An Overview of e-Government Strategy in Lebanon

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Abstract: *Lebanon has undertaken a series of initiatives over the past decade or so to develop a vision, policy and strategy to make use of ICT (Information & Communication Technology) in pursuing reform both in Government and nationally. These initiatives were initiated by the establishment of the ICT Ministerial Committee in 1997, which was chaired by the Prime Minister to coordinate and oversee developments in the implementation of the ICT agenda in Lebanon. In 1998, the first IT national policy and strategy was developed. This encompassed both public and private initiatives. In 2002, an e-Government strategy was produced; this was followed in 2003 by more comprehensive e-Strategy and e-Readiness studies and reports with recommendations to achieve reform both in government and nationally. Since then, much change has taken place both in Lebanon and in the application of ICT technology to promote reform of the government. In this respect, progress was made in a number of e-Government projects in the Lebanese Government, including key steps to establishing a legal framework that will permit the use of electronic processes in conducting business. In addition, the communications infrastructure in Lebanon, which is essential to realizing the full benefits of e-Government, has been modernized [1]. This article mainly tackles the vision of the e-Government strategy in Lebanon. Further, it alludes to ICT applications in Lebanon, with special emphasis on ICT in public administration, e-Government solutions and availability, and adoption and use of e-procurement applications.*

Keywords: *e-Government: vision, principles, strategy and pillars; e-Reform (G2G) (G2E), e-Citizen (G2C), e-Business (G2B), e-Community (G2C); ICT applications.*

1. Introduction

Despite the difficult political situation that has plagued Lebanon for quite a number of years, Lebanon has made progress on e-Government during the last decade or so. With regard to the legal framework for e-Government, a law on electronic transactions has been drafted and is awaiting consideration by the Parliament. A Telecom Regulatory Authority has been created to push forward the reform of the ICT sector. In the area of e-services, a number of services have been completely automated or upgraded (e.g. work permit). An e-procurement pilot project is ongoing with the objective of connecting six ministries to the tender board. The government information portal, which contains around 4500 forms, has been upgraded and moved to a new technical platform. The focus is now on updating the government Web sites [4].

With respect to the technical framework, efforts towards increasing the use of standards across government are underway. Discussion with major software providers have been taken to standardize all software applications in government. At the central level, initiatives have been taken to raise funds for smart applications (e.g. national ID-card or health card). Lebanon also started a number of capacity building initiatives, including ICT training for civil servants (outsourced to the private sector). Community centers have been established with the support of the private sector. Lebanon is also trying to map out all ICT projects undertaken in the last decade with OMSAR's (Office of the Minister of State for Administrative Reform) support. To increase policy co-ordination capacity at the central level, an IT strategy unit in the Prime Minister's office has been created [4].

The aim of this article is to provide an overview of e-Government strategy in Lebanon. Further, it alludes to ICT applications in Lebanon, with special emphasis on ICT in public administration, e-Government solutions and availability, and adoption and use of e-procurement applications.

2. Background

2.1. Where Does Lebanon Stand in Terms of Electronic Government Readiness?

According to the 2010 United Nations' Electronic Government Readiness Index [5], which provides a quantitative appraisal of the use of e-Government as a tool in the delivery of services to the public at large,

Lebanon ranked in 93rd place among 183 countries worldwide and 11th among 19 countries in the Middle East and North Africa (MENA). Lebanon came in 74th place globally and in 8th place regionally in the previous survey conducted in 2008. Also, Lebanon ranked in 26th place among 37 upper-middle income countries (UMICs) in 2010, and in 23rd place in the previous survey. According to Web Measure Sub-Index, which reflects governments' ability to deliver online services to their citizens, Lebanon came in 10th place (and tied with Iran), ranked ahead of the UAE (United Arab Emirates) and came behind Qatar in the MENA region.

On the Telecommunications Infrastructure Sub-Index, Lebanon ranked in 85th place globally, down from 76th place in the last survey. The sub-index includes five variables that reflect a country's infrastructure capacity, as they relate to the delivery of e-Government; the variables cover the penetration of personal computers, telephone lines, television sets, internet usage, online population and mobile subscriptions. Globally, Lebanon ranked in 9th place ahead of Tunisia and behind Oman in the region.

On the Human Capital sub-index, Lebanon ranked in 95th place globally, down from 82nd place in the previous survey. The index reflects the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratios. Lebanon ranked in 7th place and came ahead of Saudi Arabia and behind Jordan in the region.

2.2. How are ICT and e-Government Viewed Worldwide?

ICTs offer tremendous potential to raise the standards of living and enlarge opportunities for individuals, communities, countries and regions. In particular, ICTs present an opportunity for geographically remote and poor communities whose access to information and social services can be dramatically enhanced through ICTs [10,15].

