

The National eStrategy for Lebanon

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Programme

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Administrative Reform

Document 4:

The ICT Policies and
the Seven Initiatives

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1.0 Grouping ICT Policies

A Policy is generally accepted to be a “Statement of Requirement”. One of the main aims of a Government is to develop Policies by identifying such requirements.

1.1 Identification of Requirements

The National eStrategy for Lebanon has identified “National Requirements” that relate to how ICT can improve growth and competitiveness as well as improve socio-economic development. They are grouped under 4 major areas (also shown in the diagram on the next page):

1. **eReadiness Requirements:** The eReadiness Assessment arrived at a gap analysis. To close the eReadiness gap, requirements for Lebanon were identified. (Document 3).
2. **Challenges:** An analysis of the challenges of Lebanon was carried out providing a set of wide ranging requirements. These were based on UNDAF and the Five Year Development Plan of the CDR. (Document 2).
3. **Opportunities:** Similarly, an analysis of the opportunities for Lebanon was carried out. (Document 2).
4. **Knowledge Based Economy:** An analysis of Knowledge Based Economies was carried out whose result was that Lebanon needs to transit into such an economy or risk being marginalized. The requirements for such a transition were stated in the discussion. (Document 2).

The above “Requirements” became the basis of “Policy Generation”. Policies were developed for all such requirements and were grouped under 7 different “Initiatives” for the National eStrategy.

The following diagram shows the development of Requirements into Policies:

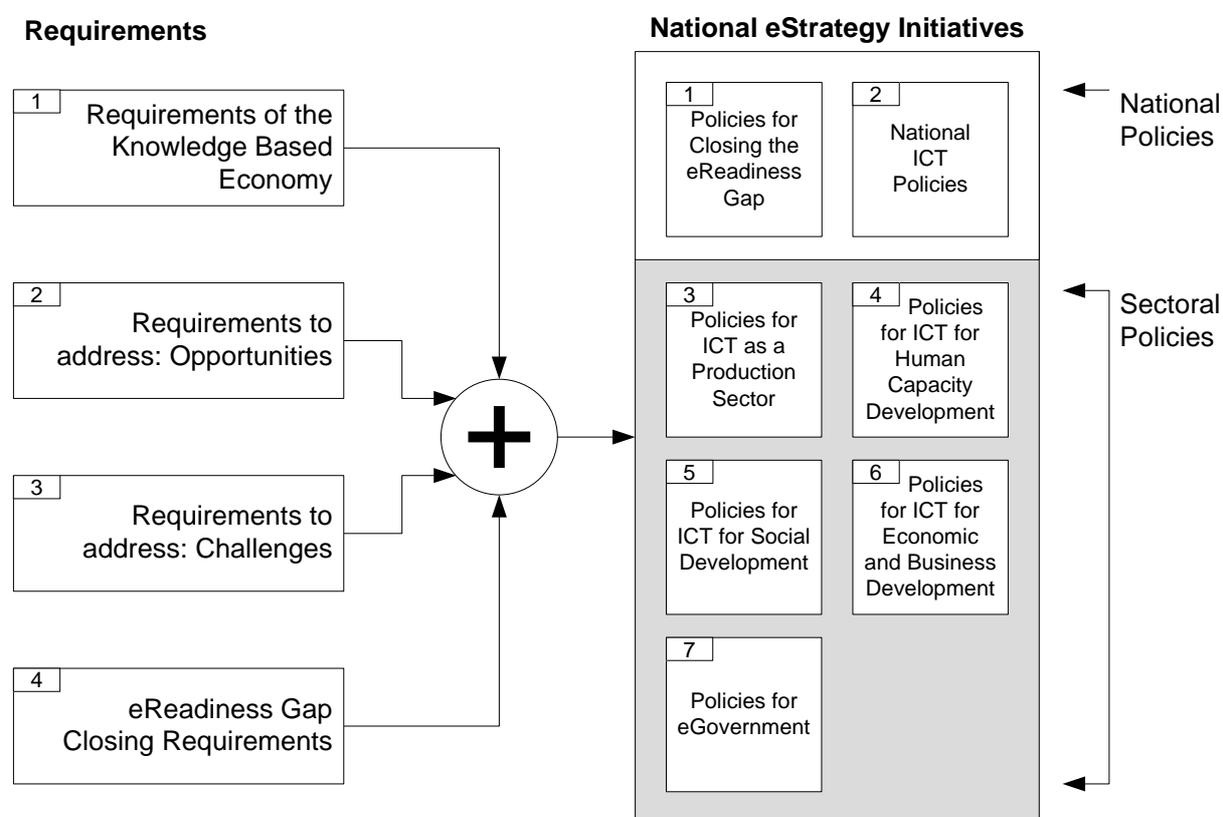


Figure 1: Development of Requirements into Policies

1.2 Grouping Policies by Initiative

The four types of National Requirements blocks shown above can be considered as “policy generators”. The Policies were grouped under 7 different initiatives.

An initiative is therefore a set of policies that have a general and common aim. For example, all Policies related to social development are grouped under Initiative 5 while all Policies that address the requirements needed to close the eReadiness Gap are under Initiative 1.

The 7 initiatives can be grouped into **National** policies and **Sectoral** policies.

ICT Policies under are elaborated in Document 5 where each set of policies are further broken down into specific objectives (or sub-policies).

Towards that end, policies have been developed in the following key areas or **Initiatives**.

1.3 National Policies: Policies for Closing the eReadiness Gap

There is a need to close the gap between the current situation of ICT and the desired state for Lebanon. These policies are pre requisites for the rest of the initiatives.

1.4 National Policies: National ICT Policies

Lebanon needs to adopt nation-wide policies that use ICT to accelerate national development processes. These would place ICT in a good position to drive Lebanon into a Knowledge Based Economy.

1.5 Sectoral Policies: Policies for ICT as a Production Sector

ICT as a sector should be developed to be a competitive sector. Furthermore, it needs to be improved to serve the other 6 initiatives. These policies focus on the strengthening of ICT industries such as hardware, software, telecommunications equipment and services.

