

**The ECA/IDRC
Pan-African Initiative on e-Commerce**

Edited by the Economic Commission for Africa

Table of Contents

INTRODUCTION	1
The context of this study	1
The organization of the work program	2
The Structure of the Report	2
KEY CONCEPTS	4
Definitions of e-Commerce	4
Stakeholders in the introduction of e-Commerce	5
Factors relevant to the introduction of e-Commerce	5
Legal Issues relating to the introduction of e-Commerce	6
THE AFRICAN INFORMATION SOCIETY INITIATIVE AND ITS EFFECTS	7
E-READINESS: THE STATUS IN SOME TYPICAL COUNTRIES IN AFRICA	11
The Readiness of Policy Processes	11
Readiness for the Networked World	13
CHALLENGES FACING AFRICAN GOVERNMENTS	15
Challenges relating to National Visions and Strategies	15
Challenges relating to Regulatory Policy	16
Challenges relating to the Acceleration of Investment in e-Commerce	16
Challenges relating to the Support of Disadvantaged Groups	17
Challenges relating to the Creation of a Skilled Labour pool for e-Commerce	17
Challenges relating to the Promotion of Research on Issues of e-Commerce	17
Challenges due to resource scarcities	18
Challenges relating to the efficiency and probity of public administration	18
CHALLENGES FOR THE PRIVATE SECTOR	20
Challenges for e-entrepreneurs	20
Challenges for firms	20

Challenges in national financial systems	20
Barriers to entry into e-Commerce for SMEs	21
THE VIEWS OF GLOBAL BUSINESS	22
RESPONSES TO THE CHALLENGES	23
An Initiative to stimulate Policy Awareness	23
An Initiative to Promote Policy Research and to Train Policy-Makers	24
SOME COMMENTS ON E-GOVERNANCE	28
The electronic provision of public information	28
The internal application of informatics in the processes of government	30
Government to Business e-Commerce	31
The electronic provision of government services to citizens	31
APPENDIX 1 – ECA/IDRC E-COMMERCE MISSION TEAM MEMBERS	32
APPENDIX 2 – THE RELATIONSHIP OF E-COMMERCE TO E-BUSINESS	33
APPENDIX 3 – THE ROLES OF KEY STAKEHOLDERS	34
APPENDIX 4– BARRIERS TO E-COMMERCE	35
“E-Commerce and LDCs: Challenges for Enterprises and Governments”	35
Obstacles to the development of electronic commerce as seen in West Africa	37
Barriers to e-commerce in Egypt	38
APPENDIX 5 – LEGAL ISSUES RELATED TO E-COMMERCE	39
APPENDIX 6 – THE PRINCIPLES OF THE ICC GLOBAL ACTION PLAN	41

INTRODUCTION

The context of this study

The African Development Forum Meeting, convened by the UN Economic Commission for Africa (ECA) in Addis Ababa in October 1999, considered the development of Information and Communications Technologies (ICTs) in Africa and their contribution to development. One area of concern under discussion was electronic commerce and how it might be harnessed for the development of the continent.

To assess and determine the support required for e-commerce, ADF placed special emphasis on :

- the need to review the status of e-commerce in Africa, its potential, the likely impact, the barriers to growth and success as well as current and upcoming e-commerce ventures in Africa
- an evaluation on where Africa should put its priorities and how to overcome barriers
- an attempt to define specific actions to insure that African e-commerce can achieve its full potential.

In response to the ADF conclusions on e-Commerce, the ECA, in close collaboration with the International Development Research Centre (IDRC), commissioned a “Pan-African Initiative on e-Commerce” to be carried out by a Mission whose principal terms of reference required that:

- The Mission will develop policy and strategy advice for African Governments with regard to the steps necessary for the stimulation of an active and early African participation in the emerging field of electronic commerce (e-Commerce)
- In particular, the mission will investigate and report on:
 - National E-commerce Vision and Strategy
 - National Regulatory Policy ;
 - Accelerating Private Investment in E-commerce
 - Targeted Support for SMEs and Special Target Groups
 - Creating an E-commerce Labour Pool
 - Domestic and pan-African E-commerce Research Capacity

**It needs to be clearly understood that
e-Commerce is first and foremost a business activity.
Given that basic understanding, the role of Government relates primarily to the
creation of the policy and legal environment in which transactions are carried out.**

For that reason, the present initiative has two goals:

- ❑ to identify possible initiatives or activities which need to be undertaken by governments in order to facilitate the evolution of e-Commerce in national economies in Africa, and
- ❑ to provide information to assist governments in fulfilling that role.

The ability of governments to influence – both positively and negatively - the growth of electronic commerce is underlined by the fact that over 70% of the world’s Information Technology Associations, from both developed and developing countries, are on record as saying that public policy is critical to the growth of electronic commerce¹.

¹ Source “The World Information Technology and Services Alliance WITSA) *International Survey of Electronic Commerce, 2000* “ (page 4) WITSA is a consortium of 38 information technology (IT) industry associations from economies around the World (including one from Egypt).

Given the specific terms of reference set out for this activity, the focus of this initiative is therefore primarily on the roles appropriate to governments in the fostering and enabling of e-Commerce in Africa.

The organization of the work program

The work of the Mission officially began in October 2000 and was carried out by interview in twelve African Countries, in four distinct geographic regions, during November and December of that year. The regions covered and the countries visited were

North Africa	East Africa	West Africa	Southern Africa
Egypt	Ethiopia	Ghana	Mozambique
Morocco	Kenya	Mali	Namibia
Tunisia	Uganda	Senegal	South Africa

In each country, interviews were held, where possible, with

- senior officials of a variety of government Ministries, Agencies, State Corporations and Task Forces dealing with aspects of e-Commerce, often including Ministers,
- representatives of the Information Technology industry, including leading Internet Service Providers;
- some companies attempting to introduce e-Commerce into their own operations;
- consulting firms and , where they existed, private economic research groups offering services relating to e-Commerce
- Chambers of Commerce, professional societies and, in one country, a Confederation of Trade Unions;
- a small number of research groups dealing with ICT policy research;
- representatives of universities and technical colleges with ICT programs
- representatives of International Organizations and Donor Agencies

The Mission amassed and reviewed a collection of electronic documents from both national and international sources dealing with policy for e-Commerce

An early description of the work of the Mission was presented at a plenary session of the WTO-sponsored meeting of African Ministers of Commerce in Libreville, Gabon, in November 2000

The principal outputs of the Mission are a set of four Regional Reports which stand as companion volumes to this present, overall Report containing our main conclusions and recommendations

The Structure of the Report

The report begins with some brief notes on key concepts – definitions, identification of stakeholders, indication of key factors to be considered and a listing of the many legal issues surrounding the introduction of e-Commerce into a national economy.

To provide some backdrop to the work of the mission, we present a brief stocktaking of the outcomes of the “African Information Society Initiative” of 1996, an initiative which was widely endorsed by the highest levels of African governments. This is followed by an attempt to portray, in a concise manner, the state of e-readiness in the twelve countries in which we have been active.

The Report then provides a brief commentary on a parallel and important trend within the “New Economy”, the trend towards e-Governance.

The heart of our findings relate to the role of governments in fostering and enabling e-Commerce in national economies and we have attempted to create a major policy agenda for governments in the form of a series of challenges which will have to be met and overcome if African economies are to capture the benefits of the new modes of doing business now becoming available.

We recognize that the private sector too has many profound challenges to overcome and provide a brief introduction to them.

In our final chapter we propose two major initiatives which could be undertaken on a continent-wide basis with significant assistance from the international community.

Definitions of e-Commerce

Many international organizations have offered definitions of electronic commerce. For example:

- In 1998, the World Trade Organization (WTO) argued that “Electronic commerce may be simply defined as the production, advertising, sale and distribution of products via telecommunication” (See www.wto.org)

- In 1997, the Organization for Economic Cooperation and Development (OECD) advanced the view that

“The term electronic commerce refers generally to commercial transactions, involving both organizations and individuals, that are based upon processing and transmission of digitized data, including text, sound and visual images and that are carried out over open networks (like the Internet) or closed networks (like AOL or Minitel) that have a gateway onto an open network”. (See www.oecd.org/publications/pol_brief/9701)

- An even fuller description comes from the European Commission, again in 1997, which argued that

“Electronic commerce is about doing business electronically. It is based on the processing and transmission of data, including text, sound and video. It encompasses many diverse activities including electronic trading of goods and services, online delivery of digital content, electronic fund transfers, electronic share trading, electronic bills of lading, commercial auctions, collaborative design and engineering, online sourcing, public procurement, direct consumer marketing, and after-sales service. It involves both products (e.g., consumer goods, specialized medical equipment) and services (e.g. information services, financial and legal services); traditional activities (e.g., healthcare, education) and new activities (e.g. virtual malls)”

For the purposes of this report we will adopt the extensive description of e-Commerce provided by the European Commission as our working definition.

In most current policy discussions of e-Commerce, four different activities are seen as being important:

1. Business-to Business (B2B) e-Commerce ;
2. Business-to-Government (B2G) e-Commerce; and
3. Business to Consumer (B2C) e-Commerce
4. Consumer-to-Consumer (C2C) e-Commerce

According to the OECD, (The Economic and Social Impacts of Electronic Commerce, OECD, Paris, 1999)

“The promise of significant economic growth places electronic commerce high on many public and private sector agendas. And to date, the growth has been impressive. Starting from basically zero in 1995, total electronic commerce is estimated at some \$26 billion for 1997; it is predicted to reach \$330 billion in 2001-02 (near term) and \$1 trillion in 2003-05 (future). These estimates are very speculative and rank among the highest of the dozen estimates generated by various management consultancy or market research firms. They are adopted so as to ensure complete geographical (world) and product (business-to-business and business-to-consumer) coverage and because recent reports of sales by leading e-commerce merchants suggest that the growth rate may be faster than expected.”

In that same report, OECD estimates that at least 78% of all e-Commerce revenues today are generated in business-to-business (B2B) transactions.

The volume of consumer-to-consumer e-Commerce is becoming a major area of expenditure, via the rapidly growing number of 'auction' sites. An on-line journal, eMarketer (www.emarketer.com) in its eCommerce: B2C Report foresees the consumer online auction market rising from \$650 million in 1998 to \$6.5 billion by year-end 2000 and over \$18.3 billion by 2004.

