist training in infrastructure operations and installations and competition regulation is extremely limited. Two major regional centres of training in telecommunications—ESMT, in Senegal, for Francophone countries and

AFRALTI, in Kenya, for Anglophone countries— currently provide some training for ICT. A number of telecommunications operators also maintain their own training schools, but these suffer from lack of financial resources and are inadequate to meet the urgent requirements of the industry. Furthermore, as these entities are progressively privatised, there is a trend towards closing these down as a downsizing and cost-cutting exercise. There is also reluctance by the new private owners of operating entities to give basic and even further developmental training for their staff, leading to a culture of poaching among the operators and regulators within countries and cross-border.

It is, therefore, crucial that the sector reforms address this issue of basic training and developmental training so as to ensure the existence of sustainable quality facilities accessible to all in the sector to ensure continued and improved availability of the requisite professional and operational human resource. Here, strong collaboration and partnerships are required between the public and the private sectors, including international and multilateral organisations. Africa should learn from India that rather than trying to legislate against staff poaching and brain-drain, instead over-train and re-train, and utilise better and motivate. That way, you not only reduce the impact of the brain drain, but you change it to “brain-export”. Africa can do this and even develop research and nascent manufacturing industries in ICT, taking advantage of the many assets in the continent that give us advantage over the more expensive economies and congested environments of the Northern and Eastern countries.

Human Resource Development (HRD) as well as Research and Development (R&D) in Africa should of necessity be considered an investment and not an overhead cost in all sectors and by both local public and private investors as well as civil society.

To this end, a program is required to support an Africa-wide network of training and research and development institutions (both virtual and physical) to develop and share resources. The failure of existing institutions set up for this purpose needs to be examined. Such institutions

should be equipped with sustainable training resources and research programmes.

Again, policy and regulatory capacity development can be a phase of an ongoing programme to develop ICT skills and applied research regionally or continentally. Such programmes should be accredited and reciprocal to facilitate mobility with a common market framework. Key institutions in the major regions could be identified to develop co-operative programmes and to co-ordinate efforts and resource allocation within the region. Embryonic initiatives of this kind are emerging at training institutions throughout the continent and these should be formalised into clear plans of action. Partnering with mature training institutions is one of the mechanisms that could drive such a process. An additional approach to capacity building and institutional development is through frequent exchange of information, experiences and lessons between African policy makers and regulators, including cross-border use of local experts and professionals.

Finally, there is a need to promote general ICT diffusion and raise awareness and appreciation as well as e-literacy among our populations, especially children and youth. This should be coupled with efforts to demystify and de-demonise ICT for people to accept it as an everyday tool and not an end to itself. ICTs (inclusively, not only computing), I believe, can be used to improve the level of basic education and literacy of African children and youth. This can be done by targeting and ensuring that basic education and literacy change from the traditional “3Rs” (reading, writing and arithmetic) to a higher standard that can be referred to as “LNCI” or Literacy—reading and writing, Numeracy—working with numbers, Communicacy—communicating effectively, Innovativeness/Initiative. Success in this would give Africa the required pool of people to develop higher skills to use efficiently and productively in the competitive and technologically fast knowledge-based economy and society of the 21st century. It will give Africa’s education, human resource development, as well as research and development the ability to “cheetah-pole-vault” so as to catch-up with the rest of the global community.

Development of ICT Performance Indicators

There is a need to develop consolidated ICT performance indicators relevant to the African environment, which will be updated on a frequent basis and serve as a reliable and current data source for stakeholders at national, regional, continental and global levels.

Government-on-line (e-Government)

There is also a need to promote the use of ICT to provide better, cheaper and faster government services and information electronically, increase citizens' participation in decision-making and facilitate good governance. To accomplish this, an effort should be made to develop comprehensive and active websites for governments in phases until all governments are covered. Such websites would provide facilities to enable interactive consultation among agencies, and between agencies and customers, and enable the public to offer structured feedback on policy issues.

Accelerated Rural/Universal Connectivity

Universal national and cross-border rural connectivity in ICT is a compelling obligation if Africa is to fulfil its responsibilities to all its people. Specific initiatives in this regard should involve the following:

- a. Implement best practices and learn from “worst/bad” practices in national and cross-border rural connectivity programs;
- b. Develop and promote use of rural connectivity tool-kits;
- c. Establish innovative funding schemes to facilitate SMME participation; and
- d. Coordinate and synchronise rural connectivity initiatives and activities at national and cross-border levels.