1.6 Sectoral Policies: ICT and Human Capacity Development

Human Capacity is a cornerstone for the other 6 initiatives. It is also a critical factor in a Knowledge Based Economy. The following policies aim at strengthening human capacity.

1.7 Sectoral Policies: ICT for Social Development

ICT can be a main driver and an enabler of social development. Social development leads to an improvement of the life of the citizen. This would lead to Lebanon's growth and competitiveness. Policies have been identified to address the social challenges and opportunities.

1.8 Sectoral Policies: ICT for Economic and Business Development

These are Policies that allow Lebanon to improve its economy and its business sector. This initiative also covers policies related to eCommerce.

1.9 Sectoral Policies: eGovernment

Lebanon needs to improve the performance of its public sector institutions. This covers such issues as efficiency, transparency, predictability and accountability. It also improves ease of access and processing by the citizen. The policies allow the public sector to transit into the eGovernment phase integrating public sector with socio economic development.

1.10 Policies and Their Objectives (Sub-Policies)

The above 7 initiatives and their 34 Policies are presented in the following 7 Sections. For each Policy, the document analyzes the benefits or the need for such a Policy and then presents its specific objectives.

2.0 National Policies: Policies for Closing the eReadiness Gap

eReadiness is the readiness of a country to exploit ICTs as drivers of socio-economic growth and human development.

The first phase of the National eStrategy project resulted in a comprehensive eReadiness Assessment. The result of the assessment led to the postulation of the following policies and their specific objectives. Initiative 1 presents eReadiness Gap Closing policies.

The eReadiness Assessment document took into consideration the following factors:

- The requirements needed to get Lebanon into an eReady state
- The ICT requirements and pre-requisites posed by the other 6 initiatives

As shown next, the eReadiness Assessment covered various aspects of Lebanon grouped under 5 major classifications. Initiative 1 presents policies related to the Access and Infrastructure subsuming the policies for the other 4 categories under the remaining 6 initiatives.

2.1 eReadiness Assessment

Five categories of eReadiness criteria were identified. They are shown below with the individual eReadiness criteria:

Access and Infrastructure:

Network Infrastructure

Access

Affordability

Reliability and Speed

International Connections

Government Leadership:

National ICT Strategy

ICT Policies and Regulations

Central Bank Initiatives

Partnerships and Funding for ICT

eGovernment and Organizational Efficiency

Human Capacity:

ICT as Formal Education

ICT as Informal Education

The ICT Brain Drain

eBusiness and Economic Environment:

Economic Climate

ICT as a Production Sector

eCommerce

Social Environment and Public Awareness:

Usage of ICT in Everyday Life

The Internet Society

Figure 2: eReadiness Categories and the 18 Criteria

The 18 criteria were selected and approved by the Technical Committee overseeing the project. The above breakdown shows the overall structure of the eReadiness Assessment document.

For each of the above 18 criteria several questions or issues were addressed. A total of 118 of these were then analyzed. The document presented an assessment for each of the 18 criteria.

2.2 Improve Network Infrastructure

The network infrastructure in Lebanon needs to be improved drastically in order to make Lebanon ready for the networked age. Moreover, without this basic infrastructure, few of the policies in the remaining initiatives can be efficiently implemented.

- Extend coverage of telecommunications networks to reach all of Lebanon
- Modernize the telecommunications sector to host new technologies
- Plan for emerging telecommunications technologies
- Deregulate and liberalize the telecommunications sector
- Aim for convergence in telecommunications services
- Improve the utilization of fixed land lines
- Provide additional fixed land lines services and options
- Increase mobile penetration by removing the limit on mobile subscriptions
- Regularize the services of cable providers
- Consider the installation of a Lebanon wide terrestrial data cable network
- Remove restrictions that incoming data needs to pass through the Ministry's facilities
- Encourage mobile operators to introduce state of the art services
- Improve the continuity and quality of electrical power
- Encourage the implementation of wide area networks

2.3 Provide Wide Access or "Connectivity for All"

Following the general policy of "Connectivity for all", the following objectives need to be met:

- Improve the PC penetration rate
- Improve the Internet penetration rate
- Improve the mobile penetration rate
- Diversify the types of access to the Internet
- Spread the access to the Internet
- Increase public access through Multi-Purpose Community Telecenters (MCTC)
- Concentrate all of the above on areas outside Beirut and the main towns
- Deregulate ISP services to allow convergence with telecommunications
- Organize the use of domain names
- Raise awareness of all services

2.4 Provide Affordable Infrastructural Services

Following the aim of reducing the digital divide(s), one of the key challenges for the Lebanese Government would be making such factors as the following affordable:

- Reduce the cost of data access on land lines

- Reduce the cost of ISDN access and that of emerging technologies
- Reduce the cost of leased lines
- Reduce the cost of wireless access
- Reduce above costs for both individuals and institutions
- Make more efficient all cycles of acquiring telecommunications services in terms of turn around time, procedures and requirements.
- Reduce taxation on ICT products and services
- Develop schemes for providing free or cheap PCs to the poor and the disparate
- Develop schemes for providing free or cheap Internet access to the poor and the disparate
- Raise awareness of all pricing schemes

2.5 Improve Local and International Communications Reliability and Speed

In all areas of ICT, speed will result in lower cost and a qualitative change in the use of ICTs. Reliability is a close second. The following objectives are required for this policy:

- Improve local bandwidth for Internet connection
- Increase international bandwidth for Internet connection
- Implement an Internet Hub in Lebanon
- Improve the reliability of all telecommunications
- Introduce technologies that offer higher speeds and capacities

3.0 National Policies: National ICT Policies

It may be argued that in a National eStrategy project, all policies are national issues. However, for the sake of proper categorization, those policies presented in this section cover national issues as far as ICT is concerned. Other “national” issues focus on eGovernment, eCommerce, Social and Economic issues are presented under separate initiatives 3 to 7.