The significant trends just cited show how much business in global markets is changing because of the emergence of e-Commerce. We believe that African economies must adapt to these changing global patterns; failure to do so will lead inexorably to what one African leader has described as "the digitization of past inequalities"²

It should be noted that electronic commerce is a subset of what is referred to as "e-Business" – with this wider concept including both e-Commerce and the widespread internal application of informatics inside enterprises³

In parallel with the emergence of e-Business, there is also the rapid development of "e-Government" which is seen to include

1. The electronic provision of public information to all interested parties
2. The internal application of informatics in the processes of government;
3. Government to Business e-Commerce; and
4. The electronic provision of government services to citizens

Stakeholders in the introduction of e-Commerce

The term "Stakeholder" as used here identifies individuals, organisations or institutions who, in some way, are related to e-Commerce. Stakeholders may either be active participants in one or more of the activities related to e-Commerce or may be directly affected by one or more of those activities..

Stakeholders who are active participants may play different roles in e-Commerce . They may be policy makers or advisors, financiers of e-Commerce activities, regulators, performers of e-commerce related activities , providers of education or training, providers of infrastructure. They also may be located in one or more of the sectors of the national economy such as industry, agriculture, health, defence, environment, transport, etc.

In Appendix 3 we summarise the roles expected of each group of stakeholder in each of the areas of concern to this study.

Factors relevant to the introduction of e-Commerce

Many international agencies have studied the barriers to the introduction of e-Commerce into developing countries and we reproduce, in Appendix 4, one such listing of barriers in an effort to sketch and underline the extent to which the factors needing consideration are pervasive.

Among the major factors affecting the introduction of e-Commerce into African economies are the following:

- The scarcity of trained people at all levels in the economy, which is in turn affected by the quality and quantity of the outputs of the educational system;
- The need to encourage a 'business culture' and a spirit of entrepreneurship within the national

² Comment by President Mbecki of South Africa

³ . See Appendix 2 for a brief discussion of this relationship

economy;

- ❑ Limitations in the telecommunications infrastructure, which is in turn affected by population size and geographic distribution, and by available investment resources;
- ❑ The nature of telecommunications services available, especially the limited availability of high bandwidths for rapid information transmission
- ❑ High costs of telecommunications related services, which in part are related to the management and regulatory regime of the telecommunications system and in part through the choice of technologies used in the delivery of those services;
- ❑ Limited availability of computers equipped with a modem and appropriate software in the national economy (as a result of high costs of both equipment and Internet connectivity)and the trained capacity to use them;
- ❑ Significant gaps in the legal and policy environments established by government for the facilitation of commerce in general and e-Commerce in particular – both of which have direct effects on the level of confidence or trust which will be accorded to electronic transactions.

Legal Issues relating to the introduction of e-Commerce

A good inventory of the commercial legal issues which need to be addressed in order to enable e-Commerce is provided in South Africa's Green Paper on e-Commerce where the listing is the following one. We reproduce that listing in Appendix 5

THE AFRICAN INFORMATION SOCIETY INITIATIVE AND ITS EFFECTS

The Executive Secretary of the Economic Commission for Africa, writing in August 1996, articulated clearly what was then – and still is – a preoccupation of African Governments when he said

“The information revolution, along with its attendant explosive growth of knowledge, and the related phenomenon of the globalization of the world economy, have brought about the Information Age, which affects all aspects of economic, social and political activity. Insufficient appreciation of this phenomenon leaves African countries on the short end of an information and technology gap, the disparity between information rich and information poor.”

To begin the process of responding to the emergence of the “New Economy”, the ECA, with the support of African Governments, launched an activity which gave rise to the definition of an “African Information Society Initiative” (AISI) (described as “An Action Framework to Build Africa's Information and Communication Infrastructure”) which was endorsed by the twenty-second meeting of the Economic Commission for Africa (ECA) Conference of Ministers, in May 1996 and later by the Organization of African Unity Heads of State Summit in Yaounde in October of the same year.

The goals set within the AISI were both long-term and ambitious: By the year 2010, the AISI was intended to realize a sustainable information society in Africa where:

- Information and decision support systems are used to support decision making in all the major sectors of the economy in line with each country's national development priorities;
- Every man and woman, school child, village, government office and business can access information and knowledge resources through computers and telecommunications;
- Access is available to international, regional and national "information highways", providing "off-ramps" in the villages and in the information area catering specifically to grass-roots society;
- A vibrant business sector exhibits strong leadership capable of forging the build up of the information society;
- African information resources are available which reflect the needs of government, business, culture, education, tourism, energy, health, transport and natural resource management;
- Information and knowledge are disseminated and used by business, the public at large and disenfranchised groups such as women and the poor, in particular, to make rational choices in the economy (free markets) and for all groups to exercise democratic and human rights (freedom of speech and freedom of cultural and religious expression).

What is AISI ⁴?

The African Information Society Initiative (AISI) is an action framework that has been the basis for information and communication activities in Africa for the last five years. AISI is not about technology. It is about giving Africans the means to improve the quality of their lives and fight against poverty.

Why AISI?

AISI was launched in 1996 as Africa needed a common vision for its quest not only to bridge the digital divide between Africa and the rest of the world but more importantly to create effective digital opportunities to be developed by Africans and their partners, and to speed the continent's entry into the information and knowledge global economy.

⁴ <http://www.uneca.org/aisi>

Who supports AISI?

AISI was:

- Launched at the 22nd meeting of ECA's Conference of Ministers in charge of social and economic development and planning in May 1996
- adopted by the OAU Heads of State summit at the 64th Ordinary Session of the Council of Ministers meeting held in Yaounde, Cameroon, from 1 to 5 July 1996
- endorsed by all the African telecom ministers during the African Regional Telecommunication Development Conference, organised by the ITU and held in Abidjan in May 1996
- supported by the then G7+1 as Africa's major ICT initiative in its 1997 Summit in Denver
- recommended by the recently held ECA Conference of Ministers of Planning and Finance, held in Algiers, from 8 to 10 May 2001, as the guiding framework for ICT initiatives in Africa. The Ministers have invited international partners to consider launching a special initiative to support the harnessing of ICT for development as defined in the African Information Society Initiative and updated in the African Development Forum 1999.

Partnership

Since its inception, AISI has been supported and implemented through partnership. ECA joins multilateral, bilateral, and non-governmental partners, as well as representatives of the private sector and African member States, in implementing AISI. An important vehicle for AISI partnership is the *Partnership for Information and Communication Technologies in Africa (PICTA)*⁵. ECA is also a leading member of the *Global Knowledge Partnership (GKP)*. The PICTA working model and methodologies have been widely replicated, mainly through the GKP annual meetings and databases.

Some of the major international partners include:

- Bellanet International Secretariat (Canada)
- British Council
- Canadian International Development Agency (CIDA)
- Carnegie Corporation of New York
- CISCO
- Korea
- Japan
- India
- Commonwealth telecommunication Organisation
- Coopération Française
- European Union
- Ford Foundation
- German Technical Cooperation (GTZ)
- Global Information Infrastructure Commission (GIIC)
- Government of Japan
- infoDev Program (the World Bank)
- International Development Research Centre (IDRC) (Canada)
- International Institute for Communication and Development (IICD) (Netherlands)
- Kellogg Foundation
- La Francophonie
- National Telephone Cooperative Association (NTCA)
- Swedish International Development Cooperation Agency (SIDA)
- The Harvard Institute for International Development
- UK Department for International Development (DFID)
- United States Agency for International Development (USAID)
- The World Bank (Africa Region) and the World Bank Institute

⁵ <http://www.bellanet.org/partners/picta>

- WorldSpace Corporation
- WorldSpace Foundation

In addition to

- leading UN agencies (ITU, UNESCO, UNDP, WHO, WIPO, FAO, UNICEF, UNCTAD, UNRISD, WTO)
- several regional (ATU, Rascom, ADB, etc.) and national organizations

Major activities/achievements

Following are some of the major achievements:

- Support provided to 24 African countries to develop their own national information and communication infrastructure (NICI) policies, plans and strategies
- Periodic consultations were organised with member states and partners through the following activities:
 - organised the Global Connectivity for Africa Conference in Addis Ababa 2 to 4 June 1998 in collaboration with Partners for ICTs in Africa (PICTA)
 - organised the African Development Forum 1999 (ADF'99)⁶, which took place from 24 to 28 October, to bring the message of information technology and development, within the context of globalization and the knowledge-based economy.
- Capacity building for decision makers and technical training
- Launched the evaluation of ICT impact on peoples' lives and welfare (SCAN-ICT project)
(The attached matrix lists selected activities undertaken in implementing AISI)

Major Focus Areas

The major areas of focus of AISI as part of Africa's development agenda, and recommended by the 1999 African Development Forum (ADF '99) held in Addis Ababa from 24 to 28 October 1999 on the theme "The Challenge to Africa of Globalisation and the Information Age" are:

- promoting sectoral applications of ICT for eradicating poverty and improving quality of life. The ADF strategy called for commitment from the highest levels of leadership to applying ICTs to Africa's pressing social and economic problems including:
 - applications to support the educational process and meet the needs of Africa's youth
 - applications in support of the delivery of health care, opportunities for business and trade
 - electronic Government, and
 - creating the enabling policy environment.

Programmes in these areas now constitute the core of the follow-up to ADF'99 and the renewed vision of AISI.

- building the capacities of African telecommunications policy makers and regulators
- building global, regional, sub-regional and national networks on ICTs for development
- harnessing the potential contribution of the diaspora in improving ICT and knowledge in Africa
- analysing and evaluating ICTs and content trends in Africa

The way forward

As Africa's common vision in promoting the use of ICTs for development, AISI needs to be accorded the

⁶ <http://www.uneca.org/adf99>

necessary attention it deserves by all regional plans and strategies, and global initiatives such as the G8 DOT Force, UN-ECOSOC ICT Task Force, Tokyo International Conference on African Development (TICAD III) of Japan and other related initiatives and programmes.

