e-Readiness Guide

How to Develop and Implement a National e-Readiness Action Plan in Developing Countries

GeoSINC International

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An e-Readiness Guide for Developing Countries

INTRODUCTION

There have been numerous attempts to devise e-Readiness assessment methods. These approaches are important and indeed useful to evaluate the stage of preparedness of a country, but they generally do not prescribe a clear course of action for the development of a national action plan. An e-Readiness assessment does not stand as a goal in itself: it has to lead to the development of a strategy and the preparation of an Action Plan that will address the opportunities and constraints identified in the readiness assessment to further the objectives of the country in the area of Information and Communication Technologies (ICTs).

This guide was developed by GeoSINC International under contract with *info*Dev (the Information for Development Program, a multi-donor grant program managed by the World Bank) to provide developing countries with a comprehensive document regarding the assessment of e-Readiness as well as the development and implementation of a national ICT action plan. It is a tool associated with the eFacilitation Center (**http://www.ereadinesscenter.org**), a website also developed under contract with *info*Dev.

This document consists of four topics:

- Chapter 1 – **TAKING STEPS TO BRIDGE THE DIGITAL DIVIDE** provides background information, defines various concepts and presents a general approach to e-Readiness .
- Chapter 2 – **CONDUCTING AN E–READINESS ASSESSMENT** is dedicated to reviewing various assessment methodologies and tools. It highlights the need of clearly defining the assessment goals before choosing one toolkit over another.
- Chapter 3 – **DEFINING AN E–READINESS ACTION PLAN** presents an outline of what elements need to be addressed in a typical National ICT and E-Readiness Action Plan.
- Chapter 4 – **IMPLEMENTING A NATIONAL E–READINESS ACTION PLAN** provides approaches and tools for Governments to take the lead role in instigating conditions favorable for the development of ICT technologies and usage.

The eFacilitation website provides standard models, actual examples and additional information sources that can be accessed to provide practical support to developing countries in implementing national e-Readiness initiatives.

I. TAKING STEPS TO BRIDGE THE DIGITAL DIVIDE

The digital divide

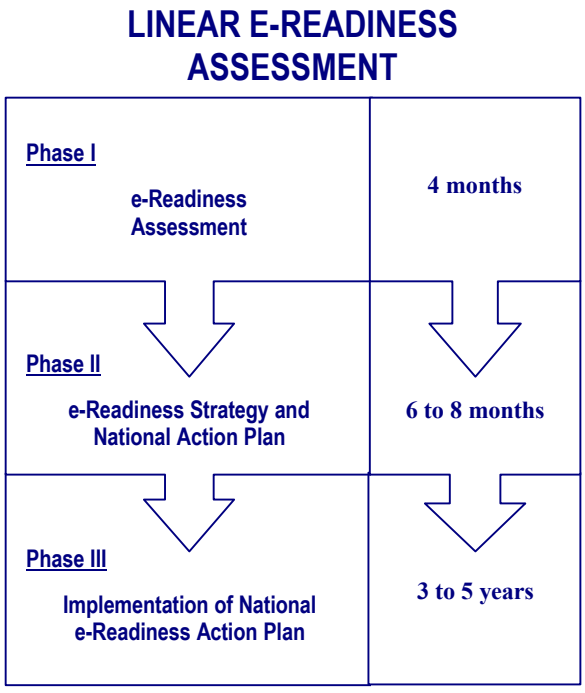
There are two main concerns associated with the expression "digital divide". Firstly, as global networks can potentially transform profoundly economic, political, and social relationships, developing countries are encouraged to use ICTs to accelerate their progress. A widening digital divide would impede this goal. Also, without the participation of a growing number of individuals and companies, the growth potential and the creation of new value propositions associated with the digital economy will not materialize. This latter concern is particularly true for developed economies in need of new markets.

It was expected that rich countries would have adopted the global network more rapidly than developing countries. However, with regard to the adoption of the Internet and the use of ICTs as a means of social development, countries that share similar socio-economic characteristics have had varying experiences and present dissimilar degrees of digital divide. The critical factor does not seem to relate to differences in the degree of development: leadership, often coming from political and government circles would appear to be a more relevant factor in explaining the varying status of ICTs across developing countries.

With diverse regulatory, social, economic and cultural frameworks, developing countries encounter differing challenges in the development of the use of ICTs. Each country needs to tailor its ICT Action Plan to address most effectively the specific needs of its economy, while remaining focussed on the goal of its society's overall development.

General approach to e-Readiness

E-Readiness is generally defined as the degree to which a society is prepared to participate in the digital economy with the underlying concept that the digital economy can help to build a better society. Regardless of a country's level of development, readiness is assessed by determining the relative standing of its society and its economy in the areas that are most critical for its participation to the networked world. However, e-Readiness can be a relative concept and it could be defined differently depending on each country's priorities and perspective.



Beyond "e-Readiness", you may look for "e-efficiency", which is the use of ICTs to reach more quickly the development goals specific to a country. A review of recent experiences in the developing world shows that the countries which are the most successful in creating a favourable climate for the use of ICTs are those that make it a priority. Their determination to participate in the digital world is reflected by rapidly focused actions supported by superior planning and sustained by dynamic public-private partnerships. To progress

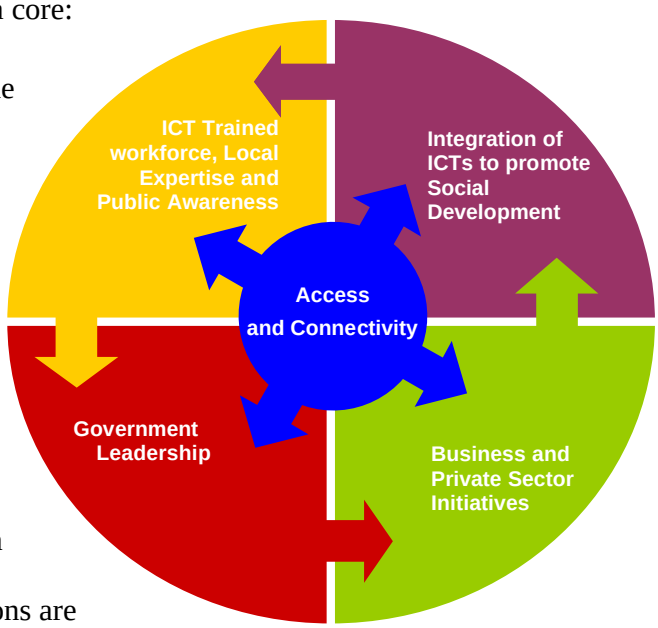
toward their goal, these countries rely on a strategic framework that assists in setting up their priorities and maintaining impetus.

Although there is often pressing urgency to act rapidly, **comprehensive action cannot be rushed,** particularly when there are large amounts of funding involved –and this is the case when attention is given to infrastructure. The complete e-Readiness process comprises three main phases, usually undertaken sequentially:

- **Phase I** is the **assessment**,
- **Phase II** is the **development of a strategy** and the **preparation of an action plan**, and
- **Phase III** is the **implementation** of the action plan.

