

the continent's entry into the information and knowledge global economy. AISI also represents a regional framework to support the implementation of the New Partnership for Africa's Development (NEPAD) Plan of Action.

The critical importance of national ICT strategies has further been confirmed during the World Summit on the Information Society (WSIS) which took place in December 2003 in Geneva. The Plan of Action adopted during the Summit emphasizes the importance of developing and implementing comprehensive, forward-looking and sustainable national e-strategies in developing an inclusive Information Society.

## 2. What is NICI?

The development of NICI plans and strategies is one of the most important programmes supported by AISL. The plans provide a framework for the sustainable development of the Information Society in Africa.

Plans and policies under this framework can be defined as an integrated set of decisions, guidelines, laws, regulations and other mechanisms which are geared to directing and shaping the production, acquisition and use of ICTs.

The plans and strategies are based on national needs and development priorities as determined by all the relevant stakeholders of any country. Governments play a central role in the creation of an enabling policy and legislative framework to promote an integrated national information and communication infrastructure. While the national development agenda forms the bedrock of the NICI plans, the following areas are also critical for the implementation of the plans:

(a) **Physical infrastructure:** Without adequate infrastructure the vision of AISI may not be realized. Central to this is the need to upgrade and establish telecommunication

networks and services at the national level and expand its reach to rural areas where the digital divide affects most. In addition, improving interconnectivity in the region and the provision of gateways to international telecommunication networks need to be considered. Other important areas include the development of broadcasting infrastructure for radio and television services, and the production, assembly and distribution of affordable appliances. The NICI plans and policies should also consider the development of software applications which enable use of local languages;

(b) **Creating a legislative and regulatory framework:** A comprehensive review of existing ICT legislative and regulatory frameworks should be conducted. This will include all the applicable laws and the institutional arrangements which guide the development of the ICT sector and ICT mainstreaming in various sectors. A stable and predictable legislative and regulatory environment is a prerequisite to attract investment into the ICT sector and develop successful and sustainable e-commerce and e-government. The framework should also address issues, such as Intellectual Property Rights (IPR);

(c) **Building national information resources:** Developing content in Africa is as important and challenging as developing the information and communications infrastructure. There is already a wealth of information available on the continent, which is not always easily accessible or exploited. The accessibility and availability of accurate and up-to-date information will play a critical role in planning and decision-making by both public and private sectors and the development of all economic and social sectors of African societies. Open Source Software will play a critical role in providing an affordable and robust platform for networks and content creation;

(d) **ICT applications in key social and economic areas:** Creating applications in line with the development priorities of the country could make a significant contribution. Applications should address how ICT could facilitate citizen's participation in decision-making processes and their empowerment through e-governance, e-education, e-health and e-commerce, among other uses;

(e) **Links to national, regional and global development goals:** The NICI process should be based on initiatives that aim to reduce poverty such as the Millennium Development Goals (MDGs) that all UN member States have pledged to support, as well as other efforts such as the Poverty Reduction Strategy Papers (PRSPs). In addition to the emphasis on e-strategies, the WSIS Plan of Action highlighted key and emerging issues of Internet governance and financing mechanisms at the global level. In order for member States to participate in the discussions and make Africa's voice heard, it is imperative to build national frameworks around these issues and build the capacity of policymakers; and

(f) **Development of human resources:** The development of human resources is the cornerstone of the sustainability of the Information Society. NICIs call for capacity building of both technical and managerial skills through education and training in order to equip Africans to become empowered citizens in the knowledge age. Education and training institutions should develop curricula to enhance the skills of managers, engineers and Information Technology (IT) specialists, workers and students.

(g) **Creating an Information Economy:** The objective is to ensure that the NICI policy framework helps to shape economic growth, productivity, employment as well as business performance for boosting the Information Economy. This also includes

measuring and analysing the information society so as to better understand the impact of ICTs on national economies.

## 3. The NICI Development Cycle

Formulating NICI plans involves a dynamic and on-going, broad-based consultative process.

Experience derived from the various NICI processes of a number of African countries operating under the AISI framework has yielded a phase-wise methodology that can be adapted for implementation in other countries.

Although the NICI Plan can be a long process, the duration varies from place to place. Countries have to be flexible and need not wait for the end of the process to begin implementation of some concrete and action-oriented programmes.

**Phase 1:** The methodology concentrates on the development of the Framework Document.

This is based on the review and analysis of current national socio-economic development frameworks, policies, strategies and provisions as well as ICT development, deployment and exploitation in the country through a baseline study. The Framework Document specifies and defines the general problems, highlighting specific strategies required to guide the policy development process and the subsequent plan.

**Phase 2:** The Policy Document is developed, providing details of commitments in relation to

WHAT needs to be done through the use and development of ICTs. The Plan, to be developed in the 3rd phase of the process, provides details of HOW policy commitments can be translated into concrete programmes and initiatives for implementation.