E-READINESS: THE STATUS IN SOME TYPICAL COUNTRIES IN AFRICA

The Readiness of Policy Processes

In many of the countries covered in this study, there are six policy discussions under way, in some shape or form, each of which have significant implications for the viability of e-Commerce within the respective national economies. The policy debates cover

- Policy development directly addressing the needs of e-Commerce;
- Policy development for the promotion of the Information and Communications Technology (ICT) Sector of the national economy;
- Policy development regarding the future structure of the Telecommunications Industry within the national economy;
- Policy development concerning the regulation of the telecommunications (and sometimes also the broadcasting) sector
- Policy development regarding the introduction of some form of electronic government; and
- Policy development regarding reform of the country's commercial code or legislation.

Brief summaries, in tabular form, of the present state of these policy discussions in each of the countries are presented below.

	Policy for E-commerce	ICT Policy	Telecom Competition Policy	Telecom Regulatory Reform	Policy for e-Government	Review of Commercial Code
North Africa						
Egypt	As part of the national ICT plan, government has committed itself to expand the application of e-commerce in the public and private sector.	The National Plan for ICT was declared in December, 1999	The telecom sector is slowly being deregulated.	The Telecom Regulatory Agency is in the process of being separated from Telecom Egypt	The Ministry of CIT has been working closely with Microsoft to establish a framework for electronic government.	A legal e-commerce committee was formed by Ministries of CIT & of Justice (3/2000). It drafted a cyberlaw which should be adopted in the next parliamentary session
Morocco	February 2000 –creation of an inter-ministerial committee to establish a global framework for the development of e-commerce		Regulated private monopoly	The regulatory body is in place		A draft law being considered includes basic definitions of e-commerce thus constituting the base for a more complex legal framework that would follow.
Tunisia	National Commission for Electronic Commerce created in November 1997. Important legislation approved	Innovation Incentive Fund launched to promote innovation in IT	Law submitted to Parliament on the 11th of December 2000 to privatize the telecom operator	New regulatory system to be introduced via the law just submitted		Amendment in June 2000 of the Code des Obligations et des Contrats introduced the legal use of electronic documents and signatures.

	Policy for E-commerce	ICT Policy	Telecom Competition Policy	Telecom Regulatory Reform	Policy for e-Government	Review of Commercial Code
East Africa						
Ethiopia	No policy in place and there is no visible movement towards establishing a policy framework.	Efforts to develop a policy paper since 1998 have not been successful.	All services are a public monopoly	A semi-autonomous regulatory institution - Ethiopia Telecom Agency- is operational.	No policy is in place for e-government	No process is in place to review the commercial code to accommodate e-commerce.
Kenya	No policy in place. Government is participating in a private sector led National Task Force	Attempts to formulate an ICT policy in the past have not been successful due to lack of government interest	Monopoly ending for fixed services. Competitors licenced but not yet in operation -	In 1999 the government established a telecom regulator	No policy is in place for e-government	No process is in place to review the commercial code to accommodate e-commerce.
Uganda	No policy is established yet	There is a serious effort to prepare a national ICT policy	Regulated private duopoly	Regulator in operation	No policy is in place for e-government but options being explored	E-Commerce not yet included in on-going review of commercial law
West Africa						
Ghana	Ghana has no E-Commerce Vision or Strategy	Policy process initiated in October 1998	Two companies operating fixed line service	A National Communication Authority was set up in 1995 as the regulator	No full policy or policy process in place	. Some individual elements of commercial law are being updated
Mali	No official process in place to develop a vision or a strategy.	Many initiatives for the promotion of ICTs in Mali but no overall policy	Public Monopoly with 100% state ownership	No independent regulator	No activity	No review is underway.
Senegal	Policy currently emphasizes 'telecentres'	Policy development for ICT cluster is active	Regulated monopoly, with mixed public-private ownership, due to end in 2003	Regulator is part of a Ministry	Some initial experiments are in progress	Senegal is a participant in the OHADA initiative (Harmonisation du droit des Affaires en Afrique)
Southern Africa						
Mozambique	Seen as a subset of ICT policy	Full policy now approved; moving to implementation	Government to move to privatization of the main telecom operator in the next two years.	New regulatory regime will be necessary.	Objectives set but no responsibility assigned	On-going reform of outdated commercial code does not refer to e-Commerce
Namibia	May be covered in ICT policy review	Policy development in early stages. Surveys completed	A White Paper was apparently approved more than two years ago, but never formally published	Has an established regulatory system	There is a secretariat responsible but implementation has not advanced much.	No work is being done on the legal and commercial frameworks. Online business contracts are not accepted by law
South Africa	Major public consultation launched Nov 2000	Major project of policy and strategy design and implementation in operation	Telecom system privatized with initial monopoly soon to expire	Independent regulator established	Major initiative just beginning. Will build on existing efforts	Full review of commercial law completed. Moving to amend as required

Readiness for the Networked World

Harvard University's Center for International Development has published a *Guide for Developing Countries* to assist in making qualitative judgements of levels of 'Global Electronic Commerce Readiness'. As the name itself suggests, this document helps in determining the readiness for participation in e-Commerce and the networked world at large by any given community. The Guide is available online at <http://www.readinessguide.org>. The factors assessed are grouped under the headings of Network Access, Networked Learning, Networked Society, Networked Economy and Network Policy.

To stimulate debate, we have produced a preliminary assessment of Africa's e-Readiness.

Characteristic	Urban Africa	Rural Africa
Network Access		
Information Infrastructure		
Internet Availability	Internet access available in capital cities in all African Countries. Urban access beyond capitals varies from very good in countries with higher per capita GDP to very poor in the poorest countries	Access very much more limited due to factors of poor infrastructure.
Internet Affordability	Telephone charges slowly begin to reflect emerging competition in the telecoms market..	Costs of access are very high in relation to most rural incomes
Network Speed and Quality	Varies greatly from country to country	Almost always much poorer in rural areas
Hardware and Software		
Service and Support		Always less developed in rural as opposed to urban areas
Networked Learning		
Schools' Access to Information & Communications Technologies (ICTs)	Computers are found at university, secondary, and primary school level in some countries in urban areas	There are some projects in some countries to introduce ICTs into rural schools
Enhancing Education with ICTs	Computers used mostly to support traditional work and study, except at university level, where information and communication technologies can be fully integrated into the curricula	Only few teachers use computers when available, in limited fashion. Most teachers using computers possess basic computer literacy skills only. Computers mainly used at tertiary education level.
Developing the ICT Workforce	Technical classes and programs on ICT-related subjects available from public and private educational institutions in many large urban areas, but in many countries the certification of such training is weak.	Very limited opportunities for training in ICT skills development in rural communities in most countries.
Networked Society		
People and Organizations Online	Some of the urban population has heard of the Internet, although few use it on a regular basis..	
Locally Relevant Content	Local web sites are increasingly common in some countries, with English as the dominant Web language in most of the continent. Use of	Very few web sites generated in rural areas. Major problem in lack of sites using African languages

Characteristic	Urban Africa	Rural Africa
	online bulletin boards, Usenet groups, newsletters, and listservs is present. In a number of countries	
ICTs in Everyday Life	Public phones found throughout many urban areas. Mobile phones spreading quickly, especially among higher income groups. In some cities, Community members use telecenters, cybercafes, etc., which offer computer use and online services to the public for a fee.	Very limited availability of public usage ICT centers and only in some countries.
ICTs in the Workplace	The higher the per capita GDP in the country, the greater the penetration of ICTs into urban workplaces.	Extremely rare in rural enterprises
Networked Economy		
ICT Employment Opportunities	Technical skills are becoming a source of competitive advantage.	Although there are some employment opportunities that call for technical skills, most workers with ICT training/experience remain in urban areas after their schooling; many eventually emigrate.
B2C Electronic Commerce & B2B Electronic Commerce	A small minority of African businesses operate web sites with regular updating evident. Usage of the Internet for B2B and B2C purposes growing in some countries, although even in such instances, paper-based transactions (e.g. signature) are usually still required.	Some local businesses provide web sites, but this is limited due to limited PC distribution. Some businesses accept orders placed by fax and telephone.
E-Government	Some early experiments in the central governments of some countries. Much less activity at other levels such as municipalities.	Few small urban or rural areas have web sites. When available, information may be outdated or irrelevant.
Network Policy		
Telecommunications Regulation	Most countries are moving (sometimes slowly) to end traditional public monopoly over the provision of fixed-line telephone services. A growing number of countries have promoted competition in mobile telephony by granting several licences for the provision of such service.	Some countries are setting targets for improved levels of rural connectivity as a condition of licencing. The advent of mobile telephony, in the longer term, may speed up the provision of access for rural people
ICT Trade Policy	A significant number of governments are developing broad ICT policies and some may be considering questions relating to import duties on ICT equipment. However, once policies are developed, many countries experience considerable difficulty in implementation	

CHALLENGES FACING AFRICAN GOVERNMENTS

From our interviews in a cross-section of African countries, we believe that there are still a long list of challenges for governments to meet if they are to create an 'enabling environment' for e-Commerce. None of these challenges is trivial; taken together they represent a broad agenda of activities which, if undertaken with determined effort, would both improve the environment for the introduction of e-Commerce **and** show that the governments of the continent have the capacity for sustained coordinated action.

From our perspective, there are no 'quick fixes' which could quickly create the conditions for e-Commerce. Rather there is a clear need for a long-term commitment by governments to programs of policy reform. From our observations, the most effective processes of policy reform are those in which substantial contributions to thinking are sought from all affected stakeholders and in which those inputs are clearly used in the fashioning of new policies and programs.

With these thoughts in mind, we present a listing of challenges which we have identified under each of the six main headings of our terms-of-reference⁷.

WE PRESENT BELOW AN AMBITIOUS POLICY AGENDA

WHICH SHOULD BE PURSUED BY ALL AFRICAN GOVERNMENTS WHICH WISH TO ENABLE AND FOSTER THE INTRODUCTION OF E-COMMERCE INTO THEIR NATIONAL ECONOMIES.