3.1 Focus on Government Leadership in ICT Matters

The Lebanese Government has to be seen as the main driver behind the ICT transformation and the transition into the Knowledge Based Economy. This policy would therefore have the following objectives:

- Develop and implement pragmatic National ICT policies
- Concentrate ICT strategies in the hands of an empowered entity
- Identify ICT champions, encourage and consolidate their effort
- Raise awareness of ICT as an educational component
- Raise awareness of ICT as a business component
- Endorse an efficient drive towards the modernization of ICT related laws and regulations
- Improve transparency and predictability of laws related to ICT
- Adopt a liberalized approach to Internet governance
- Align ICT practices with international organizations of which Lebanon is a member
- Initiate and endorse national and regional technological cooperation/partnerships
- Promote Lebanon as a base for ICT exhibitions, conferences and workshops
- Promote Lebanon as a base for ICT training

One of the most important objectives of the Government is that of improving ICT as a vital sector of the economy. This has been seen as important enough an issue to warrant its own policies and objectives. These are discussed in Section 4.0.

3.2 Address Key ICT Challenges and Opportunities

The Government needs to respond to various challenges within the ICT sector. It needs to be in the helm to enhance the exploitation of ICT opportunities. This policy is further extended in Section 4.0 (Initiative 3) where policies related to enhancing ICT as a production sector are presented.

Here are the objectives of this policy:

- Encourage and promote the use of locally suitable software products
- Encourage, liberalize and standardize the use of Geographical Information Systems (GIS)
- Encourage, liberalize and standardize the use of Global Positioning Systems (GPS) and remote sensing
- Monitor and control Intellectual Property Right issues
- Develop privacy and confidentiality of data standards and guidelines
- Develop security standards and guidelines
- Develop incentives for ICT usage in the private sector
- Raise awareness for the need and use of ICT strategies

- Encourage public private partnership for national ICT projects

3.3 Develop the Proper Legal Framework

As Lebanon transits into a Knowledge Based Economy, one of its key challenges would be to revise, modernize and develop new laws and regulations so badly needed for the proper functioning of the new economy. The laws and regulations envisaged are required for the proper function of eGovernment, eCommerce as well as the wide spread proliferation of ICT and Knowledge based solutions.

It is critical to note that these are not just legal issues. A major effort is required in terms of directorate level rules and regulations, issues that can be handled at the Agency level.

The following policies are needed on a national scale:

- Support existing efforts to modernize laws related to ICT
- Ensure that the effort is not handled by the Government on its own. Other parties should be involved such as the ICT community and the private sector.
- Ensure that laws and regulations are speedily advanced through their life cycle.
- Ensure that laws are predictable.
- Ensure that laws are not restrictive. They should not generate further controls and regulations. The Knowledge Based Economy is based on openness and liberalization.
- Laws should address a variety of ICT related issues as presented in the eReadiness Assessment document. (These are detailed in the Recommendations and Solutions document).

4.0 Sectoral Policies: Policies for ICT as a Production Sector

Traditionally, ICT was regarded as a tool, an enabler of organizational and informational efficiency for use by various sectors. As shown earlier, in a Knowledge Based Economy, ICT becomes the main driver and enabler of the economy. Therefore, it becomes a crucial sector to be planned for and monitored as is the case for other critical sectors in traditional economies. Towards that end, the following policies are proposed.

4.1 Improve the Efficiency of the ICT Sector

The ICT Sector in Lebanon is young and dynamic. However, it lags behind for reasons analyzed in the eReadiness Assessment document. The Government needs to address all issues related to the improvement of the sector's dynamics:

- Initiate and support research and development in the ICT sector
- Improve ICT practices in both the private and public sectors
- Encourage fair business practices within the sector
- Develop the proper legal framework and regulations for ICT operations, import and export, employment contracts
- Ensure ongoing collection and dissemination of information about the ICT Sector
- Improve Lebanon's rating in the Technology Achievement Index (TAI)
- Modernize patent and copyright laws
- Encourage the setup of local chapters of international ICT societies and related practices such as computer societies (ACM, IEEE), project management, quality management, etc.
- Encourage and support ICT professional associations
- Improve public sector procurement procedures for ICT products and services.
- Encourage quality management systems for systems development and operations.
- Encourage certification by ISO or other software standards such as the Capability Maturity Model.

4.2 Assist the ICT Sector in its Objectives

The ICT sector has two main objectives. The first is internal and that is to become a vital player in the Lebanese economy. Secondly, the ICT sector must be positioned as an exporter of ICT products and services. The Government needs to assist the ICT sector in its various operations to ensure that it meets these objectives. These are the objectives to be followed under this policy:

- Enhance the image of Lebanon as a center of ICT knowledge and expertise
- Reward excellence in ICT innovation and use
- Promote the use of Application Service Providers (ASP) as this would encourage export of services to regional countries.
- Encourage the export of Business/ICT expertise
- Provide tax exemption incentives on ICT expenditure in both ICT and other sectors
- Raise awareness of ICT usage and benefits in the business culture
- Endorse policies that reduce costs (mostly labor) to facilitate export
- Encourage and facilitate ICT exports
- Encourage and facilitate Foreign Direct Investments (FDI) in ICT
- Encourage and facilitate financial support for startup ICT firms (eGrants)
- Encourage research projects aimed at solving local problems and meeting national

- Improve the business capabilities of technological companies
- Sponsor the presence of ICT companies in regional and international technological exhibitions

4.3 Promote State of the Art Technologies

Policies for the improvement of Lebanon's eReadiness were presented in earlier sections. This policy ensures that the ICT sector in Lebanon is always positioned on the leading edge of technology. Without this position, the sector can neither develop nor be competitive.