When the purpose is to work at the level of a country, there is little advantage in acting upon the three phases simultaneously – e.g., starting a project in one area while conducting an assessment in another. The e-Readiness process should therefore be seen as a linear one, each phase building on the results of the previous one. It is however not a finite process: evaluation accompanies implementation and with new data emerging, strategies, action plans and projects can be improved or even modified to adjust to new conditions. Evaluation should be seen as an extension of assessment - a dynamic and evolving assessment.

The **strategic framework** varies from country to country. It is however possible to define a general approach to e-Readiness: there are five main areas of activities that contribute to the overall e-Readiness of a country. These main areas, in relation to each other, can be represented as a sort of four-tiered concentric circle revolving around a core:



- **Access and connectivity** are essential to the very existence of networks, and if they are deficient there is little point in moving on to the next focus area.
- **Training, Education and public awareness** are one of the main barriers to network development in many developing countries ; the internet is, after all, based on the written word, and mainly in English (although this situation is changing rapidly).
- **Government Leadership** is often the main vector of network development in most developing countries. Its laws and regulations are often the corner stone of a fast and successful implementation. New emerging markets are therefore created, opening new economic sectors with new windows of opportunities.

- **Business and Private Sector Initiatives** are key to the fulfillment and proper deployment of networks, and will provide constant backing for the pursuit of readiness objectives. Initiatives from this sphere will be driving the readiness of the country.

- **Social Development** builds up on the result of initiatives taken in other areas but should also be promoted through specific interventions if the Internet is expected to contribute significantly to the alleviation of poverty.

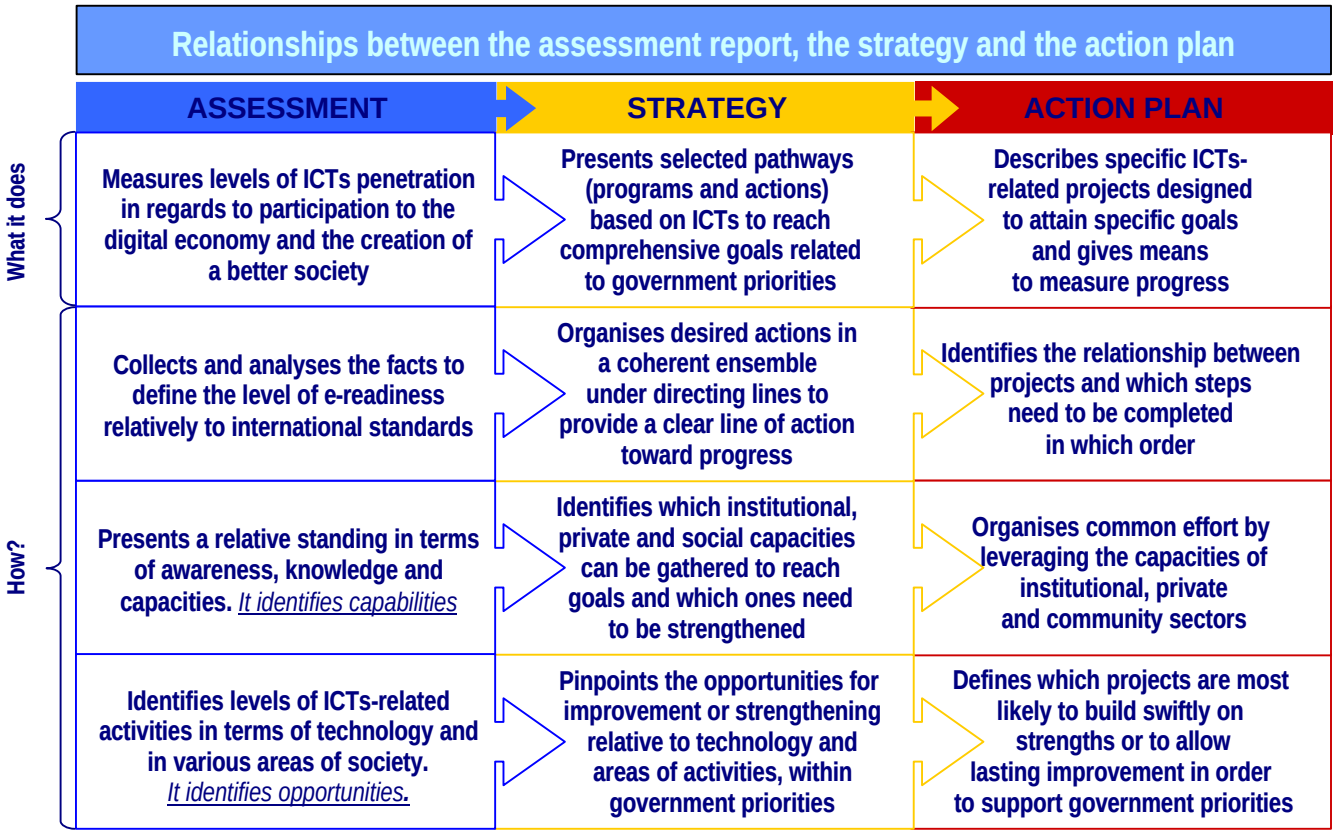
The ultimate objective of the e-Readiness process is to identify how the ICTs and the participation to the digital economy can help a government to reach more expeditiously its objectives in terms of economic and social progress and growth. By pinpointing the opportunities for action in the five main strategic areas and by defining the capacities that can help take advantage of these opportunities, it is possible to deliver an action plan closely related to the specific reality of a country.

Such a basic framework is useful for organizing e-Readiness assessments, developing a strategy and preparing a national Action Plan. When the same framework is used to organize data and strategy at each phase, it not only helps to make documents uniform, with shorter drafting time required and easier consultation, it also means, above all, that the risk of project overlaps is minimized and that the whole Action Plan is likely to be comprehensive and coherent.

Organized according to this framework, **three main documents** will result from the first two phases of the e-Readiness process:

- an e-Readiness **Assessment Report**,
- an ICTs-based **Strategy** and
- an ICT National **Action Plan.**

The action plan is the guide for the implementation of projects, the phase III of the whole process. It should reflect the analysis provided by the assessment report and corresponds to the line of action defined by the strategy. **The following table** illustrates the relationships between the three documents. It is useful to understand the role and specificities of these tools before starting the e-Readiness assessment. Also, **the accompanying website** provides detailed table of contents that can help to understand the purpose and format of these three important documents.



The role of a designated agency

The responsibility to carry out an e-Readiness program should ideally be undertaken by a public-private entity under government authority. Only an authorized agency has the ability to facilitate communications among all relevant ministries with responsibility for ICT policy, planning, and implementation.