Challenges relating to National Visions and Strategies

- **Leadership:** Will Governments provide strong and visible leadership from the highest level to make a credible case for allocating a high priority to activities relating to the introduction of e-Commerce into the national economy? Are modalities such as Inter-Ministerial task forces or standing committees appointed by the Head of State and led by senior ministers useful and viable ways of providing the necessary leadership in the political contexts of the different countries of Africa? ;
- **Acting as a role model:** Can Governments assemble the human and intellectual resources to act in ways which will serve as a role model for other parts of the national economy. Can Governments decide in favour of adopting practices of e-Government, including e-procurement, in order to demonstrate their feasibility in the national context? Can governments extend such initiatives to State Corporations and especially to those in the Telecommunications sector?
- **Having all parts of government act together.** Can Government overcome the lack of established traditions of inter-Ministerial co-operation which will affect not only policy making in an area such as e-Commerce which touches on many Ministerial jurisdictions but also will affect attempts to introduce e-Government within a national government?
- **Creating popular awareness:** Can Governments devise and implement activities and programs to increase awareness of the opportunities available for all citizens and enterprises in e-Commerce?;
- **Involving all national stakeholders:** Can government organize consultative processes which will reach beyond government ministries and agencies (and beyond capital cities) to hear inputs from diverse groups of stakeholders including firms who are users of IT as well as those who are suppliers,

⁷ We note that our detailed findings are presented in the four regional reports which accompany this Volume

firms which are of all sizes, educational and training institutions in both the public and private sectors, and representatives of civil society including labour unions, consumer groups, professional societies and development-oriented non-governmental organizations?

- **Changing Attitudes and Perceptions:** Can Governments act to improve the dynamics of the interactions between the public and private sectors by
 - Regarding the private sector as a partner rather than a competitor;
 - Co-operating with the private sector in development of a national strategy for the IT industry;
 - Assisting in the identification of competitive advantages in local production and service provision which might be enhanced by their involvement in e-Commerce;
 - Assisting in the development of sectoral strategies for the introduction of e-Commerce in key areas of the national economy;
 - Assisting in the identification of opportunities in the emerging new economy, for example through the application of IT within traditional economic activities?
- **Making use of existing knowledge:** Can governments organize their own internal processes to profit from the wealth of information available electronically from the United Nations System and other reputable national and international sources?⁸

Challenges relating to Regulatory Policy

- **Establishing Financial Services for e-Commerce.** Can the Banking and Financial Sectors be encouraged to implement changes in their policies, practices and services to accommodate the growth of e-Commerce in the national economy?
- **On-line payments;** In particular, can steps be taken to provide for legally acceptable means of on-line payments and financial transfers?
- **Foreign Exchange Controls** Is government willing to conduct a review of foreign exchange control rules and procedures in the light of the introduction of e-Commerce?;
- **Security and Trustworthiness.** To increase the security and trustworthiness of on-line business transactions, will Governments put in place systems to accredit agencies which will in turn have a reliable capacity to certify the validity of electronic signatures and electronic contracts?;
- **Amendments of Corporate Law:** Are Governments ready put in place Legal Commissions to propose amendments necessary to all business and corporate laws which will be affected by the introduction of e-Commerce? Such laws in need of revision will include, but not be limited to:
 - Copyright Laws;
 - Laws on intellectual property which should be brought into line with the WIPO Copyright Treaties
 - Laws regarding protection of databases, privacy protection, trademarks and domain names ;
 - Laws on competition
 - Laws regarding the use of cryptography
 - Laws relating to new forms of 'cyber-crime'.

Challenges relating to the Acceleration of Investment in e-Commerce

- **Creating a positive investment climate.** Are Governments ready to create an investment climate in which investors have confidence and in which the risks and benefits of e-Commerce are known and understood?
- **Encouraging business start-ups.** Are Governments ready to create an environment in which establishing new business start-ups is encouraged, possibly through the establishment of incubators, and in which Venture Capital Firms are enabled to operate?
- **Making e-commerce be seen as nationally and continentally vibrant:** what role can government play in partnership with the private business sector to boost African goods and services on the Internet as alternatives to the products and services of other parts of the world?

⁸ As an example, in December 1996, all African Countries voted in the UN General Assembly in favour of the "UNCITRAL Model Law on Electronic Commerce", yet during interviews in December 2000, hardly any official interviewed knew of the existence of this useful material.

Challenges relating to the Support of Disadvantaged Groups

- **Evaluating experiences with community access initiatives;** Can Governments which have made significant efforts in collaboration with business associations, investors associations and international agencies, to provide affordable access to ICT through technology access community centers (TACCs) now establish feedback and evaluation mechanisms in order to understand the usefulness of these centers to the public?
- **IT support for SMEs.** Do governments have the capacity to deliver IT support to small and medium scale enterprises (SMEs) as the first step on the route to enabling them to participate in e-Commerce?;
- **Quality Assurance in SMEs.** Can government act to expand the availability and affordability of services to SMEs in the area of quality assurance, to permit SMEs to demonstrate the reliability of the products offered and hence to facilitate their sale by electronic means?
- **Assistance to women entrepreneurs.** Will governments put in place the special assistance needed for women entrepreneurs who often face added difficulties in obtaining information and credit? Would the creation of national portals for women entrepreneurs in the Internet be a useful initiative?
- **Assistance to youth:** Will governments appreciate that the early introduction of young people to IT skills will be of fundamental importance to the economy of tomorrow?

Challenges relating to the Creation of a Skilled Labour pool for e-Commerce

- **Filling the gaps in the education and training systems;** The arrival of e-Commerce and the new knowledge based economy in Africa confronts the economies of the continent with the need to both improve the teaching of IT related matters throughout the existing formal education system **and** to put in place new learning opportunities for people already in the work-force ; in such a context can Governments address a series of important skill gaps which include:
 - Inadequate IT knowledge among many public servants, including many of those at senior level: government cannot play a leading role in enabling e-Commerce if public servants have inadequate levels of understanding of IT;
 - Inadequate entrepreneurial skills among the technically trained, which inhibits the emergence of new start-ups in the new economy;
 - Inadequate numbers of adequately skilled trainers in IT fields;
 - Inadequate numbers of certified training programs in areas relevant to e-Commerce;
 - Inadequate knowledge of the changes being brought about by e-Commerce in the legal profession and among judges who will be called on to participate in the new economy?
- **National Skills Strategies.** Can – and will - the public and private sectors of African countries, acting jointly, formulate national skills strategies in order to face the growing challenges of the new knowledge-intensive economy?
- **Availability of Trained Researchers** There are few researchers in the region working on issues of e-Commerce, in part due to the lack of funding available to support their activities; are governments prepared to work with donor agencies to address this gap in skills?

Challenges relating to the Promotion of Research on Issues of e-Commerce

- **Creating a demand for policy research:** Policy-related Research on issues of e-Commerce can only flourish in areas where there are adequate numbers of trained researchers, adequate flows of information, and an openness among decision-makers in both the public and private sectors to integrating the results of policy-research into their decision-making processes. Can African governments work with their private sectors and the international donor community to address these weaknesses in policy-making?

This catalogue of challenges would be daunting, even in countries well-endowed with human and financial resources – a situation which is rare in the developing world. And we must reiterate that the challenges related to the introduction of e-Commerce are only a subset of the larger set of challenges posed by the need to truly integrate information and communications technologies (the technologies of the ‘new economy’) into African economies. The challenges of the African Information Society Initiative discussed earlier have still to be faced.

Challenges due to resource scarcities

The agenda of e-Commerce challenges is made more difficult to tackle due to

- **Lack of financial resources within government** which severely limits policy implementation;
- **Lack of investment capital** which slows the expansion of the ICT sector and, in area of telecommunications, results in limitation of available bandwidth and high unit costs of communications;)
- **Human Resource scarcities in Government**– lack of skills in technical areas, in policy formulation, in policy research and in management of regulatory processes;
- **Human Resource scarcities in private sector** – in technical areas, in management of transition to e-commerce.

As in all other facets of life, e-Commerce will flourish more fully under a climate of good governance. As a result of existing poor practice, there are governments, both inside and outside Africa, which face yet another set of challenges:

Challenges relating to the efficiency and probity of public administration

These politically –sensitive challenges can be summarized as the challenge of **Establishing the Rule of Law**⁹, which includes

- Ensuring the quality and fairness of a country’s legal and regulatory system;
- Enhancing the degree to which officials, bureaucrats and citizens understand their national laws, embrace them and know how to make them work
- Establishing Bankruptcy rules;
- Publicizing Business codes of conduct;
- Creating Property-rights that encourage risk-taking;
- Providing Processes for judicial review;
- Utilizing International accounting standards;
- Establishing competent Commercial courts;
- Creating Regulatory oversight agencies backed up by an independent judiciary;
- Enacting Laws against conflicts of interest and insider trading by government officials; and
- Having officials and citizens ready to implement these rules in a reasonably consistent manner

⁹ Based on a listing contained in Freidman, Thomas L. *“The Lexus and the Olive Tree: Understanding Globalization”* Anchor Books, New York, Updated and Expanded Edition, 2000, pp 152-153

The principal finding of this review is that African Governments need to act on their responsibility for creating an economic, legal and regulatory environment which will enable and foster the growth of e-Commerce within their national economies.

**As a first step, each Government should develop and publicize
a specific agenda, accompanied by a proposed time-table,
for the actions which it will undertake
to create an enabling environment for e-Commerce within its national economy.**

CHALLENGES FOR THE PRIVATE SECTOR

As we stated in our introduction to this report, it needs to be clearly understood that e-Commerce is first and foremost a business activity. While we have received a mandate to look at what governments need to do, we would be remiss if we failed to at least mention the challenges and barriers facing firms and enterprises of all sizes in Africa's economies.

Challenges for e-entrepreneurs

The first problem facing all enterprises, including e-enterprises, is the appropriate definition of the markets which they wish to penetrate. Given all of the difficulties which we have identified in the African economies which we have reviewed – including issues such as inadequate facilities for electronic payments, difficulties in local distribution, limited access to the Internet among many potential consumers – we believe that an important challenge for African e-entrepreneurs will be that of breaking into export markets in the industrialized world. The first wave of Africa-based e-businesses should be export-oriented and export-driven. The sale of services via Internet connections offers significant opportunities.