- Encourage Competency Centers in Lebanon
- Promote the use of appropriate technologies
- Provide channels for the transfer of technology
- Ensure that the technological infrastructure and needs of the ICT sector are met and are affordable
- Encourage academic institutions to provide advanced ICT degrees
- Encourage local cooperation with international ICT companies
- Facilitate the establishment and strengthening of ICT technical support centers, call centers and information service centers for the region.
- Encourage and launch technological zones, parks and incubators
- Encourage technology transfer and the use of emerging and specialized technologies

4.4 Improve the Status of the ICT Workforce

The ICT workforce is the mainstay of the ICT sector. Furthermore, it is the ICT workforce within the rest of the sectors that can also enhance the absorption of ICT in these sectors improving the economy and enhancing ICT as a production sector.

A set of policies have been developed for improving both formal and informal ICT education. These policies would also apply to the ICT workforce. (See Section 5.0).

The following objectives are meant at improving the status of the ICT workforce in both the ICT sector and the rest of the economy:

- Reform ICT Labor Laws
- Enhance ICT job opportunities and encourage job fairs
- Contain the ICT brain drain by motivating the ICT workforce to stay in the country
- Encourage the return and involvement of ICT Diaspora
- Encourage academic institutions to cooperate with the ICT sector to ensure that the educational programs provided by such institutions meet the requirements of the ICT industry.
- Encourage academic institutions to require more lengthy on the job training than the current summer jobs. It would be of benefit for the ICT industry to absorb university students during longer periods, such as 4 – 6 months.
- Provide job career counseling for ICT staff
- Modernize the job classification of ICT staff in the public sector
- Develop equivalence programs to allow those with the proper ICT experience but without minimal educational levels to benefit from positions and contracts meant at higher educational levels.
- Involve the professional ICT associations in the improvement of the status of the ICT workforce

- Establish an ICT Order or Syndicate to harness and improve the quality of the national ICT talent pool.
- Create a body to act as a liaison between the ICT sector and the educational sector.
- Standardize and certify ICT skills according to international standards.

The last two objectives were suggested by ALSI, the Association for Lebanese Software Industry.

5.0 Sectoral Policies - ICT and Human Capacity Development

A sine qua non for a Knowledge Based Economy is the ability of the population to access, absorb, share and use information and knowledge efficiently. To achieve this, the population must have the proper education levels and must be ICT literate enough to access and use such knowledge efficiently.

ICT policies need to be developed under two dimensions resulting in 4 different policies:

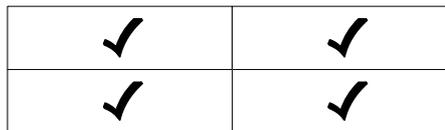


Figure 3: Breakdown of Education Initiatives

ICT can be used to assist the educational process. However, stress must also be made on educating the population in ICT.

The following sections develop policies for the above 4 combinations in addition to policies on developing ICT Skills in the Private and Public Sectors.

In addition to the above 4 policies, a fifth section presents policies for developing ICT skills in the private and public sectors.

5.1 Use ICT for Formal Education

As educational methods progress, more and more stress is being laid on using ICT as an educational tool. Such methods as Computer Based Training (CBT) and eLearning (often referred to as distance learning or online learning) are essential to provide first hand education, complementary and refreshing learning.

This would require changes in the current primary, secondary, vocational and university education.

- Modernize current curricula to exploit ICT for learning purposes
- Encourage and make more affordable the access of educational institutions to the Internet
- Start drives to identify already developed educational content earmarking it for localized content and language.
- Encourage the development of eLearning and computer based training (CBT). Such material would be mostly that requiring local content. There is no need to duplicate material already developed in other countries.
- Support the proliferation of virtual universities and educational institutes
- Promote the use of educational web sites that provide support to formal education. Such sites provide online tutorials, eBooks, articles and related material.
- Extend the existing SchoolNet project to include all private and public schools as well as improve the service delivery of the network.

- Encourage and foster ICT R&D through the establishment of university portal or network

5.2 Use ICT for Informal Education

In a Knowledge Based Economy, informal education is as important if not more important than formal education. It is the communities with an edge in education that succeed and progress.

ICT can be a major driver in informal. By providing Internet access to the segments of society that are challenged in various ways, the Government can ensure that part of their education is accessible informally and at little or no cost. This educational stream can also be of use to the already educated to promote research, advancement and lifelong learning.

- Support the proliferation of automated and ICT supported public libraries.
- Support and encourage the development of eLearning and CBT for informal educational subjects.
- Encourage the development of locally relevant educational material.
- Encourage the use of ICTs to encourage lifelong learning.
- Promote the use of citizen guides in various areas as part of general education and knowledge (legal, medical, education and other issues).
- Use radio and TV for the improvement of informal educational levels.

5.3 Improve the Formal Education of ICT

General Education in Lebanon has recently introduced ICT into its secondary programs. ICT should be part and parcel of every educational level.

- Identify the required ICT literacy levels for various educational levels.
- Spread the learning of ICT at all educational levels: primary, secondary, vocational and university.
- Encourage the international community and the private sector to support the development of local and national educational institutions and capacities.
- Encourage the use of already established ICT training material to avoid the local redevelopment of the same.
- Distribute the task of ICT training outside the current educational establishment, at least in its early stages. This is because the educational establishment is currently not ready to learn and transfer its knowledge to students in schools and universities.
- Follow the scheme of training the teachers to ensure that the proper knowledge is imparted.
- Encourage and support ICT training institutes through promotion, incentives and exemptions.
- Encourage the involvement of the ICT sector in formal education.

5.4 Improve the Informal Education of ICT

Much of ICT knowledge acquired in the early stages of ICT development was informal and that drive still goes on. Citizens find it easy to learn ICT content on their own. The Government should encourage this drive and promote it:

- Improve ICT Skills for citizens through media such as radio and TV
- Strengthen public libraries and reading places, assisted by ICT, to develop reading and information seeking behavior of the society.
- Raise awareness of the importance of informal education through eLearning, the web and computer based training (CBT).
- Provide wider content of relevance to Lebanon and the region.
- Encourage the learning of English as it is the most widely used language on the web.
- Encourage ICT certification in academia and Training Institutes

5.5 Develop ICT Skills in the Private and Public Sectors

One of the foundation stones of the Knowledge Based Economy is a capable workforce, knowledge workers with developed technical skills. This applies to both ICT and other workforces. Developing ICT skills would therefore lead to the strengthening of managerial capabilities, exploitation of new business models and the proper use of knowledge.