This entity can take various forms, an agency or a task force. It is better that it forms an **autonomous unit**, not attached to a ministry in particular, as it needs to coordinate actions falling in such a wide range of activities. It should however rely on a group of specialists coming from the various important ministries: Justice, Education, Private Sector and Industry, Telecommunications, Revenue.

As explained in the following table, the designated agency combines three main roles: management, consultancy, and leadership.

As a manager, the agency plans, organizes and administer the 3-phase e-Readiness process. It is accountable for a budget and has the role, at the implementation stage, of allocating funds.

As a consultant, the agency provides all the information reports and recommendations expected. As such, the personnel of the agency are in frequent contact with key persons in the government and in the community.

It is as a leader that the agency exerts its most crucial role, one of creating awareness on the opportunities to seize and of consensus building. The agency constantly leads initiatives within the public administration structure to promote consistent and coordinated policies across government and enhance partnerships with the private sector.

MAIN ROLES AND ACTIVITIES OF THE DESIGNATED AGENCY

e-Readiness Assessment	**Management**: Plans, organizes and manages process; **Consultant**: Chooses assessment tool, gathers and compiles data; prepares report; **Leadership**: Liaises with various government departments; Builds awareness among key community members; sets foundation for further partnerships.
e-Readiness Strategy and National Action Plan	**Management**: Plans, organizes and manages process; **Consultant**: Drafts strategy jointly with relevant government departments; Advises key government decision-makers on best strategy to follow and propose programs; **Leadership**: Prepares strategic orientations; develops partnerships with key community members and alliances with international institutions and foreign investors.
Implementation of National e-Readiness Action Plan	**Management**: Plans, organizes and manages process; Supervises implementation of projects; **Consultant**: Evaluates, on an on-going basis, the relevance of activities; keeps alert on changing conditions; **Leadership**: Maintains good relationships between all stakeholders; recommends adjustment to programs if necessary.

MAIN ROLES OF THE COORDINATING COMMITTEE
Phase I No action Organization of Coordinating Committee Representativity is key issue
Phase II Gathers opinions and support; Drafts strategy outline and approves final document
Phase III Ensures continuous support from all stakeholders; Monitors alignment between implementation and objectives; Suggests new actions if relevant

There is also a need to constitute a **coordinating committee** which includes representatives of the main stakeholders. This committee will need to be organized during phase I and start working at the beginning of phase II. The next section emphasizes its importance.

The **coordinating committee** supports the activities of the agency. Not responsible for management, the committee acts as a think-tank and as a liaison unit.

Building awareness and consensus in the community

It is necessary to put an emphasis on the importance the designated agency has in creating consensus, not only within the governmental structure but also in the community. To reach this later goal, the agency mainly relies on the coordinating committee.

When the time comes to develop a strategy and to prepare an action plan, the agency necessarily needs to involve the active participation of all key stakeholders, both public and private, with industry and civil society participants to advise the government on appropriate policies and programs to promote ICT development. This is done through the coordinating committee. The potential candidates for this committee should have been identified at the early stage of the assessment and the selected persons contacted some time before the end of the assessment phase.

II. CONDUCTING AN *E-READINESS* ASSESSMENT

The first task of the designated agency is to organize the assessment process. This is not only a time for collecting data but also for the opportunity of building awareness and gathering the support of all stakeholders through a coordinating committee.

Assessment purpose

For developing countries, an e-Readiness assessment can help establish basic benchmarks for regional comparison by market verticals and for national planning.

There are numerous existing e-Readiness assessment toolkits that vary in terms of objectives, methodologies and results. This is to say that no assessment tool is likely to cover all topics and deliver the complete set of required data. Therefore, the assessment task force should plan to use a combination of different tools.

The first step consists in clearly defining the objectives the country is pursuing. The choice of a methodology depends on the perspective and objectives determined by the coordinating committee. The selected methodology should measure what the committee is looking for, and should fit the definition of an 'e-ready' society that is valorized by the country.

One of the goals of the toolkit is to contribute to "best practices" of the process of ICT's readiness. That is, the assessment should provide examples of what has worked best as a strategy for all parties involved (governments, NGOs, and the private sector). In an attempt to provide developing countries with valuable information for their own future efforts, an assessment methodology should highlight strategies which have worked "best" (most efficient and sustainable) in attaining the diffusion of the Internet and developing the new economy. The focus on individuals, context, interests and related activities, will help all participating countries to prepare the process of readiness in the years ahead. Through information and experience sharing, the focus on best practices emphasizes not only efficiency and sustainability, but also which practices led to widespread, equitable, and development-oriented results.

Assessment Methodology

Not all countries make it through each phase in the readiness process in the same way or at the same rate. The give-and-take process between governmental institutions, individual policy-makers, NGO's, and entrepreneurs is largely what determines movement of a country through the phases.

The assessment framework also reflects that ICT is driven by supply as well as demand, and that within each domain, there are multiple roles. For example, participants on the supply side may include telephone companies, computer manufacturers, and Internet service providers. On the demand side, these may include academic institutions, government agencies, businesses, and non-governmental organizations. Each of these involved parties has somewhat different goals, and therefore brings a different dynamic to the process.

A selected methodology should be dynamic, inter-active, scalable and provide threshold points that are important benchmarks for improved service in the ICT field. The emphasis is not on technological advancements, though these need to be mentioned, but rather on how the technology came to be in the country, who was responsible and what did they have to do to get the technology established. In other words, the emphasis is on the dynamic process itself.

Existing assessment methodologies

A starting point in the selection of the right assessment methodology is the "*Comparison of E-Readiness Assessment Models"* by Bridges.org (www.bridges.org), a non-profit organization dedicated to research, testing, and promotion of best practices for sustainable use of information and communication technology, offering open access to their studies and conclusions. Their comparability exercise describes the various methodologies that are available and what they measure, including the tools' underlying goals and the assumptions which shape their outcomes:

- **APEC**: Asian Pacific Economic Cooperation (APEC) E-Commerce Assessment (tool and report)
Source: http://www.ecommerce.gov/apec
Description: Assessments gauge a country's readiness for e-commerce through a detailed questionnaire, focusing especially on import-exports and policy.

- **CID**: The Guide to "Readiness for the Networked World" by the Center for International Development (CID) at Harvard and IBM (tool and report)
Source: www.readinessguide.org, http://www.cid.harvard.edu/ciditg/
Description: Assessments categorize countries along four stages of development for each of 19 categories, focusing on technology infrastructure, pervasiveness of technology, and the regulatory and business environment.

- **CSPP**: Computer Systems Policy Project (CSPP) Readiness Guide (tool and report)
Source: http://206.183.2.91/projects/readiness/
Description: Assessments rate communities along four progressive stages of development for each of the five categories, focusing on existing infrastructure and the pervasiveness of technology in society. Based on a 23 question questionnaire.