Challenges for firms

The corporate cultures of most of the firms need to be reviewed because, among a long list of challenges,

- **Work attitudes need to be changed** - Most SME's don't understand the application of e-commerce to their day-to-day business operation. This lack of awareness is due mainly to the fact that since there is no domestic possibility to market product via electronic means, these companies are more skeptical of the technology in general.
- **The skills of management, especially of SMEs, need to be upgraded.** Typical SME proprietors have a low level of education and therefore the interaction and usage of ICT is very limited. In some countries, fewer than 2% of SME proprietors have education beyond secondary school level. This level of education has not prepared the proprietors with adequate skills and confidence to utilise ICTs
- **The skills of employees need also to be upgraded** so that employees can operate in the new modes required by e-Commerce. Companies are impeded in their growth by skills shortages but they continue to under-invest in training.
- **Customer services have to be enhanced,**
- The competitive spirit to be able to operate in a global market has to be injected into many more firms,
- **Lack of Awareness of the potential opportunities,** benefits as well as returns of engaging in e-commerce need to be created
- **Quality of Service** has to be introduced as a working necessity
- **Product Quality has to be improved** but most companies are weak in the management of technical change and in the promotion of innovation.
- **E- Entrepreneur skills** need to be developed
- **Weak Distribution Systems for goods** – not reliable; addressing schemes often not efficient, postal services need upgrading.

Challenges in national financial systems

- Absence of basic banking services to allow use of electronic payments, credit, and funds transfers;
- Banks are still very conservative as regards offering ICT-friendly payment tools. Even in terms of loans and financing to dot.com companies, commercial banks need to re-orient their assessment of the

balance sheet “asset” items in evaluating securities of “knowledge-based” companies

- The greatest impediment to development within the SME sector is lack of access to fixed and working capital which in turn affects the capacity to access or procure ICTs
- Financial institutions have high handling charges that cannot be absorbed by SMEs.

Barriers to entry into e-Commerce for SMEs

- **The relative costs of establishing and maintaining an e-commerce operation** are high in relation to the internal economies of most African firms. There are millions of enterprises in Africa (1.6 million enterprises, excluding the agricultural sector, in Egypt alone), of which 98% are small, micro, and medium and combined they use significantly less than 10% of all credit extended. This vast number of companies cannot usually afford to buy a computer and have the level of Internet connectivity on which e-commerce is heavily dependent.
- **The inability of consumers to pay:** Purchasing power is limited: in 1999, the average income per person in Africa was 540 dollars, compared with 2,300 in other developing regions and 26,100 dollars in developed countries. International telephone calls cost an average of 3 dollars a minute and the cost of mobile phone services is equally prohibitive. With public telephone operators running international internet backbones, internet service providers (ISPs) pay excessive access rates, which are passed on to the subscriber. On average, a monthly subscription costs 50 dollars, compared with seven dollars in the United States¹⁰
- **The cost of communications.** The primary barrier to access is the price of telephone calls. While the advent and accelerated adoption in many African countries of cell-phone technology has permitted rapid access to telephone services in areas where fixed-line service is not available, the differential cost of using prepaid service (the only option for the poor) as opposed to long-term contract service means that the cost barrier is higher for the poor. Only 13 of Africa’s 54 countries have introduced a tariff system (based on use of a special ‘area code’) to permit Internet access at the cost of a local phone call¹¹
- **Low Telephone Penetration**
- **A country-wide shortage, in most countries, of business resource centres** equipped to offer Internet Access
- **The majority of African SME’s are located in rural areas** and therefore face problems associated with poor access to telephones, lack of maintenance support for computers and lack of commercial power.

¹⁰ Source: Oxford Analytica daily report, Feb 20, 2001

¹¹ According to an Oxford Analytica Report (Feb 20, 2001) the countries are Benin, Burkina Faso, Cape Verde, Ethiopia, Gabon, Malawi, Mali, Mauritius, Senegal, South Africa, Chad, Togo, and Zimbabwe

THE VIEWS OF GLOBAL BUSINESS

As African governments move to formulate their own policy approaches to enabling e-Commerce in their national economies, they should be aware of the available information which documents the views of business world wide. Many of those views are channeled through the International Chamber of Commerce (www.iccwbo.org) which has national committees in 11 African Countries¹² ICC has presented to Ministers of the Industrialized Countries a Global Action Plan for Electronic Commerce¹³ and the main principles behind the plan are reproduced in Appendix 6.

As recently as December 13, 2000, The Global Business Dialogue on Electronic Commerce (GBDe), an organization of more than 70 international corporations, concluded agreements with ICC and another business group, the Business and Industry Advisory Committee to the OECD. Under the agreements, the three business groups will work together to identify best practices for e-commerce and share expertise in such subjects as internet property rights, cybersecurity, bridging the digital divide and alternative dispute resolution

All of the major initiatives by business make some reference to “the digital divide” and this creates an opportunity for African governments to open a dialogue with business to improve the opportunities for African enterprises to help close that divide.

¹² Algeria, Burkina Faso, Egypt, Ghana, Morocco, Nigeria Tanzania, Senegal, South Africa, Togo and Tunisia

¹³ The text can be downloaded from http://www.iccwbo.org/home/electronic_commerce/commission.asp.

RESPONSES TO THE CHALLENGES

While most of the responsibility for creating the conditions to enable the introduction of e-Commerce into national economies clearly lies with national governments, and while the actual development of e-Commerce is a clear responsibility of the private sector, we have identified some activities which would benefit from action at the Pan-African level, with important contributions from the international community. We discuss these possible initiatives here.

From analysis of the interviews conducted by the Mission, there has emerged a set of three important needs which are felt in almost all of the countries of our sample. These are for:

- A strong advocacy of the need for action by African Governments to facilitate the introduction of e-Commerce into national economies. . [Within Governments this advocacy needs to come from the very highest levels including Heads of State and Prime Ministers; in the private sector it needs to be expressed by people of sufficient stature in Africa to command the attention of Heads of Government and Senior Ministers];
- Sources of policy advice related to e-Commerce which are based on research conducted with an African perspective; and
- Courses dealing with the legal, social, economic and technological aspects and implications of policies for the facilitation of e-Commerce, designed for senior policy-makers and delivered in modules which are practicable within the heavy schedules of most of the policy-makers for whom the courses are designed;

Also from the analysis has come the perspective that “*policies for e-Commerce*” include policies for the management and regulation of telecommunications, policies for the promotion of the development and use of information and communications technologies and policies regarding the reform of national commercial codes in order make those codes suitable for a digital environment. As a consequence, in what follows we intend that this broad interpretation of “*policies for e-Commerce*” be used.

An Initiative to stimulate Policy Awareness

Our report has reiterated, yet again, the many challenges facing individual governments in Africa as they attempt to come to grips with the myriad of issues surrounding the introduction of e-Commerce into their national economies. We are also aware of the variety of intergovernmental initiatives which have been promoted, particularly by the Economic Commission for Africa and by the specialized agencies of the United Nations System.

Our proposal is for the creation of an **African Forum on e-Commerce Policy and Practice** which would consist of:

- representatives of the private sector (ideally Chief Executive Officers from corporations active in some aspect of e-Commerce) nominated by the Secretary General of the African Business Round Table¹⁴ in consultation with the International Chamber of Commerce and drawn from sources such as national business associations and chambers of commerce and the East, West, North, and South African Enterprise Networks; and
- representatives of governments (ideally Senior Ministers with responsibilities in the areas of e-Commerce, ICTs and Economic Development) nominated by the Secretary General of the Economic Commission for Africa in consultation with the ITU, UNCTAD, WIPO and UNCITRAL

This forum could receive professional support from the Secretariat of ECA and draw upon substantive

¹⁴ see www.abrnet.org/english/about.htm

outputs from the research system described below. The linkages with the international business community which could be established through the nominating procedure proposed above should also open up access to the global networks of private sector organizations thinking about e-Commerce

The idea is based on the kinds of public-private round tables which today are playing important roles in national debates on e-Commerce in industrialized countries

We would propose that the terms of reference¹⁵ of this new forum would include responsibility:

- To provide a comprehensive and on-going overview of the current state of e-business in Africa.
- To present a compelling vision for the development of Africa's Internet economy, including aggressive targets and opportunities..
- To identify strategies for industry, the educational sector and government to realize this vision.
- To inspire African business to approach the opportunities presented by the Internet with a sense of urgency.
- To persuade African governments and regulators that facilitating the development of Africa's Internet economy should be a priority.

A great challenge to any such body would be that of gaining credibility in the eyes of African Governments – a task whose difficulty is underscored by the modest levels of impact at the national level of the African Information Society Initiative.

The first step in establishing such credibility lies in the selection of members of the Forum

**The Mission would formally propose that
the Economic Commission for Africa, through its Executive Secretary,
take the appropriate steps to launch
an *African Forum on e-Commerce Policy and Practice*
as described in this report.**

**The Mission also recommends that member countries of the ECA
should launch similar initiatives at the national level.**

An Initiative to Promote Policy Research and to Train Policy-Makers

The introduction of e-Commerce into an economy involves a significant and complex array of economic, social, legal and technological changes and, as a new phenomenon, it is poorly understood. Better-informed policy making and policy implementation in the public sector, and better-informed investment decision-making in the private sector, will depend on improved understanding of all of the ramifications throughout a national economy of the processes now under way.

As we have shown in our regional reports, there are two streams of research on e-commerce and related telecommunications policy issues slowly beginning to emerge:

- Research in some academic institutions and within a very limited number of large legal firms in a small minority of countries, addressing issues of public policy; and
- In-depth studies of the market behaviour of firms, conducted by a few leading consulting firms, again in only a small minority of countries, aimed at informing private sector decision making.

¹⁵ Based on the experience of Canada's Round Table on e-Commerce

As yet, the linkages are weak and fragile between the little research on-going and policy-making . At the same time, we see frequent cases of senior officials who still need to receive basic introduction to new technologies and their implications being thrust into positions in which they have to make policy choices which have great significance for their countries' development.

To tackle these issues we are drawing, and proposing to extend, the experience generated over the last fifteen or more years in the support of research and training in issues of macro-economic policy in Eastern and Southern Africa. The experience is that of the African Economic Research Consortium (AERC)¹⁶, originally established as an IDRC funded project in the early 1980s and converted into a legal entity supported by a consortium of some 15 international donor agencies in 1988.