Most of the following objectives apply to both the private and the public sectors:

- Encourage ICT training institutes by providing them with incentives, connecting them with international firms having similar objectives and involving them in national training requirements
- Encourage the certification of workforces on ICT products that are non-technical in nature but of general use for knowledge workers.
- Launch eLearning projects addressed at the Lebanese workforce that provide them with improved ICT and organizational skills.
- Identify and promote the use of ICT skills training on the web.
- Define ICT literacy levels for various jobs allowing managers to develop their staff and perform regular evaluations. Ensure that with time, more and more jobs include ICT skills as part of their pre-requisites.
- Career paths need to be streamlined to include growth in ICT skills.
- Encourage academic institutions to cooperate with the ICT sector to ensure that the educational programs provided by such institutions improve the ICT skills of various job types.
- Ensure that the Ministry of Education coordinates with universities and the ICT sector when developing its own ICT educational curricula. This would have a direct impact on the skills of future workforces.
- Encourage SMEs to train their workforces on ICT skills. This also requires ensuring that such SMEs provide the necessary ICT infrastructure.
- Develop training programs for ICT skills throughout the public sector.
- Improve the availability of books that support ICT skills by encouraging technical book fairs, reduction of taxes on books and CDs.

6.0 Sectoral Policies: ICT for Social Development

One of the core mission objectives of a Government is the improvement of the quality of life of the citizen. The social development required for such an aim covers a variety of areas. Policies for the use of ICT to promote social development are listed in the following sections.

6.1 Alleviate Poverty

Poverty is a key national concern. There are deep political, economic, social and cultural issues involved with the alleviation of poverty. The use of ICT to alleviate poverty should be looked at realistically. ICT can assist in the alleviation of poverty but is not its main driver. The Government needs to concentrate on the other core issues in order to alleviate poverty. ICT is only an enabler.

- Increase ICT job opportunities, particularly at the lower levels by decentralizing back office ICT work such as data entry, support, call centers, etc.
- Use ICT in the drive to increase job opportunities in general by collecting job opportunity information, matching supply with demand and providing counsel on employment issues.
- Develop community projects based on ICT production to reduce urban migration and raise the level of employment.
- Provide micro-lending for startup ICT companies or projects particularly in the areas outside the main towns.
- Use ICT to promote industries based in the rural regions.

6.2 Reduce Gender Disparity

As in the case of poverty, ICT is not the main driver for the reduction of Gender Disparity. However, ICT is an enabler and can assist the Government in its drive to reduce such disparities.

ICT is gender neutral. However, it may be applied in a manner that is gender sensitive because of content development and presentation, employment opportunities and ICT skills.

The following objectives are proposed for this policy:

- Ensure that all data collection about ICT, jobs, education, etc, includes relevant analysis of gender indicators
- Encourage the training of girls and women on ICT skills
- Encourage girls and women to use ICTs
- Resolve gender disparity issues in education
- Resolve gender disparity issues in ICT employment
- Encourage women to startup their businesses
- Use ICT to encourage women to manage and run cottage industries
- Develop web content of direct interest to girls and women
- Develop web content that emphasizes and increases awareness of the issues related to gender disparities

6.3 Use ICT to Improve the State of the Health Sector

The Health sector was always a strong sector in Lebanon. Currently, much revenue is being lost because there is a general lack of direction in the Health Sector. Insurance companies have proliferated and have a larger say in the practices of this sector. The Government is still a shadow player.

ICT can be a main driver and enabler in this sector.

- Promote the automation of all hospitals and clinics
- Develop and use standards for such health indicators as used internationally. ICT can be a main driver for objective as it would allow medical institutions to exchange data with ease.
- Encourage and enable the exchange of patient / doctor / resource information between hospitals
- Develop guidance content on medical issues and resources for the citizen
- Encourage the interaction between the key players in the medical sector such as hospitals, clinics, doctors, pharmacies, the National Fund for Social Security, insurance companies, etc.
- Turn the health sector into a health tourism sector by providing specific information and packages for visitors from outside Lebanon.
- Improve the situation for the disabled by using ICT to promote and raise awareness of new technologies and solutions for them, by training them on different ICT skills to improve their job opportunities and by providing them with wide ranging information.
- Encourage the use of modern Health Information Systems in private and public medical institutions.

6.4 Empower Communities and Citizens

One of the key objectives of a Knowledge Based Economy is to empower communities and citizens by making available information and knowledge.

- Focus on the right to communicate
- Raise awareness and realization of rights
- Foster freedom of expression and information exchange
- Diversify content, ownership and control of information and knowledge
- Encourage information exchange and sharing
- Launch electoral information online
- Allow the poor to communicate their needs
- Promote and support virtual communities

6.5 Improve Local Content

Local content is critical in a country that is tri-lingual. The issue is not only one of language but one of relevance too.

- Give priority to the creation of useful local information, contents and knowledge
- Support all technological innovations related to Arabization of ICTs
- Encourage diversity in language, culture and local knowledge
- Ensure relevance of local content

6.6 Improve the State and Health of Youth

The youth of today is presented with many opportunities for development and healthy growth. Alongside that, they are also presented with various challenges that work against such development.

The Government should be concerned about youth and their growth. They represent the workforce and society of the future. ICT can assist through such objectives as the following:

- Promote sports and leisure activities through the web
- Promote sports knowledge and information
- Promote youth involvement in community services through access to voluntary and charity activities
- Support and endorse a youth network with the purpose of guiding youth towards healthy activities
- Use ICT to allow youth to form their own communities and have their own voice

6.7 Advance Lebanese and Arab Culture through the Use of ICT

In the recent past, countries lost their heritage due to circumstances beyond their control. Even in politically stable societies, it is common for floods and fires to claim such damages. Lebanon has an institute for the preservation of its national heritage. However, additional effort in the following areas is needed:

- Digitally capture the cultural heritage electronically for its protection, utilization and documentation. This would cover literature, painting, sculpture, music and other culture artifacts.
- Provide wide and free global access to the captured heritage
- Promote the dissemination of Lebanese and Arab culture through web sites.