- **McConnell**: McConnell International's E-Readiness Reports (report)
Source: http://www.mcconnellinternational.com/ereadiness/default.cfm.
Description: Countries are rated in the five categories including infrastructure and access, government policies, human capacity, information security, and business climate, on a scale of one to three ('blue,' 'amber,' 'red'), and extensive analysis and recommendations are given.

- **WITSA**: The World Information Technology and Services Alliance (WITSA)
Source: http://www.witsa.org/papers/EComSurv.pdf.*Description*: The questions cover a range of issues, including: barriers to technology industry, role of consumer trust, problems with e-commerce technology, internal business practices that support e-commerce, workforce problems, taxes, public policy issues, and resistance from consumers.

- **Mosaic**: Mosaic Group's Questionnaire for tracking the global diffusion of the Internet (tool and report)
Source: http://som.csudh.edu/fac/lpress/gdiff
Description: A questionnaire based assessment by Mosaic, much less detailed than their case studies but covering the same issues (pervasiveness, geographic dispersion, usage within the economy, technology infrastructure, the Internet service market, and sophistication of use).

- **CIDCM**: University of Maryland, Center for International Development and Conflict Management (CIDCM)'s Negotiating the Digital Divide framework
Source: http://www.bsos.umd.edu/cidcm/projects/leland.htm

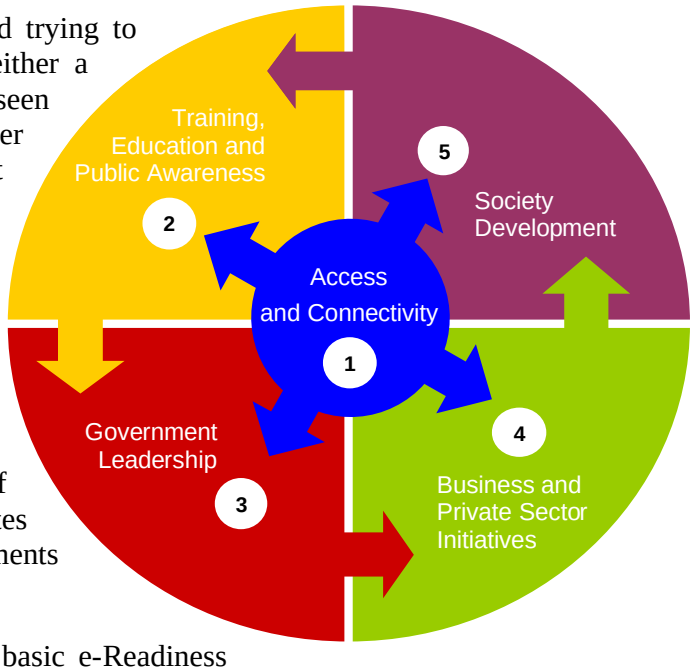
Description: The method gauges four types of information for each country: Background and history, Key players in Internet development, Internet development and ICT policy over time, Negotiations between players in developing the country's Internet. 'Negotiation' between players is the focus of the framework.

The "*Comparison of E-Readiness Assessment Models"* by Bridges.org gives scores to each assessment tool regarding the aspects and level of detail it considers. The rating system is from 1 to 3, 3 representing the high score; no score meaning that the assessment tool doesn't consider the aspect that is rated. The Bridges.org comparison is presented in the table presented on page 14. For convenience, we have added a total for each assessment area and each assessment tool as an indication of what is best considered by the different methodologies.

The Bridges.org *"Comparison of E-Readiness Assessment Models"*							
Assessment Tool's Level of Detail	CSPP	CID	APEC	WITSA	McConnell	CIDCM	Mosaic
Access and Connectivity							
Infrastructure – Network, Tele-density	2	3	3	1	2	2	3
Pricing	-	2	3	1	2	1	1
Speed and Quality	2	2	3	-	2	1	2
Other Technology Issues	-	3	3	-	1	2	2
Total level of detail – Access and Connectivity	**4**	**10**	**12**	**2**	**7**	**6**	**8**
Training and Education							
Use in Schools	1	2	2	-	2	1	1
Tech Training in Schools	1	2	2	-	2	1	1
Availability of Trained workforce	1	-	2	3	2	1	1
Total level of detail – Training and Education	**3**	**4**	**6**	**3**	**6**	**3**	**3**
Government Leadership							
Policy (Privacy, Trade, Intellectual Property, Electronic Signatures) Regulations	1	2	3	2	3	3	2
E-Government	1	2	1	-	2	1	1
Political Openness, Democracy	-	-	-	-	2	2	-
Total level of detail – Government Leadership	**2**	**4**	**4**	**2**	**7**	**6**	**3**
Business and Private Sector							
Use within Businesses	1	2	2	2	-	1	1
E-Commerce	1	2	3	3	1	-	1
Market Competition / Privatization	2	-	3	1	2	2	3
E-port Trade, Foreign Investment	-	-	3	-	2	2	2
Other Economic or Business Factors	-	-	3	3	1	2	2
Total level of detail – Private Sector	**4**	**4**	**14**	**9**	**6**	**7**	**9**
Social Development							
Use of ICTs in Everyday life	1	2	2	-	2	1	2
Utilization of Technology throughout Society)	1	2	1	-	2	1	2
Basic Literacy, Poverty, Other Social Factors	-	-		-	1	2	1
Locally relevant Content	-	2	1	-	1	-	1
Consumer Trust	1	1	-	3	-	1	1
Unique Political, Business, Social History	-	-	-	-	2	3	3
Total level of detail – Society development	**3**	**7**	**4**	**3**	**8**	**8**	**10**

A composite framework

Combining all the different approaches and trying to make the "ultimate" assessment tool is neither a realistic nor even a desirable endeavor. As seen previously, different methodologies cover different situations and serve different purposes. An all-inclusive methodology would leave out certain levels of detail or a focus that is required in certain countries but not in others.



However, for the purpose of simplifying the planning process and the reporting, it is advisable to use a composite framework which accepts the constructive features of existing systems but which also clearly states the relationships between the various elements that converge to organize an e-ready society.

As presented in section one (page 6), the basic e-Readiness framework can be divided into a number of focus areas:

1 **Access and Connectivity**
2 **Training, Education and Public Awareness**
3 **Public Administration and Government Leadership**
4 **Business and Private Sector Initiatives**
5 **Society Development**

This e-Readiness model is comprehensive in that, although infrastructure and connectivity are at the start of the e-Readiness process, it clearly gives an equal importance to other factors, not linked to technology.

Gathering and reporting of data are simplified by following the structure given by this framework. As mentioned in section 1, this basic framework is to be used for the assessment, for the preparation of the national action plan and for its implementation.

The results of the entire information gathering should be presented in a report, structured in such a format that identifies strategic opportunities for progress and key constraints that must be removed. The eFacilitation Center's website provides an example of how to achieve this.