**Phase 3:** This is the final phase and is devoted to the development of the first ICT plan guided by government policy commitments. This plan, the first of a series, serves as a cornerstone for the country's socio-economic development plan over a specific timeframe (3 - 5 years). The task is to develop an integrated ICT and socio-economic development plan with the capability of supporting development of the necessary economic base and environment for accelerating the transformation to an information and knowledge-based economy/society. Once the plan is developed and implemented, the progress of the implementation is monitored and evaluated on a regular basis. Normally, the plan provides for annual reviews.

## 4. Sensitization and participation of stakeholders

It is recommended that all stakeholders be involved in the preparation of NICI plans and policies from the beginning. Therefore, the formulation of a NICI policy and plan involves an intensive consultative process where government takes the lead.

Ideally, the process of developing the NICI plan is managed through a high-level taskforce or commission. In countries where the process

has been very successful, the Task Force or Commission was appointed by the President or the Cabinet. Representatives include governments (agencies, departments and ministries), civil society groups, private sector, independent regulatory bodies, academia and mass media. It is through this consultative process that certain issues can be addressed, such as how gender and youth considerations can be incorporated into the plans and strategies.

According to Marie Koumandial Nanalbaya a Chadian Member of Parliament, "there is need for sensitization campaigns to promote women's access to ICTs and the Chadian Government and Parliament should start a national policy and plan in favour of women". As a first step, it is recommended that a workshop be held with all parties to sensitize them on the process. This is to ensure buy-in and support from all societal actors from the start.

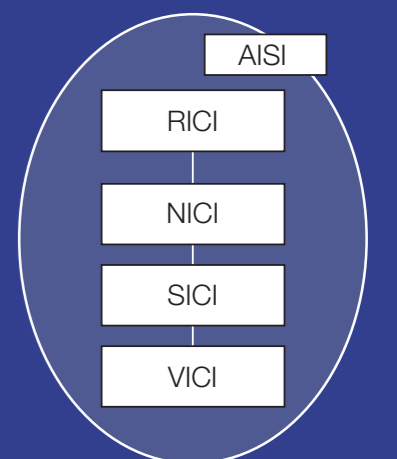
## 5. Implementing NICI policies and plans

After successful formulation of NICI and SICI policies and plans, the next step is implementation, monitoring and evaluation. Many NICI policies and plans stipulate the coordination mechanism for implementation and some

### From NICI to SICI

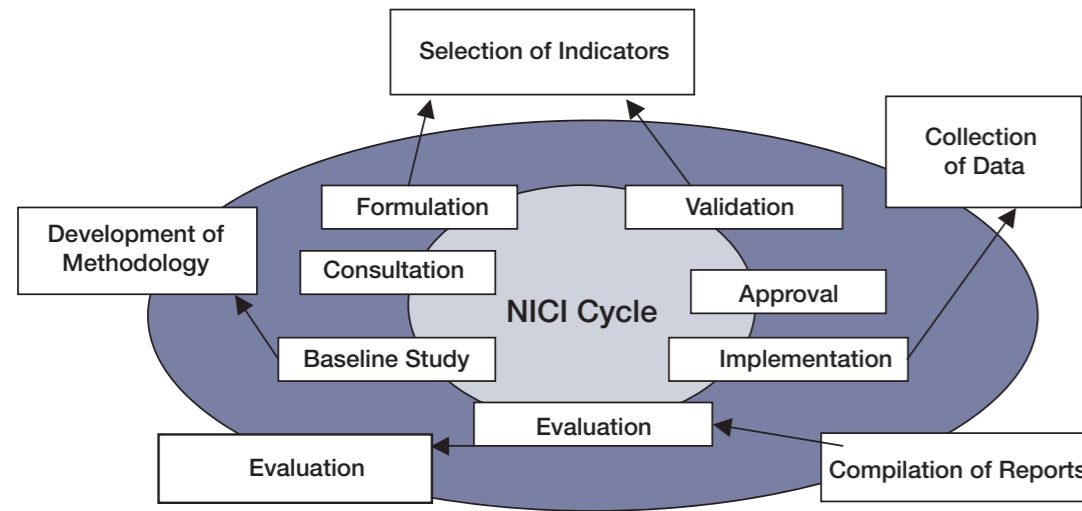
After formulating or in parallel to the formulating of NICI policies, a number of countries embarked on the translation of the NICI visions and objectives into sectoral strategy, known as Sectoral Information and Communication Infrastructure (SICI) policies and plans. Ghana has gone a step further to bring the process to the village level and piloted the development of Village Information and Communication Infrastructure (VICI) policies and plans so as to make explicit linkage between national endeavour and local initiatives.

At the subregional level, some regional economic communities (RECs) have initiated Regional Information and Communication Infrastructure (RICI) policies and plans to harmonize legislative and regulatory frameworks, expand markets, develop the infrastructure and build capacity at the subregional level. AISI also aims to encourage regional cooperation among African countries, to share successful experiences and to support regional development in the context of ICTs.