6.8 Use Information and Knowledge as Part of the Social Fabric

ICT is a glue that helps to resolve social differences. ICT can be used to improve development through the above policies. However, more objectives are needed that focus on social development such as the following:

- Integrate ICT into the social fabric of Lebanese society
- Improve regional integration through ICT
- Provide pervasive access to information
- Raise awareness and monitoring of environmental issues through ICT
- Raise awareness and reduce vulnerability to natural and man-made disasters through ICT
- Disseminate social statistical information
- Encourage social groups to participate in the provision and dissemination of ICTs based services and products
- Encourage voluntary and charity activities through ICT

7.0 Sectoral Policies: ICT for Economic and Business Development

Having encouraged the growth of ICT as a sector on its own, the Government needs to use ICT to promote the growth of other sectors that have a direct influence on the economy and business development:

7.1 Improve the Use of ICT in All Sectors

The eReadiness Assessment document shows that the private sector is well introduced to the use of ICT. However, its usage is restricted, lacks exposure and is not advanced in terms of modern applications. The economy can benefit tremendously through a major drive to promote and improve the use of ICT in the main sectors of the Lebanese economy:

- Promote and implement good ICT practices in the private sector through raising awareness of standards, software development methods, project management and quality management for ICT resources and operations.
- Raise awareness of specific ICT usage in various sectors: trade, industry, transport, etc.
- Use ICT to provide national and timely business information for healthier business competition
- Encourage the use of consolidated decision support systems in private sector. Different sectors can consolidate their information to provide a better assessment of their situation.
- Encourage new ICT based work modes such as telecommuting, online jobs, telemarketing, etc.
- Promote the use of ICT through incentives, exemptions and grants.
- Use ICT to improve business opportunities within and outside Lebanon.
- Through ICT, encourage the establishment of cooperatives for an increased efficiency in promoting rural business and industries in urban areas in Lebanon.

7.2 Use ICT to Position Lebanon as an Significant Trading Partner

Lebanon has always been an important trading center in the region. It now needs to go into a different gear by adopting modern ICT technologies to remain a viable and competitive partner in world trade:

- Improve trade and other linkages with the global community by providing a wide range of Trade Information for both the Lebanese private sector in terms of international information as well as for its trading partners abroad in terms of information about Lebanon.
- Reengineer the import and export processes for higher efficiency. This can be achieved by changing laws and regulations, establishing Trade Points and streamlining procedures.
- Cut direct and indirect costs of import and export so that Lebanon can be more competitive.
- Strengthen data warehousing for promoting trade and commerce
- Encourage Trade Facilitation through improving procedures for customs, the tax regime, transport, etc.

7.3 Implement ICT Policies in the Financial and Banking Sectors

The Central Bank is already on the way towards the implementation of various projects that improve the status of ICT for the banking sector as well as supporting other sectors in their ongoing adoption of various ICT applications.

The success of eGovernment and eCommerce has a strong dependence on banking policies. Such policies should be considered as imperative and as pre-requisites for these two Initiatives.

Some of the following objectives are already underway with the Central Bank in its Secure Electronic Banking and Information in Lebanon (SEBIL) vision:

- Automate Clearing House (ACH) operations to speed up settlements of customer checks.
- Implement schemes for ePayments that can be used by the business sector in its project eCommerce operations.
- Implement integrated risk management to improve the quality of business operations.
- Implement secure frameworks for all financial activities through Secure IT Infrastructure (SITI)
- Implement multi-channel points of access: the web, PDAs, mobiles, telephone, ATMs, Kiosks and various special purpose point of sale terminals. Such points can be used by both the citizen and the private sector.
- Implement decision support systems for quicker reaction to financial fluctuations.
- Implement systems to ease third party operations such as debit and credit cards and payment orders. This is crucial for eCommerce activities.
- Implement a real time settlement system for Inter-government payments, public sector payroll and billing for various public sector utilities and departments. (RTSS).
- Implement connections to ease banking transactions with the outside world.
- Implement public key cryptography. This would be of use in various eGovernment and eCommerce applications as well as financial and banking transactions.
- Ensure the speedy implementation of banking services on the web to allow bank customers to access their accounts, statements and other information. This would also improve Internet penetration by providing an incentive for account holders to access the web.

7.4 Encourage eCommerce

eCommerce presented businesses with major advantages over traditional commerce. It allowed businesses to expand from local to global market places. It allowed them to deal with individuals (B2C) and businesses (B2B) using the same technology, reducing costs by reducing inventory levels through extending the supply chain over the web. It provided major improvements in customer support and follow up through Customer Relationship Management (CRM).

eCommerce also provided benefits to customers who can now transact 24 hours a day, all year round from any location. More choices became available making it easier to select the best and cheapest product or service. Customers can have direct access to information and support through the web. New modes of business were made available such as virtual auctions, communities of product users and peer to peer business. Societies in developing countries, particularly those in rural or inaccessible areas,

suddenly had access to a market of products, services and information that was not available to them otherwise.

Although the domain of eCommerce is the responsibility of the private sector, the Government needs to be involved in the process for several reasons:

- Improving eCommerce leads to a direct improvement of the economy both internally and in terms of increasing export.
- The Government itself stands to benefit in a major way when its procurement processes are interfaced with the web based supply chain.
- The technological support developed by the private sector for eCommerce would provide the Government with an added benefit when developing its own transactional sites.