III. DEFINING AN E-READINESS ACTION PLAN

First the strategy, then the action plan

While the assessment phase involves the administration and organization of data, the first stage in the planning phase is oriented toward assembling the views of the various stakeholders into a strategy that needs to be approved by the government and supported by investors and funding organizations. The table of contents of a standard strategy document is available on the eFacilitation website..

Based on the information gathered by the e-Readiness assessment, the **strategy develops a vision** of how the country can use the ICTs **to foster social and economic progress and growth**. The strategy categorizes and prioritizes the main areas in which to act and defines the main objectives of each action. It also sets a timeline, usually a three- to five- year period.

	STRATEGY	ACTION PLAN
What it does	Presents selected pathways (programs and actions) based on ICTs to reach comprehensive goals related to government priorities	Describes specific ICTs-related projects designed to attain specific goals and gives means to measure progress
How?	Organises desired actions in a coherent ensemble under directing lines to provide a clear line of action toward progress	Identifies the relationship between projects and which steps need to be completed in which order
How?	Identifies which institutional, private and social capacities can be gathered to reach goals and which ones need to be strengthened	Organises common effort by leveraging the capacities of institutional, private and community sectors
How?	Pinpoints the opportunities for improvement or strengthening relative to technology and areas of activities, within government priorities	Defines which projects are most likely to build swiftly on strengths or to allow lasting improvement in order to support government priorities

The strategy reflects the analysis and the thinking that have been done during the assessment process. As it is strongly suggested that representatives of the various groups/stakeholders (government, private sector and public societies) participate to its preparation (through the coordinating committee), **the strategy is a document based on reality**: the reality described by the assessment report and the reality of the support coming from various sectors of the society –support without which the strategy could not be implemented smoothly.

The strategy is an inspiring document that is to be used to obtain the required funding, both at the government, private and international finance organization level.

Once the strategy is defined, the next task consists in preparing **the action plan**. The action plan describes with more details the various programs to be conducted. It splits the programs in possible projects, estimates budget and proposes realization schedules.

Both these documents take into account the existing interdependence between all the projects. Good planning makes it possible to avoid overlaps of actions and optimizes the resources.

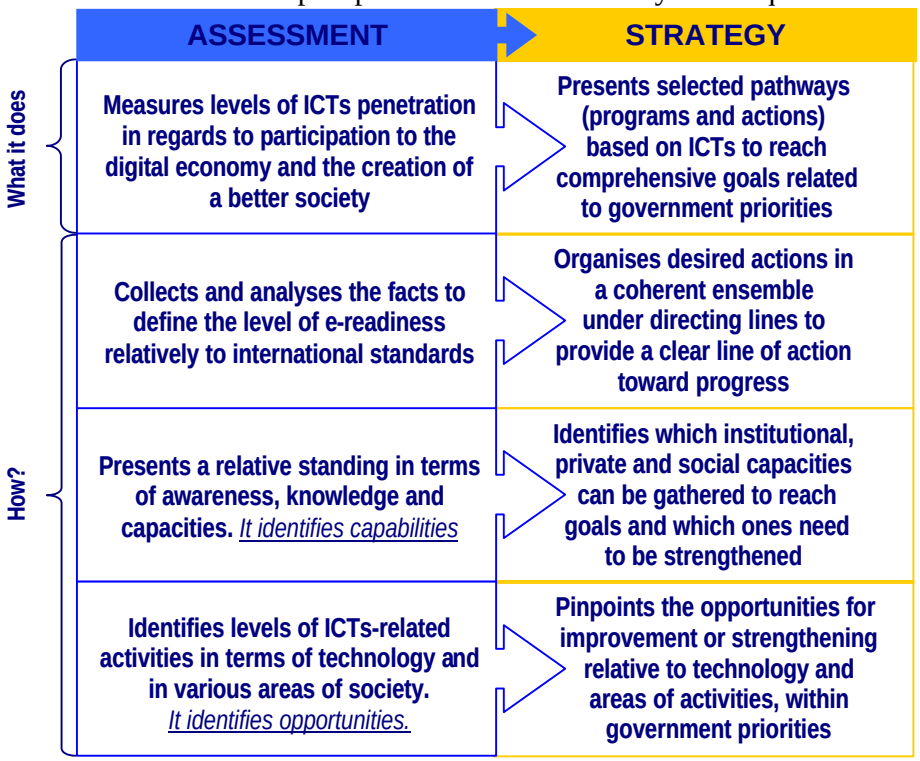
At this stage a full description of projects may not be realistic (the first stages of implementation still comprise adjustments to the plan). However, it is necessary to prepare the details of the feasibility

studies and the pilot projects in terms of objectives, execution schedule and estimated budgets, etc. These studies and projects need to be conducted in order to confirm on a small scale that the plan is feasible and the technological choices are compatible with the existing equipment and services.

The designated agency determines the terms of reference for the feasibility studies and pilot projects, necessary to validate specific strategic actions. For each preliminary action, persons in charge will be made accountable. If external experts are required, the committee has to decide if it is necessary to proceed by tender.

How to use the e-Readiness assessment to prepare an action plan

The assessment report provides all the necessary data required to make informed decisions on which ICT programs to develop. For the five main strategic areas, the assessment report provides an idea of which opportunities exist in terms of improvement or reinforcement. It is the role of the strategic task force (comprised of the coordinating committee and the specialists of the designated agency) to transform these opportunities into specific programs and activities.



This is done partly by examination of the observed opportunities within the framework of the government's priorities. Emphasis varies from country to country and can be, for example, the alleviation of poverty, the growth of external commerce, the promotion of educational and cultural values in all sphere if the society or a more transparent government. Such various goals can all use ICTs to jumpstart or support their achievement. The strategic task force has to find out what is the best way to support the national priorities with ICTs.

The e-Readiness assessment also provides all the information regarding the constraints and obstacles to a swift development of ICTs. Such constraints and obstacles are in fact an invitation to action and it is the role of the strategy to define how to overcome them.

The role of the agency and the coordinating committee

The coordinating committee now plays a crucial role. Its responsibilities include the elaboration of the strategy outline in relation to the action plan and the gathering of support in the private sector and in the community. To take into account the various reactions to the assessment report from the different stakeholders' groups, there are two ways of proceeding: either the spokespersons of various sectors have been officially delegated by a truly representative body (examples: chamber of commerce, manufacturers association, school teachers union, etc.) or a public consultation is held. The later option involves more time but could be considered a public relation activity by the agency.

Once a satisfying preliminary strategy has been drafted, the work continues in close relationship with the agency's specialized personnel. They are the ones that write the details of programs and prepare all the necessary technical information for transmission to the agency head to recommend relevant adjustments. Once reviewed at the satisfaction of the coordinating committee and the head of the agency, the strategy is approved by the government according to the usual administrative and legislative procedures. It becomes an official document.