“Smart Subsidy” Initiatives

There is a need to develop result-oriented funds, which do not distort the market, to be used as subsidies to kick-start targeted ICT projects that are commercially viable, cut across borders and are particularly beneficial to rural communities. This could include the following specific actions:

- a. Develop transparent guidelines for the management and distribution of fund;
- b. Develop a methodology for the analysis of ICT projects, which could qualify for ‘smart subsidies’; and
- c. Identify sponsors for funding.

“ICT Cities” Initiatives

We should develop in each African country, a critical mass of ICT industries, related services, and resource base that can effectively target off-shore outsourcing markets, promote local ICT hardware and software manufacturing, develop and trade-in local ICT (digital) expertise and local content. We could, for example:

- a. Develop a framework for effective development of ICT cities;
- b. Identify technical assistance and partnerships; and
- c. Collate best practice experiences at the national and sub-regional levels.

e-Schools and e-Health

There is a need for computers for schools and youth centre modules for digital training and general ICT literacy, networking of schools and youth centres, and access to cheaper and faster Internet and multi-media

facilities. We should also develop the capacity for extensive and intensive use of ICT in preventive and curative health in general as well as in specific programs, such as HIV/AIDS, Malaria, Tuberculosis, and Malnutrition.

Electronic linking and virtual networking of health clinics/centres, hospitals and laboratories nationally so as to provide improved and advanced health access, especially to rural communities, remote areas and the under-served poor urban areas, is one way to approach this.

e-Agriculture

We could greatly advance agricultural productivity through the extensive use of ICT and electronic media to, for example:

- a. Improve the cultivation and use of agricultural inputs (seeds, fertilizer, medicines, tools/plants, amongst others);
- b. Improve weather and other natural forecasting information, particularly for rural productive areas;
- c. Improve information on market prices and marketing of agricultural products; and
- d. Improve delivery of rural products to markets in rural, urban cross-border and international markets.

Conclusion

We start the Year 2003 looking forward to the World Summit on Information Society in Geneva in 2003, and Tunisia in 2005. It is, therefore, proper that we reflect first on what Africa has to do to propel herself into the Information Society and hence become active and benefiting players in globalisation. Secondly, we should also reflect on what Africa expects from the rest of the global community as partners and fellow members of this Information Society. Info-Communication (ICT), as

stated earlier, is not an end by itself, but one of the means or tools for social, economic and cultural development as well as for all human activity. ICT is one of the critical tools for empowering individuals, communities, countries, regions and continents in their struggle for social, economic, cultural and political development as well as for improving their quality of life. The WSIS, we believe, is a recognition of this fact as well, in that by transcending the barriers of the digital divide within and between communities, countries and regions, we shall be able to empower humanity to participate fully in their own development and in positive globalisation.

We expect that WSIS will bring into focus how information and knowledge exchange and related digital opportunities can be harnessed to become one of the facilitative tools in addressing the numerous objectives and declarations of the many Global Summits that have taken place over the last two decades, all aimed at addressing the many problems that our planet and its inhabitants face. It is hoped that the WSIS will be able to develop a shared vision and mutual political, corporate and moral will and commitment to make ICT that crucial tool in reality and for the Information Society to be inclusive, effective and mutually beneficial. This, of course, means each and every citizen, community, country, region and continent takes full responsibility for the exercise while recognising and facilitating mutual partnership.

The African Connection and similar African initiatives are Africa's ambitious and courageous attempts and commitment to address this challenge. This chapter is a humble attempt at putting these ideas and vision together. It is intended to trigger debate that may hopefully lead to development of some coherent strategies and actions by Africa's public, private and civil society, with partnerships from outside Africa. This is not an attempt to raise all the issues nor answer all the questions.

At the end of the day, development is first internally intended and pushed, then externally facilitated and assisted through mutually beneficial partnership with equitable sharing of responsibilities. It is a business, not a philanthropy.

NOTES

1. I would like to dedicate this chapter to the African Ministers of Communications for their African vision and African Connection initiative in 1998, and to the African Connection Secretariat for use in this chapter of various presentations we have made in the past and to Ms. Mavis Ampah Sintim-Misa, for her leadership, professionalism, commitment to Africa and leadership of the African Connection secretariat as its Chief Executive Officer.
2. Info-communication and ICT have been used in this chapter interchangeably to signify the combination of all those areas traditionally known as telecommunication, information technologies (IT), radio and TV broadcasting, online publishing and postal services, including the ultimate multimedia.
3. www.africanconnection.org