Strengthened linkage between NICI formulation and implementation and the SCAN-ICT



countries have been assisted in building capacity for programme implementation and donor coordination.

In order to monitor the progress made in the implementation of national e-strategies and advancement of the Information Society, the SCAN-ICT project was initiated by the International Research Development Center (IDRC) and ECA with the support of the European Union (EU) and the Norwegian Agency for Development Cooperation (NORAD). The initiative aims at building capacity among national statistical offices and research institutes to monitor, analyse and evaluate progress being made at the national level and, subsequently, attract investment to the ICT sector.

The second phase of the initiative will start at the beginning of 2005 with more focus on harmonization at the regional level, gender mainstreaming and stronger linkage with NICI policy formulation and implementation and overall national development frameworks, such as MDGs and PRSPs. This will translate into assistance to member States in integrating poverty reduction and pro-poor approaches in the formulation, implementation and evaluation of NICI policies and plans, and to creation of a sustainable financing mechanism at the national regional and global levels.

## 6. Building Africa's Information Society: Lessons Learned and Good Practices

There are many challenges to overcome in building the Information Society in Africa. Embedded in these challenges are opportunities for the continent to make its contribution in developing innovative solutions for addressing the many social and economic imperatives facing developing countries today. The role of government is to provide a vision and strategy within a legal and regulatory framework that will promote development of the information Society and ensure that all sectors of society can benefit from it.

According to an assessment conducted by the Development Information Services Division (DISD) of ECA on eight NICI policies and plans in 2003, the average duration of the plan formulation process is 17 months. The fastest among the 8 countries completed the plan in 7 months, while the longest took 36 months. Half of them selected only 4-5 focus sectors and the other half expanded to 8-9 sectors. Most of the countries identified business, private sector development and education as their

priority areas, followed by health, good governance and development of telecommunication infrastructure.

In order to fine-tune the methodologies, ECA has compiled the following lessons learned over the past years:

- There is a need for increased awareness at various levels;
- It is important to garner support from high-level leadership in order to move the ICT agenda forward;

- NICI processes should be participatory;
- Human and institutional capacity needs to be strengthened;
- Regional cooperation and integration needs to be emphasized;
- There is a need for more adequate and innovative financing mechanisms; and
- Strengthen integration of ICTs in the economic sectors.

### Countries implementing RIC, NICI, SICI and VICI strategies

Countries which are formulating NICIs	Countries which are formulating or have formulated sectoral policies and plans	Countries with NICI policies and plans and which have been implementing NICI policies and plans	Countries which have evaluated NICI policies and plans	Country which started a VICI policy and plan
Burundi Cameroon The Gambia Lesotho Malawi Nigeria Sierra Leone Sudan Swaziland Tanzania	The Gambia (E-government) Ghana (E-government) Rwanda (E-government) Uganda (Health)	Burkina Faso Cape Verde Comoros Gabon Guinea Niger Mali Mozambique	Benin Mauritania	Ghana

The African Information Society Initiative (AISI) is an action framework to build Africa's information and communication infrastructure. AISI aims at supporting and accelerating socio-economic development across the region. The AISI calls on African governments to provide a strategy and an enabling environment to promote the use of ICTs in government to improve the effectiveness of government service delivery.

For more on AISI go to <http://www.uneca.org/aisi>

For this and other ECA publications, please contact:  
Publications  
Economic Commission for Africa  
P.O. Box 3001  
Addis Ababa Ethiopia  
Tel: 251-1-443168  
Fax: 251-1-510365  
Email: [ecapubs@uneca.org](mailto:ecapubs@uneca.org) or [ecainfo@uneca.org](mailto:ecainfo@uneca.org)



# Towards an Information Society in Africa: The Case for National Policies



## Introduction

Building a sustainable information society in Africa is a central goal of the African Information Society Initiative (AISI). AISI calls for the development of a National Information and Communication Infrastructure (NICI) plan in every member State as a national framework for developing an information society and accelerate socio-economic development through the application of information and communication technology (ICT). This plan should be based on national development visions, goals and aspirations and rooted in national development priorities such as health, education, job creation, good governance, food security, natural resource management, industrial development, trade, and tourism. This paper provides a brief introduction to the NICI concept in Africa and what the process entails.

## 1. Why National ICT Policies?

The world has entered the knowledge and information society, driven by information and intellectual products as raw materials and

resources. In addition to the capacity to create relevant content and applications, the ability to transmit data over information and communication infrastructure is a crucial prerequisite for any nation, to participate effectively in the global information society and economy. The successful deployment of ICTs can also contribute to the development of knowledge societies and contribute to bridging the digital divide in ways that accelerate socio-economic development in Africa.

In May 1995, the Conference of Ministers of the Economic Commission for Africa (ECA) adopted a resolution called "Building Africa's Information Highway", to establish an Information Society agenda. The action plan, AISI, was adopted by the ECA Conference of Ministers and by Heads of State and Government of the African Union (AU) to guide the development of Africa's Information Society and support socio-economic development across the region.

AISI was launched 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