The schedule is tight and the work should be accomplished quickly but without neglecting the importance of gathering support and creating partnerships.

e-Readiness Action Plan General Outline

The template of an e-Readiness National Action Plan is provided on line at the eFacilitation website. The plan is organized according to the main areas defined by the strategic framework. For each area it gives:

- a summary of the situation as described in the assessment,
- an identification of opportunities in relationship with the government priorities,
- a national strategy,
- an inventory of available resources (human, financial, technical) in the country needed to seize the opportunity,
- a description of the program's objectives,
- a description of the principal means of action,
- a summary of the expected results.

The action plan also provides a comprehensive table showing objectives and activities by sector. To help the planning, each strategic area is reviewed in the following pages.

Access and Connectivity Program

Access and connectivity are essential to the very existence of networks. No country can expect to reap benefits from the digital economy if its telecommunication (land, air and sea) and Internet infrastructure are deficient. Similarly, if the infrastructure is deployed and available but only a select few can take advantage of it prohibitive costs, the situation cannot be considered as favorable for a quick penetration of ICTs.

The access and connectivity program should therefore aim at two main objectives:

- To provide network accessibility to the general public by means of a functional national, metropolitan and regional telecommunication network at an affordable cost
- To provide infrastructure required by the development of ICT-based projects;

To attain these objectives, there are various means of action, ranging from strictly technology-related, to the reform of policies and law, and to community-oriented projects.

Technology: Well researched solutions at this stage will narrow the number of potential offerings to the ones really able to deliver the expected results and facilitate the eventual selection of supplier. Different technology solutions should be considered with the following criteria of evaluation: cost, adaptation to context (geography, demography), environmental conditions, scalability, and ease of maintenance.

The Action Plan should describe the desired solutions in general terms but within a realistic timeline, and in relationship to the other programs.

Law and policies Adaptation of regulations and issuing of favorable policies imply a good understanding of the mechanisms at stake in the telecommunications sector. Various elements require an intervention, like structure of telecommunications sector, costs of services, tax on imports, foreign investment protection, national regulations agencies, etc.

Community Access Finally, simple community access solutions should be considered within this program: affordable connection to the Internet, of course, but also creation of access points which provide a way to use ICT possibilities for people without the means to equip themselves.

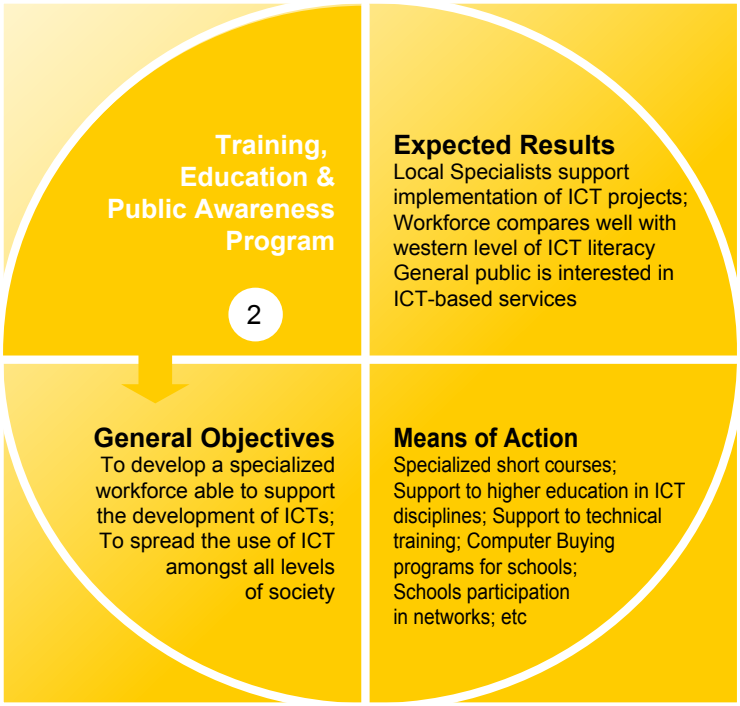
Training, Education and Public Awareness

Lack of specialized training, low levels of education and inadequate public awareness as to the possibilities of ICTs and Internet are some of the main barriers to network development in many developing countries. To devise a program that can effectively supply the necessary workforce for implementing ICT projects as well as developing skills in the general public, one needs to develop focused projects within a long term vision.

It is important to point out that some means of action associated with this area of programming are also shared by other programs: modernization of administration gives experience to local ICT specialists, ICT use in public administration requires continuous training, implementation of ICT-related projects in the private sector also implies training. All these aspects require immediate training to develop, implement and maintain the plan. Therefore, the program needs to take into account ongoing work-related training as well and formal education. This part of the national action plan should however contribute to institutional aspects of training and education, through schools, specialized institutes and universities in order to develop long term capacities. The related projects should provide the basic and theoretical foundation for workforce development and public awareness while other programs would concentrate on the practical and empirical aspects. Links should however exist whenever possible for schools to give real world practice, and for the public administration, business sector and community networks to be able to rely on the resources of the education system.

Some actions can and need to be quickly put into place, especially if the number of local specialists is small. These include :

- Organization of short courses for computer specialists with the help of international network companies and from equipment manufacturers ;
- Invitation of foreign specialists in universities ;
- Information and initiation sessions for school teachers ;
- Internet activities in schools, etc.



Other projects require a longer period of implementation :

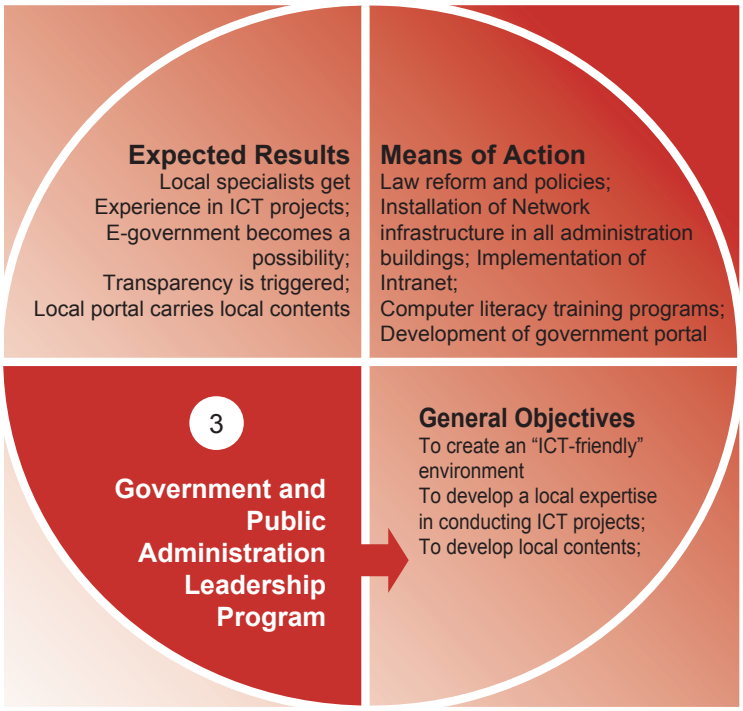
- buying computers for the education system (schools, specialized schools and universities),
- development of new curricula in secondary schools,
- creation of a national institute of telecommunications and networks, etc.