Many of the pre-requisites for a healthy eCommerce sector in Lebanon rest on the shoulder of the Government in terms of implementing the following policies and objectives:

- Develop the necessary legal framework needed for fair and secure eCommerce.
- Raise the awareness of both the private sector and its consumers of the benefits of eCommerce.
- Encourage the launch of pilot projects which would publicize the “proof of concept” for eCommerce.
- Encourage cross-sector interactions to improve the implementation of more extended commercial transactions.
- Raise the level of confidence and trust in eCommerce
- Encourage off shore eCommerce for facilities that are cannot be feasibly implemented in other countries.

The Ministry of Economy and Trade is about to embark on a consulting project that aims at expanding some of the above policies including the setup of a visible pilot project.

8.0 Sectoral Policies: eGovernment

Although several countries in the region have already adopted an eGovernment strategy and have started implementing it, the majority of governments have not embarked on a consolidated drive yet.

In Lebanon, OMSAR has already been instrumental in setting up a Ministerial ICT Committee (MICTC). (1997). This was followed by a comprehensive eGovernment Strategy document (December 2002). It is on the way of being approved by the Council of Ministers. This section endorses the recommendations and policies made by OMSAR and uses most of its recommendations to extend the policies and objectives of this initiative.

8.1 Defining eGovernment

The World Bank defines eGovernment as:

“Government-owned or operated systems of information and communications technologies (ICTs) that transform relations with citizens, the private sector and/or other government agencies so as to promote citizen empowerment, improve service delivery, strengthen accountability, increase transparency, or improve government efficiency. (2002)”¹

From this definition, it can be seen that eGovernment is not to be considered as an option or a choice. It can also be seen that eGovernment is part of the drive towards a Knowledge Based Economy.

In the past, eGovernment was often confused with the automation of government. The definition then progressed to add services to citizens. As can be seen from the above definition, eGovernment is now seen as a much wider effort. It can be viewed as made up of the following 3 major efforts:

1. Automating the business processes within the government. This is traditional automation.
2. Automating the service delivery to citizens, the private sector and other government agencies (eServices). These would be in terms of interactive services of value to these parties followed by full integration into portals.
3. Transforming relationships with these parties to improve citizen empowerment and endorse democracy (eDemocracy). This is part of the mission of government and is often called eGovernance.

The above are not to be considered as “stages” as they should be implemented jointly.

The following sections present various policies whose purpose is to place eGovernment as a key initiative in Lebanon’s eStrategy.

8.2 Pre-Requisite Policies to Support the eGovernment Initiative

As a pre-requisite for the implementation of Lebanon's eGovernment policies and strategies, the following are required:

- Implement policies related to making Lebanon eReady. (Refer to Section 2.0 which covers the eReadiness Initiative policies).
- Increase direct government ICT expenditure
- Improve the use of donor funding for ICT projects by better planning, coordination and monitoring
- Modernize the status of the ICT workforce by establishing proper job descriptions, career paths and salary scales. This will reduce the brain drain from the public to the private sector.
- Build the capacity of the public sector workforce by raising literacy requirements, training and incentives.
- Increase PC penetration rate in the public sector
- Increase access to the Internet
- Setup an inventory of ICT projects to ensure that experience can be shared, duplication can be avoided and status can be known with speed and accuracy.
- Setup an inventory of ICT resources using modern Configuration Management techniques whose purpose is to facilitate global purchasing, reduce training costs, standardization, change control and efficient upgrade planning.
- Enter into global licensing software and hardware agreements

8.3 Adopt a Top and Horizontal View of eGovernment Implementation

One of the major challenges for eGovernment is the lack of coordination, standardization and a common view of the objectives of the initiative. Adopting a top view that considers eGovernment effort horizontally across the public sector would have major benefits in terms of standardization, cost reduction, increased and shared experience as well as the implementation of planned for policies.

It is important for the Government to adopt the above policy with the following objectives:

- Establish an entity that has the responsibility of planning and coordinating eGovernment efforts without it being a control or a restrictive agency.
- Develop ICT Strategic Plans for each Ministry and Agency to ensure that their strategic applications are efficiently implemented.
- Identify the core design criteria for eGovernment applications in terms of portal design, look and feel and minimal content.
- Establish a Data Exchange Board that coordinates and plans for all issues related to record ownership, publication, access rights and data exchange.
- Implement ICT Standards and Guidelines in the public sector
- Implement ICT best practices in the public sector such as proper ICT project management, international ICT and quality standards and practices.
- Identify "re-usable" applications and ensure that duplication does not take place.
- Learn from the lessons of other countries through research and cooperation.
- Develop performance indicators that will allow the Government to monitor and evaluate all its processes.

8.4 Reform and Develop the Public Sector

One of the ongoing challenges for the Lebanese Government, indeed for all Lebanese, is the organizational state of the Lebanese public sector. Repeated calls for Administrative Reform have been made. Response to these calls has been meager and without much effect. The public sector remains inflexible, archaic, unresponsive and inefficient. Furthermore, it lacks transparency and accountability.

The Office of the Minister of State for Administrative Reform published its Administrative Reform Strategy for Lebanon which was approved in September 2001. OMSAR has been active in various initiatives, particularly those related to National ICT issues such as the Ministerial ICT Committee, the eGovernment Strategy and the current project for the National eStrategy for Lebanon. Various projects have addressed administrative reform issues.

Administrative Reform is a pre-requisite for any entry into eGovernment, eCommerce or other national ICT projects. Without a quick acting Administrative Reform, entry into the Knowledge Based Economy will be unlikely.