The essence of the AERC model is one in which the AERC is constituted as a legal entity (in Kenya, in this case) which has

- a Board of representatives of donor agencies which finance the AERC who approve annual programs of work for the AERC, provide the funding, and monitor the outputs and
- a Board of researchers and policy makers drawn from the region, who develop annual programs of work, run competitions for funding of research projects and organize training activities;

The AERC in turn supports

- a set of research teams in the countries of the region in which attempts are made to have officials from Central Banks and Ministries of Finance participate as members; and
- training courses for young researchers.

In the case of African e-Commerce, we are proposing the creation of

- a **Donor Consortium on African e-Commerce Policy and Practice** at the Pan-African level;
- a set of **Regional Round Tables on African e-Commerce Policy and Practice** at the regional level and
- the support of research projects, of training programs for officials, and of training programs for new researchers at the national¹⁷ level.

The Donor Consortium on African e-Commerce Policy and Practice should consist of one representative of each donor agency making contributions to the fund for support of research and training activities within this system and should become a legal entity with the power to receive and disburse funds. This consortium can obviously draw on the extensive experience of the AERC Consortium with respect to its operating practices.

The objectives of the Donor consortium would be

- To finance regional programs of applied research in direct support of policy development and private practice related to e-Commerce in Africa
- To finance the training of new researchers in this field;
- To finance high-level training courses for policy-makers; and
- To support dissemination of the results of that research

This modality is not proposed as a mechanism for coordination of existing donor efforts; rather it is a mechanism for raising and channeling funds into programs of research designed and coordinated by Regional Round Tables.

The use of a consortium is a tool to overcome some of the fragmentation of donor efforts identified by the Mission as a problem for African governments. There is a perceived feeling in many countries that e-Commerce initiatives which are donor driven are not co-ordinated and at worst competitive with the

¹⁶ see www.aercafrica.org

¹⁷ These activities could also encompass regional cooperation if specific opportunities arise.

activities of other donors and that they show little proper concern for local priorities. The impression conveyed is that the internal priorities of the donor's own program take precedence over national priorities. There is an added fear that this approach is setting in place programmes that are greatly balkanised and whose sustainability is suspect. And whereas health, education and to some extent agriculture sectors have received some specific attention in donor initiatives, rural commerce feels left out with only some casual mention at times that the private sector should be able to take care of rural needs on its own..

- The **Regional Round Tables on African e-Commerce Policy and Practice** consist of sets of representatives of the industrial, governmental and research communities interested in issues relating to the promotion of e-Commerce in their regions and each should become legal entities with the power to receive and disburse funds

While in the long-run membership of these Round tables should be self-selecting, the initial memberships should probably be at the invitation of the Donor Consortium with inputs from the African Business Round Table.

The objectives of the Regional Round Tables should be to support policy and decision making relating to e-Commerce in the region by

- Developing programs of research to respond to needs identified by governments and the private sector in the region;
- Financing research and training activities on topics within those programs, via a system of 'calls for proposals' using funds provided by the donor consortium
- Encouraging and facilitating the dissemination of research findings among public and private decision-makers

The Round Tables would receive their base funding from the Donor Consortium and would be able to accept commissions from Governments or Private Sector Organizations for research and training activities.

To assist the Round Tables in becoming operational, advice could be provided to them by the Secretariat of the AERC.

At the **national level** the Round Tables would identify and support research teams or networks with proposals to

- carry out applied research on topics which relate to e-Commerce in the region and which fall within the program areas identified by the Regional Round Table.
- conduct training courses for decision-makers;
- provide training to young researchers; or
- disseminate widely the results of completed research activities

Each research team should have demonstrable links to public and private decision makers. The key to the activities of this system at the national level will be the attention paid to building face-to-face links between researchers and policy-makers (often by including policy makers directly in research teams). Such a practice would be designed to ensure both that researchers understand better the constraints faced by policy-makers and that policy-makers have quick and effective access to on-going research.

Activities which could be supported would include

- Research projects and networks (either national or regional)
- Training workshops;
- Workshops and publications (including web-based versions of both) to disseminate results

**The Mission would wish to formally propose that
the International Development Research Centre,
in the light of its co-sponsorship of this Mission and of its long-time association with
the African Economic Research Consortium,
undertake to promote the creation of the Donor Consortium
and of the Regional Round Tables proposed in this Report**

While we have proposed a mechanism through which donor funds would be provided in support of research and training on e-Commerce, we believe that Governments should make at least symbolic financial contributions to the proposed work as an indicator that Governments accept the priority which needs to be allocated to these activities.

SOME COMMENTS ON E-GOVERNANCE

In today's world in which governments everywhere are striving to be more transparent in their processes, more efficient, economic and effective in the fulfillment of their responsibilities, and more responsive to the needs of the citizens whom they are elected to serve, the application of information and communications technologies in a systematic way – referred to as “e-Government” – is widely perceived as a crucial objective. The goal, as set out in a South African Policy Paper¹⁸, is to enable government to work better, faster, more intelligently and more cheaply.

According to the “Report of the Presidential Review Commission on the Reform and Transformation of the Public Service in South Africa¹⁹”

Fiscal constraints and the resulting pressure on government budgets makes the integration of information technology into all facets of the public service vital to meeting the service demands of the public. Information technology must not be applied haphazardly or sporadically. It also must not be used simply to automate existing practices. Instead, information technology must be seen as the essential infrastructure for the government in the 21st century - a modernized electronic government which allow citizens broader and more timely access to information and services through efficient, customer- responsive processes, thereby creating a fundamental revision in the relationship between the Government and everyone served by it.

However, the recognition of the need to move towards more extensive and systematic use of IC technologies is tempered by often-bitter memories of significant failures in this area in the past. In the Policy Paper cited, the Government of South Africa refers to “unscrupulous IT vendors”²⁰ who exploited the weaknesses in the technological knowledge-base of officials responsible for ordering IT equipment and who oversold technical systems which were not tailored to respond to the specific needs of the purchaser.

It will therefore be against a backdrop of acknowledged need coupled with real concern that African Governments approach e-Government.

For the purposes of this report, we distinguish four different elements of e-Government –

1. The electronic provision of public information to all interested parties (the simplest form of e-Government to implement)
2. The internal application of informatics in the processes of government;
3. Government to Business e-Commerce; and
4. The electronic provision of government services to citizens.

The electronic provision of public information

Often, the first evidence of a government becoming engaged in some form of e-Government is the appearance of Governmental web sites on the World Wide Web. For the purposes of this report and within

¹⁸ See Department of Public Service and Administration, Republic of South Africa “*Electronic Governance: the Digital Future*”, Pretoria, October 2000, page 6

¹⁹ Available at <http://www.gov.za/reports/prc98/part1.htm>

²⁰ In fairness we must record that we have also heard complaints about “unscrupulous public servants”, normally in key positions, who decide on the basis of commissions or in favor of firms where they have shares, a practice said to be becoming common in certain African countries

the countries of our sample, we have conducted an informal census of the numbers of Ministries with Web Sites and provide some comment on the information content of the sites.

	Number of Official Web Sites ²¹²²	Examples of Government Home Pages	Ministries		Information Content of Ministry Web Sites
			Total	With Web Sites	
Egypt	35	www.alhokoma.gov.eg	24	8	Some Ministries have their own sites which provide some useful information (Statistics, texts of legislation) but often in need of updating.
Ethiopia	22	None	17	0	Only a few press releases available from the Office of the Government Spokesman. Other web sites maintained by public bodies provide old information
Ghana	23	www.ghana.gov.gh	29	4	Some useful information on some of the sites. Others are weak
Kenya	13	www.kenyastatehouse.go.ke	20	2	Very limited information about Ministries available on Government Web page. Additional sites reported to be under construction
Mali	5	None	23	3	Limited information
Morocco	44	None	23	9	Some useful information (statistics, legislation) on most Ministry sites
Mozambique	14	www.mozambique.mz	24	3	Some useful information on Government Home page. The few Ministry pages created to date, and which are hosted by the major university, show only limited development.
Namibia	23	www.grnnet.gov.na	21	20	Each Ministry provides well-drafted basic information plus at least a listing of relevant legislation plus some electronic documents on policies and legislation
Senegal	19	www.gouv.sn	29	3	The Government Home page provides basic information on all 29 Ministries. One of the three Ministerial web sites is still under construction. The two others provide some useful information.
South Africa	163	www.gov.za	25	25	Informative; all major documents are posted regularly. There is an efficient archive of all legislation from 1993 onwards (www.polity.org.za/govdocs/legislation)
Tunisia	18	www.ministeres.tn	23	2	Some of the Ministries provide extensive information via the government web site (e.g. Communications) but most documents appear still to be hard copy only
Uganda	31	www.government.go.ug	16	10	Ministry web-sites have complex designs, leading to slow operation; they contain limited information

²¹ Sources: African Governments on the WWW (www.gksoft.com/govt/en/africa.html)

Chiefs of State and Cabinet Members of Foreign Governments (www.odci.gov/cia/publications/chiefs)

²² Official web sites include those created by Ministries, Government Agencies, Embassies, Political Parties

The internal application of informatics in the processes of government

The second stage of implementation of e-Government can itself be subdivided into three levels

- A level of “automation” where the essential infrastructure is still being developed and the conversion of existing systems and design of informatics solutions has traditionally been the sole responsibility of technical personnel.
- A level of “service orientation” characterized by the move towards personal ‘ownership’ and use of computing tools by officials in government with a strong influence of involved officials in the design of automated systems and finally
- A ‘systems integration’ phase when computers are connected in networks both internally (intranets) and externally (to the Internet or other systems) and system design is characterized by close collaboration between official users and informatics providers in response to external demands from those served by the system.

Consideration of these three levels indicates that there needs to be clear recognition that introduction of e-Government goes far beyond the mere purchase of equipment and will require a fundamental rethinking of many processes. It is critical to understand that ill-planned and poorly-implemented solutions have the potential to generate highly inefficient and unsustainable processes in government service delivery. The South African Presidential Commission referred to earlier concluded that governments would need to focus on ways and means to

- Promote the concept of information as a strategic resource to be managed as any other resource;
- Facilitate the creation of a culture of sharing and re-using information;
- Promote the principle of aligning information and IT strategies with business strategies, objectives, and processes;
- Promote the concept of re-engineering of processes to ensure that they all add value to the service being provided;
- Identify and co-ordinate transverse information sources and needs;
- Investigate and establish norms, standards, principles and mechanisms to enable information sharing; and
- Build capacity in government to better manage information.