Government and Public Administration Leadership

Government Leadership is often the main responsible of network development in most developing countries. This for two reasons: first, the government has the capacity to create a favorable environment for projects that are progress related, by the reform of laws and regulations and by shaping policies and installing incentives; second, the government is generally a large employer in the country.

Projects related to the Government and Public Administration fall in three categories: Law and regulation reform and Policy making projects; Information management and Intranet projects; Extranet and E-government projects.

Law and regulation reform and Policy making projects Most often than not, changes in laws and regulations will have to be done early in the process of action plan implementation. In most cases it should be seen as a prerequisite to the start of the implementation process. The revision work should cover the requirements specific to business and private sector operation (see next section) and consumer protection as well (particularly privacy protection). Matters related to fiscality and customs are of great importance in allowing development of ICTs business and electronic commerce. As such, defining the framework and boundaries of new technological concepts such as virtual individual, electronic signature and digital liability will all become new challenges to the government and the judiciary infrastructure. Special attention should be given to these aspects.



Management and Information Systems (MIS) projects and Intranet projects mobilize relatively large funds but mainly imply great coordination and attention to details. Their goal is to reduce administrative overlaps, to speed processes, and to provide a collaborative work environment.

Extranet and E-government projects are a step towards a more transparent public administration. They also have an important indirect result: the production of local Internet content by augmenting emphasis and promotion of local cultural content.

In the developing countries, the government has unquestionably a great leadership role to play for the growth of the ICT sector, and not only as a law maker or economic enabler. It can truly be the initiator in matters of providing experience to ICT firms and workers as well as helping the creation

of local contents. A more subtle impact yet a tremendously important one is the positive effect on the creation of an ICT-knowledgeable workforce.

Business and Private Sector

Business and Private Sector Initiatives are key to the fulfillment and proper deployment of networks, and will become the guarantors of the pursuit of readiness objectives.

Within the context of a national e-Readiness action plan, considered actions should aim at facilitating such initiatives and supporting business projects that are in line with government priorities, let it be employment, poverty reduction or commerce growth.

E-commerce should be seen as a means of stimulating international distribution of local products, including knowledge. This has great implications in the areas of customs, logistics and financial transactions and trade systems. Long and complicated procedures, inadequate distribution system and outdated banking system will hindered the advantages and possibilities of global electronic exporting markets.

The national action plan should look at four large categories of projects:

Fiscal measures should reflect the new realities associated with Internet and widespread use of ICTs. While the legal adjustment work is to be done under the strategic area 3 (Government leadership), there is specific fiscal support programs that can be implemented. Special programs (either under the form of subsidies or fiscal considerations) can be developed to promote job creation and business start ups in the field of ICTs and to encourage electronic commerce and trade. If it has not been done under the law reform project Privacy protection should be guaranteed by law and a formal code of ethics enforced by a business association that has a power position.

Virtual financial transactions are a twin to electronic commerce. Modernization of banking system may be required in some countries. Legality of virtual transactions should be acknowledged.

Logistics improvement is a topic which needs to be addressed. It could imply modernization of the postal system, allowing new carriers to do business in the country and automating the customs system.

ICT and Internet related business regrouping is a great way of creating synergies and building local capacities. Projects can be done at a very concrete level like the designation of a dedicated building or perimeter or in a virtual way through a portal.

Synergy could be created between ICT business that are devoted to hardware, software, networks, programming and Internet and multimedia business that include design, production of content and web specific programming. Also, a business portal promoting local products and services can be a great way to involve many firms not initially interested in e-commerce.

Society Development

Society Development builds up on the result of initiatives taken in other areas but should also be promoted through specific interventions if the Internet is expected to contribute significantly to the alleviation of poverty.

The projects prepared in relationship with this strategic area have a definitive social focus. While some could be classified as part of training and education program, they all give an attention to special needs and promotion of wellbeing. In that regards, three areas usually require most attention: health, literacy and social and economic advancement of women

The projects developed within the society development program are the ones that can most embody the government's priorities in terms of social progress. Imagination is the key here to use the immense leverage potential of ICTs and Internet.

IV. IMPLEMENTING A NATIONAL E-READINESS ACTION PLAN

At the implementation stage, the designated agency sees its tasks ranging in three main categories:

- to ensure that all facilitating conditions are present,
- to secure and attribute funding, and
- to monitor the execution of projects in regards of respecting the objectives and administration of funds.

The coordinating committee also has a role of supervision – this one specific to the contribution of projects to the objectives. It monitors alignment between implementation and overall objectives and suggests new actions if relevant. It also ensures continuous liaison with the stakeholders' groups.

The implementation schedule has to be closely watched according to performance indicators. The implementation phase comprises four main stages:

Stage I - Feasibility and Validation which secure local partnerships and validate the work carried out during the development of the national action plan;

Stage II - Preparation consists in the finalization of the national action plan and ensures adequate financing of the relevant projects;

Stage III - Tender process aims at creating profitable partnerships for the execution of the strategy;

Stage IV - Implementation of selected projects starts, with three distinct stages: beginning, execution and preparation of long-term operation.

The figure next page presents the implementation process. The methodology is described on the following pages.

THE IMPLEMENTATION CYCLE

STAGE I - FEASIBILITY AND VALIDATION which secure local partnerships and validates the work carried out during the development of the national action plan;

STAGE II - PREPARATION consists in the finalization of the national action plan and ensure adequate financing of the relevant projects;

STAGE III - TENDER is a process which aims at creating profitable partnerships for the execution of the strategy;

STAGE IV - IMPLEMENTATION of selected projects starts, with three distinct stages: beginning, execution and preparation of long-term operation.

Methodology

This section presents a general approach for implementing the projects that will increase the e-Readiness of a country. It refers to the diagram presented on the previous page.

Implementation Stage I – Feasibility and Validation

Although this phase comprises many steps, it should be carried out very quickly, ideally in six months, building on the actions conducted and partnerships developed during the previous assessment and planning period.

Step 1 – Secure local partnerships

While the assessment phase and the preparation of the strategy should have created the necessary awareness and consensus, the implementation requires formal agreements of cooperation with important local stakeholders. This step constitutes the foundation on which all further activities will rely. No ICT national development plan will take off if there is no sufficient local support, especially from the part of public administration.

To develop all necessary local understandings in a short period of time is not realistic but the coordinating bureau should at least secure the collaboration of important ministers and agencies (namely Justice, Finance, Education, Industry, Telecommunications and Customs) to put ICT development in their priorities, backed by corresponding financial and human resources.

Apart from the administration, the most important local partners are higher education institutions, business associations, principal industry representatives, local telecommunication companies, and banks. E-Readiness requires a joint effort. Good work at this stage will do a long way for the success of future projects.