The policy for Administrative Reform has the following objectives:

- Acquire political commitment for the process without which little success can be achieved.
- Link the effort for Administrative Reform and Development with the strategic objectives of eGovernment which need to be considered when business processes are to be reengineered.
- Review the positioning of OMSAR to provide it with more authority and empowerment in developing administrative reform processes and implementing them. This could be in the form of placing OMSAR in a direct reporting line to the Prime Minister, as in the case of the Control Agencies. An alternative would be to setup OMSAR as a Ministry with an executive portfolio.
- Develop three main objectives for OMSAR: (1) Organizational reform and development, (2) Human Resource development and (3) Legislative reform and development. In the past, any work by OMSAR in these areas was hampered by issues of overlapping responsibilities. Agencies handling day to day issues in the above 3 areas need not be totally responsible for developing them. For example, although it is totally the responsibility of the Civil Servants Board (CSB) to handle HR affairs in the public sector, modern management approaches to HR development almost never leave the task of HR development to the HR department on its own. A group of stakeholders can assist OMSAR in its role of HR development, primary amongst them would be the CSB. The same applies to the other areas such as organizational and legislative development.
- Administrative Reform needs to be implemented as a set of re-engineered business processes. In the past, attempts were made at simplifying procedures, removing obstacles and unifying forms. These address islands of issues and do not cover the strategic administrative problems.
- On the other hand, much can be achieved by localized process improvement. Analysis of disruptive organizational anti-patterns and their resolution is a simple to implement mode of administrative reform. However, on its own, it is not sufficient.
- Separate the implementing of ICT projects from Administrative Reform and Development. ICT is an enabler of ICT reform and cannot on its own cause it to progress. This is case of sequencing. Business processes need to be reengineered for best performance using ICT whenever needed to enable their superior performance. The example of the successful project by the Ministry of Finance to simplify the

collection of taxes from private companies can be given of a successfully reengineered process that did not require any ICT.

Administrative Reform is the cornerstone of other Initiatives that require the use of Government resources, procedures and

8.5 Improve Governance

Governance is the manner in which power is exercised in the management of a country's social and economic resources for development. It relates to the quality of the relationship between government and the citizens whom it exists to serve and protect.

The Asian Development Bank states that "Four governance pillars are universally applicable regardless of the economic orientation, strategic priorities, or policy choices of the government in question"². The 4 pillars are: accountability, transparency, predictability, and participation.

eGovernment is a process that will change the traditional modes of governance. While doing that, it should concentrate on the use of ICT to enhance these pillars.

8.5.1 Accountability

Accountability is the capacity to call officials to account for their actions and to ensure that the consequences of such actions are also clear and predictable.

ICT can enhance accountability through the following:

- The design of systems that track all actions within all procedures.
- Such systems will also have the capability of analyzing various performance indicators to measure bottlenecks, slow service, exceptional processing, etc.
- The design of systems that collect feedback from serviced citizens and private sector companies.

8.5.2 Transparency

Transparency consists of the free access to comprehensive and useful information. Information is required by citizens, the private and the public sectors. Information is required for democratic decision making by these three parties. Citizens must have access to information so that they may participate meaningfully in decision processes and make informed choices. Transparent decisions are more effective because they permit evaluation and strengthen institutional credibility and legitimacy

Although transparency has come to be used as a euphemism for "lack of corruption", it is through the implementation of transparency that a Government can succeed in reducing corruption.

ICT can enhance transparency through the following:

- Information should be made available about all public sector processes, rules and regulations.

- Information is required about the performance of Government in all areas under its responsibility. Therefore, reliable and timely social, economic and financial information is a must for the citizen.
- Access to such information should be wide, equitable and free.
- Information must be made available in an official manner. It is not useful to dump information that cannot be used for decision making. An Agency that publishes a list of its procedures where those are not complied with or by its own employees is not a transparent Agency.

8.5.3 Predictability

Predictability covers laws and regulations that have unambiguous interpretation, are known in advance and are uniformly implemented. When laws and regulations are not predictable, they lead to improper planning, poor performance, interference and corruption.

Although ICT cannot influence predictability directly, eGovernment ICT legal frameworks, practices and processes must be predictable.

8.5.4 Participation

Participation is needed for good governance to ensure that all citizens can have a voice in decision making, whether directly or through their legitimate intermediaries. Governance is therefore dependent on listening to the parties being governed. This acts as an ongoing "audit" of government performance. It also has the benefit of inciting Government to improve its operational efficiency.

ICT can enhance predictability through the following:

- Providing citizens and the private sector with channels through which they express their views.
- Providing equitable access where all citizens regardless of which segment they come from can use such channels.
- Inciting Government to respond to such views.
- Empower communities by providing them with their own local information processing.
- Allows citizens to all Government documents
- Assists citizens in searching for and finding information
- Clarify such information
- Promotes dynamic dialogues between decision makers and the public.
- Provide access to guidance from the Government on such issues of concern to the citizen as consumer protection, transportation, traffic and driving, legal issues and services, government procedures and health information and services.

8.6 Make the Public Sector More Effective

The previous policy of reforming the administration is a top view approach. However, there are various practices that can be implemented in parallel with such an effort. Such bottom up practices can be subsumed under the policy of making the public sector:

- Efficient
- Flexible

- Scalable
- Configurable
- Accountable
- Transparent
- Responsive
- Consistent and predictable

The following objectives relate to both the removal of hurdles in the way of proper application of ICT as well as the introduction of modern efficient practices:

- Implement the citizen's smartcard that would include a minimal set of updatable data elements for use in various agencies as a source of critical data and authentication.
- Modernize procurement laws and procedures and improve purchasing cycles through eProcurement systems.
- Remove such poor practices (Anti-patterns) as: offloading work onto the citizen, multi-agency processes, excessive controls, displaced controls, duplicated information, multiple transcriptions of data, multi-visit procedures.
- Eliminate the use of financial stamps by implementing a prepaid payment card that can be used to settle minor charges.
- Implement document and procedure tracking systems (as in the case of the Jounieh Municipality) for improved transparency, tracking and efficiency.
- Foster the hybridization of centralized/decentralized processes through ICT

9.0 End Notes

¹ *Electronic Government and Governance: Lessons for Argentina* Paper Prepared by Roberto Panzardi, Carlos Calcopietro and Enrique Fanta Ivanovic for the World Bank, page 3, Washington, July 2002.

² *Governance in Asia: From Crisis to Opportunity* by the Asian Development Bank, <http://www.adb.org/Documents/Reports/Governance/gov010.asp>