As the Government of Mozambique addresses the issue of “e-Government”, its own IT Policy underlines that among the problems and challenges to be confronted in the area of governance in Mozambique, are:

- Bureaucracy – public and State institutions are slow and of low efficiency in responding to inquiries and requests from citizens;
- High costs associated with the way in which public services are dispensed;
- Lack of linkages and rapid communications among organs and central departments of State themselves, and between those bodies and their provincial equivalents;
- Lack of centralized data-bases, with uniform and consistent information, which creates frequent discrepancies from department to department with respect to the same kind of information;
- Limited Informatics education of the majority of leaders of State or Public Institutions and a consequent indifference or apathy in relation to the role which information and communications technologies could play in the development and general improvement of services.’

Government to Business e-Commerce

Examples are scattered and limited. The National Tender Board in South Africa publishes its weekly Bulletin on a web-site²³ but still will not accept the submission of electronic bids on the tenders called for.

The electronic provision of government services to citizens

This aspect of e-Government is not well developed anywhere in the world and the Mission identified no examples of its practice yet in Africa.

²³ At www.nstb.pwv.gov.za

APPENDIX 1 – ECA/IDRC E-COMMERCE MISSION TEAM MEMBERS

Overall Mission Team Leader

Mr. James Mullin, President, Mullin Consulting Ltd, Ottawa, Canada.

North African team:

Ms Magda Ismail, (Regional Team Leader) Chair of the E-Commerce Committee of the Egypt Internet Society

Ms. Lamia Chaffai Sghaier, Director of the E-commerce Division, Agence Tunisienne Internet (ATI), Tunisia.

Mr Adel Mokhatari, Managing Director, Fusion Engineering, Morocco,

East/Central Africa team:

Mr Muriuki Mureithi, (Regional Team Leader) Chair of Kenya E-commerce Task Force;

Mr Kebour Ghenna, President, Addis Ababa Chamber of Commerce, Ethiopia

Mr. Vincent Musubire, Director for Public Relations and Information Technology, the Uganda National Chamber of Commerce and Industry, Kampala, Uganda

West African team:

Mr Addoulaye Ndiaye, (Regional Team Leader). Research consultant. Dakar, Senegal,

Dr Nii Quaynor, Executive Chairman, Network Computer Systems (NCS), Accra, Ghana

Mr. Jacques Rostenne, President, Perwit International Management Consultants, Canada.

Southern African team:

Mr James Mullin (Regional Team Leader)

Mr Milton Louw, CEO, NamBizDot.Com CC , Windhoek, Namibia

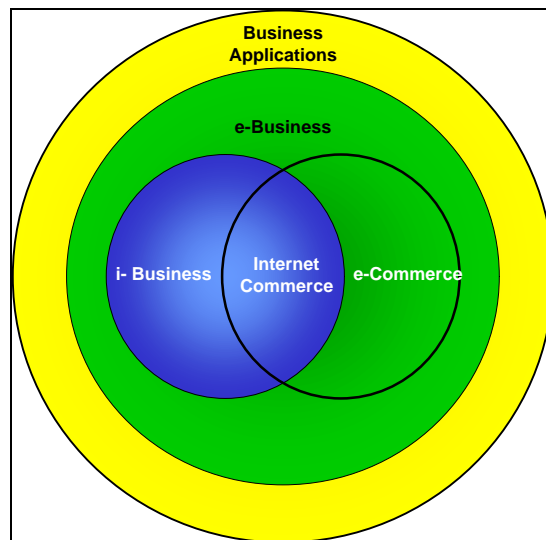
Mr José Murta Managing Director, EXI, Maputo, Mozambique

Mr Theo Scribante, Independent Consultant, Johannesburg, South Africa

APPENDIX 2 – THE RELATIONSHIP OF E-COMMERCE TO E-BUSINESS

A useful sketch of e-Commerce's relationship to e-Business is provided by the consulting firm BMI-TechKnowledge (www.bmi-t.co.za) which argues that e-Commerce is fundamentally a portion of a much larger picture: that of business applications and e-Business. e-Commerce has played a very important role in building awareness and acceptance of doing business in a connected fashion, but e-Commerce is not a new idea. It is an idea that has been super-enabled by new technologies.

The Figure below illustrates at a macro level, the nesting relationship among business applications, e-Business, e-Commerce, and their Internet components. Adopting this macro view in defining the world of connected business applications permits inclusion and understanding of the many permutations that currently exist and for those that will evolve.²⁴



Source: IDC, *The Return on Investment Associated with e-Business and e-Commerce* (Report #W21462 – February 2000)

²⁴ Source: BMI-TechKnowledge, South African e-Commerce Survey, June 2000

APPENDIX 3 – THE ROLES OF KEY STAKEHOLDERS

The matrix below tries to show, in diagrammatic form, the sets of stakeholders who may be involved in national actions on each of the six principal themes of this project. It also projects, for each stakeholder group, its principal role in each of the theme areas.

	National Stakeholders					Non-National stakeholders
	Government	Business	ICT Sector	Academic & Training	NGOs	
National E-commerce Vision and Strategy	Leadership	Active participation	Active participation	Active participation	Active participation	Sources of Advice
National Regulatory Policy	Leadership	Source of Advice	Source of Advice	Source of Advice	Source of Advice	Sources of Advice
Accelerating Private Investment in E-commerce	Enabling role	Leadership	Leadership			Sources of Advice
Targeted Support for SMEs and Special Target Groups	Leadership	Active participation	Active participation	Active participation	Active participation	Sources of funding
Creating an E-commerce Labour Pool	Enabling role	Active participation	Active participation	Leadership	Active participation	Sources of funding
Domestic and pan-African E-commerce Research Capacity	Principal user of output	Important user of output	Important user of output	Leadership	Potential users of output	Sources of funding

With respect to National Stakeholders, the terms used are intended to cover the following:

Government covers all of the Ministries, agencies, state institutions or corporations within a country and any task forces established by government;

Business, in this context, covers all private enterprises engaged in any sector of business except the ICT sector, and includes any related association such as a Chamber of Commerce or of Industry. (i.e. the enterprises of the so-called 'old-economy')

The ICT Sector, in this context, covers firms such as Internet Service Providers, info-mediaries, web solution providers as well as providers of telecommunications services and any related associations.

Academic and Training covers secondary and tertiary educational and vocational institutions, whether public or private and which offer courses relating to ICTs.

NGOs are such other non-governmental organizations in civil society as have interests in e-Commerce (For example labour unions, professional associations, local or international bodies promoting poverty alleviation)

With respect to 'Non-National' Stakeholders, they include

Regional bodies of interest are intergovernmental bodies within Africa with interests in or effects on the development of e-Commerce in regions of Africa.

Other International bodies of interest include bilateral donor agencies (e.g. IDRC, USAID etc) and multilateral agencies (e.g. the ECA, the World Bank, the ITU, WTO etc) with interests in or effects on the development of e-Commerce in regions of Africa.

APPENDIX 4– BARRIERS TO E-COMMERCE

“E-Commerce and LDCs: Challenges for Enterprises and Governments”

Extracts from an UNCTAD Paper
prepared by Shaun Lake, Executive Director AGN, Johannesburg, South Africa

LDC governments too have responsibilities in making e-commerce work. Aside from the obvious issues such as the liberalisation of telecommunications and the development of an information society infrastructure, governments must strive to create an e-commerce friendly environment. They must address areas such as the e-commerce legal framework, overly bureaucratic trade procedures, trade restrictions and a difficult investment climate. Governments could go a long way in developing an e-commerce enabled business community by setting up on-line access to and submission of tenders. Trade promotion organisations should focus on possible e-commerce opportunities and government should facilitate or encourage the creation of education institutions to develop a population of knowledge workers. *[from the Executive Summary]*

GOVERNMENT BARRIERS

There are a number of government policies in LDCs which have a detrimental effect on the proliferation of e-commerce in these countries. They include:

- **The insistence of governments to hold onto and protect inefficient state owned telephone networks.** This results in inferior and high communications costs making e-commerce activities unnecessarily costly and uncompetitive.
- **The lack of government strategy or support to develop world class enterprises.** A poor business, even if connected to the web and e-commerce enabled, will not succeed in a competitive world. Companies in LDCs are ignorant of international opportunities, the needs of those markets and how to service them properly.
- Governments should be doing more to help enterprises **identify international opportunities** and take advantage of them.
- Government insistence in maintaining ownership and management of logistics networks such as ports and airports resulting in **inefficient, costly and unreliable services**, which are incompatible with an e-commerce environment.
- **Bureaucratic export and import procedures** result in lengthy customs clearance times which nullify the benefits of speed in transactions offered by e-commerce. This affects service levels and increases the cost of business operations.
- **Restrictions on imports and exports** such as permits and licences, and the time taken to obtain these permits, place barriers in the way of fast efficient e-commerce activities.
- **Lack of progress in setting government institutions, such as the Customs department, to accept customs declarations electronically.** This forces e-commerce enabled companies to produce paper and undermines the concept of paperless trading.
- Although a number of African LDCs have already made great strides in abolishing **exchange controls**, some still exist and provide a barrier for transacting in a foreign currency on the Internet.
- **Lack of an e-commerce friendly legal framework to provide recourse for companies.** Current laws do not accommodate electronic contracts and signatures. Most LDCs do not have legislation that deals with e-commerce concerns including enforceability of the validity of electronic contracts, digital signatures

Commercial barriers

Commercial barriers to e-commerce active LDCs involve a range of issues.