Step 2 – Obtain preliminary funding

Almost in parallel with the step 1, a search for preliminary funding is required to conduct pilot projects and start to put in place the facilitating conditions.

In some cases, funding will come from public budgets and has therefore been secured at step 1. Some other projects could require funds from international finance institutions or private investors.

Step 3 – Prepare facilitating policies and start revision of law and regulations

Favourable government policies, mainly in the areas of trade, telecom regulations, support to business initiatives and national education system are seen as prerequisites to adequate development of ICT use.

The policy makers have an important responsibility in removing all institutional and law obstacles to the development of ICT use. The designated agency is indeed the main advisor for the government in regards of setting up ICT priorities, policies and in developing supporting programs for initiatives coming from the various sectors.

Although this could be seen as a true implementation activity, the enabling and facilitating nature of appropriate laws and regulations justifies starting right away their revision.

A prerequisite to most subsequent projects, an adapted corpus of policies and laws can also be a proof of the seriousness of the country in developing a pervasive use of ICTs. This step requires little funding and some part can be completed quickly given the amount of documentation on these topics.

Step 4 – Conduct feasibility studies and execute pilot projects

At this initial stage, the national action plan requires the sounding board of feasibility studies and/or pilot projects. The results of these activities, to be conducted in a short period of time will serve to finalize the national action plan mainly in regards to the identification of technical, financial and human resources. This information will be used to articulate and /or finalize the requests for further funding from donors, international institutions or foreign investors.

Implementation Stage II - Preparation

Whereas stage 1 is necessary for gathering strong local support, and defining the needs and capabilities in a more precise way, stage 2 aims to provide all the necessary means of action. The national action plan is adjusted taking into account the results of the feasibility projects and is approved. The funding is secured and all relevant international partnerships are concluded.

Step 5 – Finalize and approve National Action Plan

In their final form, the projects are approved by the Coordinating bureau which determines the amount of required funds. The designated agency (i) ensures that the projects take into account the results obtained by the preliminary actions, (ii) checks that they do not overlap and (iii) sees that the detailed plan is realistic, i.e. it will make it possible to achieve the goals with the resources planned for the realization.

The projects' description must comprise the following elements:

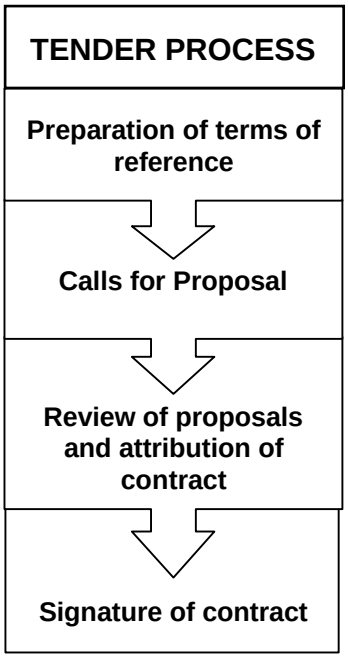
1. A clear short description of the nature and goals of the project;
2. General strategy of intervention :
    a. Objectives and deliverables,
    b. Overall estimates of necessary resources (financial, technical and human),
    c. Required financial, technical and institutional partnerships necessary to its execution and its lasting effect;
    d. Duration of the project;
3. Identification of pre-requisites as regards of governmental policies, legal framework and infrastructure;
4. Presentation of the existing links between the project and other planned interventions ;
5. Detailed activities;
6. Stages of realisation according to a schedule of execution;
7. Overall indicators of performance corresponding to each defined stage, in relationship with important intermediate and final results;

8. Mechanisms, actions or structure required to ensure the lasting effects of the project once completed, particularly in terms of financial self-sufficiency;
9. Specific communication plan ;
10. Detailed identification of the necessary personnel and their responsibilities;
11. Distribution of funds along a time line and by stages of realization.

Step 6 – Secure international and foreign funding

Implementation Stage III - Tender

Under the responsibility of the coordinating bureau, the tender process respects the requirements for transparency and the technical specifications in use for the attribution of contracts carried out with international financial institutions funding.



Step 7 – Organize and carry out tender process

The process starts with the definition of the terms of reference and/or technical specifications. These are based on the project description, completed in step 5. The terms of reference are an important document as it should attract the best possible persons to execute the mandate. It is also used to write the contract.

Then, the call for proposals relies upon multiple channels of diffusion in order to obtain to the greatest possible number of quality applicants. In this regards, the publications of the financial institutions and specialized magazines remain the best means.

The invitation to tender is written on the base of the brief description of the project (see step 5). Interested applicants should have access to the terms of reference. The more detailed documents (result of the feasibility studies, national action plan and other relevant documents) are available upon request.

Those who want to show their capacity to carry out the project need to: describe their methodology of intervention; propose a detailed schedule of realization and a detailed budget, by stages and types of costs, present the required personnel, etc. They must provide performance indicators for each stages of the project and submit a plan for the continuation of the operation once the project is completed.

The delay given to answer the invitation to tender is relatively short, due to the probable urgency to start the projects. This period of time is adjusted in relation to the magnitude of the project but should not exceed three months.

For the analysis and selection of the proposals, the designated agency associates itself with specialists in the concerned field.

The signature of the contract actually corresponds to the conclusion of a partnership between the country, its agency and the contractor. The contract defines the obligations of the two "partners".

Implementation Stage IV – e-Readiness action plan implementation

During this phase, the implication of the agency is mainly one of supervision; it sees to the respect of the terms of reference and contract and controls the execution using performance indicators. The agency also makes sure that all the prerequisites to the good standing of the project are operative (effective allowance of funds, lifting of administrative, legal or political constraints, etc.).

Each project is carried out under the direction of a director of project appointed by the agency. This person is responsible for the objectives defined in the project plan.

Step 8 – Manage execution of e-Readiness projects

Initiation

Typically, the beginning stage of the project lasts a few weeks. This stage includes activities such as:

- Administrative procedures (bank account, obtaining the licences and necessary authorizations,);
- Establishment of the project office (local and equipment, telephone lines, etc);
- Hiring of personnel;
- Preparation of the project synopsis according to a standard format (see the example provided on line by the eFacilitation Center) ;
- Finalization of the communication plan for the project (contact with administration, backers so relevant, and with partners);
- Installation of the administrative check procedures;
- Purchase of the hardware and the equipment planned for the realization of the project.
- Delivery of the hardware on the place planned for the installation

Realization

Appointed experts and persons in charge carry out each stage as defined in the detailed plan of project submitted to the agency. The project is managed according to the performance indicators and usual administrative controls.

Continuation

This stage begins during the last year of the project implementation. Depending of the project, various elements should be addressed:

- Maintenance Plan for the equipment;
- Implementation of the mechanisms allowing financial autonomy;
- Transfer of the documentation of project;
- Operation Budget for the first post-project year ;
- Signature of agreements ensuring the continuation of activities;
- Transfer of rights;
- etc.