- **Lack of world class manufacturers and service providers based in LDCs.** E-commerce is not the magic wand to new prosperity. The same basic principals of success remain, which is, are there products or services from LDCs that are needed or wanted by the international market, and is the enterprise internationally competitive in delivering that product or service?
- **Incompatible business processes.** Entrepreneurs tend to run their businesses on instinct and experience. The e-commerce environment will challenge their business processes. The lack of business expertise and available technical assistance to make the necessary changes could impact severely on the LDC company's chances of becoming e-commerce enabled.
- **An absence of a critical mass of e-commerce enabled business partners or online customers inside the country.** Unless businesses are able to link with their local suppliers, service providers and customers electronically, they cannot conduct e-commerce within the country.
- **A lack of capacity (skills and finance) to take on the new technologies** required in becoming e-commerce enabled. The costs and skills required to set up an internal e-commerce infrastructure are often overwhelming for small and medium businesses.
- **A poor representation of IT vendors and support services in LDCs.** Companies must be able to access e-commerce software, networking products and technical assistance in order to set up their e-commerce capability. The problem is whether or not LDCs are attractive enough markets for vendors to establish a presence in those countries?
- **A lack of a capital market in most LDCs to fund e-commerce ventures.** Without access to capital, entrepreneurs with credible ideas for Internet startups will not get their opportunity off the ground.
- **A lack of critical mass of knowledge workers needed to operate an e-commerce business environment.** These are people skilled in IT and content creation for the new economy.
- **A lack of confidence on the part of the international buyer in LDC based websites.** For companies wanting to establish a presence on the www, to attract international customers could prove difficult due to negative perceptions about their reliability.
- **Lack of availability of logistics and financial support services.** Most LDCs experience irregular, slow and higher cost service from courier companies. Banks do not offer the same level of service and products usually found in developed economies. These deficiencies place LDC companies at a disadvantage.

Social barriers

- **Culture and mentality** are significant barriers to e-commerce. A study conducted by Booz-Allen & Hamilton for the 1997 G7 Bonn Conference showed that one of the main reasons for European (with the exception of Scandinavia, UK and Netherlands) and Japanese small and medium enterprises (SMEs) lagging those in the USA in taking on e-commerce was due to cultural and mentality issues.
 - This barrier is even more accentuated in LDCs and caused due to a lack of education and awareness about e-commerce, a fear of the technology, a lack of familiarity of information technology and a lack of trust in the system.
 - An analysis of e-commerce practice in SMEs ... found that cultural issues were considered to be the biggest barrier to e-commerce followed by cost of investment, infrastructure and concern for security.
- **Gender issues.** In many LDCs, half the population of a country are marginalised due to their gender. The e-revolution is an opportunity based in human intellectual resources. Many LDCs with a gender bias have therefore effectively locked up half of their e-commerce potential because of gender prejudices.
- **Lifestyle differences.** LDCs tend to be more community orientated whereas the Internet is an interaction between an individual and the content on the screen. This may cause people in LDCs to take longer to realise the benefits of Internet access.
- **Levels of education and language.** Due to limited literacy skills and English not being the language of most LDCs, it is more difficult for people to adopt this new medium of communicating and

interacting.

Obstacles to the development of electronic commerce as seen in West Africa

[Translation of an excerpt from
 “Développement du commerce électronique en Afrique: le cas du Sénégal”,
 par Abdoulaye Ndiaye, a paper prepared for the
 “Programme d’Assistance Coordonnée à l’Afrique dans le domaine des services (CAPAS)
 organized by the International Telecommunications Union (ITU), October 1999]

- The low availability of computer equipment in households and SMEs, the low telephone density, and the narrow bandwidth providing access to the Internet are existing inhibiting factors for electronic commerce;
- The cost of telecommunications, based on the pricing system in actual use which
 - is proportional to the connection time
 - which offers no choice of payment other than a standard monthly payment and,
 - which offers no differentiation between a local telephone call and an Internet connection.
 These results of existing policy choices will offer serious limitations in an information-using society where connection times will be longer and longer.
- The legal void relating to electronic contracts and signatures, the difficulty of identification of the competent jurisdiction in certain cases, the impossibility in certain cases of returning unsatisfactory merchandise, all of which can discourage operators in developing countries
- Zones which are poorly served by air transport, notably among towns in the sub-region, despite the growing presence of courier-express companies, coupled with the high costs of air freight between West Africa and Europe or the United States, and with the limitation of freight capacity compared to demand, all constitute bottlenecks for the expansion of electronic commerce;
- Customs procedures are still heavy and not adapted to a commercial system in which activities of ordering, payment and dispatch take place in minutes while, once a parcel has arrived at its destination, the buyer can easily lose hours or days in getting a parcel between Customs and the Post. In addition, the return of unsatisfactory goods demands other procedures for re-exportation.
- The difficulty in obtaining credit cards, either for the public or for merchants, because of a banking system which has difficulty in changing its traditional habits, and , more generally, the lack of availability of modern instruments of payment – all of which can be explained by the lack of commercial energy of banks which have always known a high demand
- A level of security which is still seen as insufficient to permit commercial transactions on the Internet, notably the fear of revealing either a credit card or bank account number, and the lack of a very secure system which has been widely adopted by the international community
- Senegalese have a strong propensity to buy things which they can see and touch, which explains the success of commercial fairs, while, by definition, electronic commerce tends to suppress physical contact. However, certain tendencies to overcome this type of obstacle can be observed – more and more consumers , even those who are illiterate, place orders through catalogues, are familiar with the fax machine, and some among them have already begun to order items on the Internet.
- The generalized use of English can certainly limit public participation in electronic commerce, but there can be seen a tendency toward bilingualism which is favoured by growing numbers of Senegalese who have emigrated towards English-speaking zones (United States, Africa, and Asia). In addition, those who are illiterate have a tendency to be helped by their children many of whom have been educated abroad.

Barriers to e-commerce in Egypt

Listing of issues taken from “*Overcoming Deterrents and Impediments to Electronic Commerce in Light of Globalization: The Case of Egypt*” by Mohamed A. El-NAWAWY and M. ISMAIL
(available at http://www.isoc.org/inet99/1g/1g_3.htm)

- **Awareness and education**
 - Consumer awareness
 - Corporate awareness
- **Market size: business to consumer**
- **E-commerce infrastructure**
 - Lack of a certificate authority
 - Lack of secure electronic transaction compliance
- **Telecommunications infrastructure and planning**
 - Bandwidth cost
 - Teledensity infrastructure
 - National strategic telecommunications planning
- **Financial services and infrastructure**
 - Credit card usage
 - Concept of individual credit system
 - Financial transactions on the Internet
 - Online financial information
 - Coordination of Egyptian banks
- **Legal system**
- **Government issues**
 - Policy
 - Business rules
 - Affordability/cost structure
- **Social and psychological drawbacks**
 - Trust
 - Resistance to change
 - Territorial behaviour
 - Generation gap
 - Language barrier

APPENDIX 5 – LEGAL ISSUES RELATED TO E-COMMERCE

The following list was compiled from South Africa's Green Paper on e-Commerce, published in November 2000 and available at www.e-comm-debate.co.za

CONTRACTING AND TRADE LAWS

- Ensuring the Legal Recognition of Electronic Communications
- Admissibility and Evidential Weight of Electronic Communications
- Formation and Validity of Contracts and the Recognition by Parties of Electronic Documents
- Attribution of Electronic Documents
- Time and Place of Dispatch and Receipt of Electronic Communication
- Electronic Signatures

ELECTRONIC COMMERCE AND TAXATION

- Characterization of income
- Indirect (Consumption) Taxes
- Customs and Excise Duties
- Gaming and Betting
- Stamp Duty
- Cyber Cash (Electronic Money)
- Tax Administration and Compliance

MULTILATERAL TRADING SYSTEM AND E-COMMERCE

- Market access for products conducive to e-commerce
- Customs valuation; import licensing; rules of origin; technical barriers to trade and tariff concessions

INTELLECTUAL PROPERTY RIGHTS AND E-COMMERCE

- Copyright
- Patents
- Trademarks

BUILDING TRUST IN THE ELECTRONIC ECONOMY

- Authentication
- Confidentiality
- Integrity
- Public Key Cryptography
- Certification Authority
- Privacy Of Communications
- Cyber Crime

- Lawful State Access To Encrypted Data

CONSUMER PROTECTION

- Protection Of Privacy And Personal Information

INFRASTRUCTURE, ACCESS AND CONVERGENCE

- Bandwidth
- Universal Access and Affordability
- Telecommunications Regulation and Competition
- Interconnection – Post Exclusivity Period
- Convergence
- Technical Standards

DOMAIN NAMING

- Dispute Resolution: Trademarks Vs Domain names
 - Potential security concerns
-

APPENDIX 6 – THE PRINCIPLES OF THE ICC GLOBAL ACTION PLAN

In this context, we [i.e. the authors of the ICC Plan] provide the following Policy Principles for Global Electronic Commerce. We expect that these Principles may need to be extended as insights are gained from the development of the market place.

- 1. The development of electronic commerce should be led primarily by the private sector in response to market forces.**
- 2. Participation in electronic commerce should be pursued through an open and fair competitive market.**
- 3. Government intervention, when required, should promote a stable, international legal environment, allow a fair allocation of scarce resources and protect public interest. Such intervention should be no more than is essential and should be clear, transparent, objective, non-discriminatory, proportional, flexible, and technologically neutral.**
- 4. Mechanisms for private sector input and involvement in policy making should be promoted and widely used in all countries and international fora.**
- 5. Electronic commerce is global by nature. Government policies that affect it should be internationally co-ordinated and compatible and should facilitate interoperability within an international, voluntary and consensus-based environment for standards setting.**
- 6. Transactions conducted using electronic commerce should receive neutral tax treatment in comparison to transactions using non-electronic means. Taxation of electronic commerce should be consistent with established, internationally accepted practices, and administered in the least burdensome manner.**
- 7. Regulation of the underlying telecommunications infrastructure, when necessary, should enable actors to compete, globally, in an open and fair market. As competition develops, regulation should be phased out and there should be a greater reliance on competition law.**
- 8. The protection of users, in particular with regard to privacy, confidentiality, anonymity and content control should be pursued through policies driven by choice, individual empowerment, industry-led solutions. It will be in accordance with applicable laws.**
- 9. Business should make available to consumers and, where appropriate, business users the means to exercise choice with respect to privacy, confidentiality, content control and, under appropriate circumstances, anonymity.**
- 10. A high level of trust in the Global Information Infrastructure-Global Information Society (GII-GIS) should be pursued by mutual agreement, education, further technological innovations to enhance security and reliability, adoption of adequate dispute resolution mechanisms, and private sector self-regulation.**