ICT is believed to be a powerful enabling tool to address some of the key barriers and challenges for entering the global economy and for future growth potential. It can transform old challenges and create unprecedented possibilities for sustainable economic development, just as it has done for businesses in the industrial world. Nevertheless, ICT represents a high risk for developing countries – the risk to deepen the digital divide and to further marginalize them with the networking revolution. Countries, which fail to embrace and use ICT tools for entering the global network and for addressing development needs, will suffer pivotal disadvantages in the form of information poverty that could further widen the gap in economic status and competitiveness [12].

The initiatives of government agencies and departments to use ICT tools and applications, internet

and mobile devices to support good governance, strengthen existing relationships and build new partnerships within civil society, are known as e-Government initiatives. As with e-commerce, e-Government represents the introduction of a great wave of technological innovation, as well as government reinvention. It represents a tremendous impetus to move forward in the 21st century with higher quality, cost effective government services, and a better relationship between citizens and government [8].

Benefits assured by use and application of e-Government in developing countries are the same as those in developed countries. The differences between these two groups could result from the fact that many potential benefits of e-Government are not reaped by developing countries as a consequence of their limited use of e-Government [9]. By all means, governments worldwide are under increasing pressure to change the way in which they function and operate. There is a realization that the government no longer needs to undertake all the functions itself and that an efficient government today must involve forming partnerships with other organizations [3].

Countries around the world - from the lowest income to the most industrialized ones - have started adopting the network revolution and MICT (Media, Information and Communication Technologies) and have introduced e-Government initiatives, each at its own speed. The potential benefits of the network readiness of government are as substantial and varied as the importance of government in the lives of individuals, citizens and businesses [7,13].

A summary of advantages and challenges related to e-Government initiatives are given in Table 1.

Table 1. Summary of advantages and challenges related to e-Government initiatives [7].

Advantages	Challenges
• Increases efficiency and effectiveness.	• Privacy/security/confidentiality concerns.
• Increases communication.	• Information overload..
• Eliminates redundancies and inconsistencies.	• How to value information.
• Enhances transparency.	• Websites do not work/are outdated.
• Yields opportunities on the entire economy.	• Benefits are often linked to high stages of development.
• Spurs the adoption of internet	• Internal resistance/lack of leadership.
• Reduces costs (communication, information, labor, and material).	• Lack of resources/ capabilities/ infrastructure.
• Improves the speed and service delivery, broadens reach, eliminates distance problems.	• High investments are necessary.
	• Eliminates personal interaction/ contact/ possibility to ask questions.
• Increases convenience.	• Threatens jobs.
• Empowers citizens.	• Advertizing opportunities are limited and hence less
• Attracts investments, businesses and skilled people.	awareness.
• Increases the amount of available information.	• The bureaucratic nature of governments reduces flexibility.
• Improves the utilization of resources.	• Enhances the citizen's trust in e-Government.

Generally speaking, a number of Arab countries, including Lebanon, have acknowledged the benefits of e-Government, even if they are only at the first stage, where governments provide information through websites. In half of these countries, more than 50% of ministries have their web presence. Unlike national ministries, regional and local authorities are almost never present on the web. They are systematically under-equipped and under-represented with rates ranging below 12%, indicative of the under-development of local government representation and services in many of the MENA countries in general and in Lebanon in particular [13].

3. e-Government Strategy in Lebanon

3.1. Vision for e-Government in Lebanon

The vision for e-Government in Lebanon centers around the attainment of a number of strategic objectives based on citizen and business-centric approaches. These are made possible by the facilitating role of ICT, and backed by the required institutional and legal frameworks. To attain the e-Government vision for Lebanon, the strategy to be followed has been supported by a number of underlying principles. These principles can be summarized as follows [1, 3]:

- The government will assure the enactment of the required institutional, regulatory and legal frameworks to enable business to be undertaken electronically – in the country and abroad - in an orderly and timely manner.
- The government will undertake the necessary measures to realize a comprehensive communications network infrastructure throughout the administration, and to gradually roll out compatible information systems that exhibit open standards and interfaces to the replicated data repositories or centers in partnership with the private ICT and communications industry in Lebanon.
- To ensure the successful implementation of e-Government; the efficiency and effectiveness of related services will be taken into account. The latter include the postal system, the banking system, courier delivery services, and the overall legal environment.
- The government will ensure the security, integrity and privacy of citizens and business data by implementing a legal framework with state-of-the-art security systems that are in line with accepted international best practice.
- All citizens will be given the opportunity to be part of the electronic or networked society regardless of their financial, social or educational conditions or geographical location.
- All public servants will be given, by the nature of their new job functions, an equal opportunity to be

part of the electronic or networked society, whether for their provision of services to the citizen or for intra-government communication.

- The government, in partnership with the private sector, academia and non-governmental organizations (NGOs), will work aggressively on the proliferation of ICT literacy throughout the country, whether through the continuous enhancement of the education curriculum or through the provisioning of targeted awareness campaigns and training programs.
- The adoption of electronic commerce by the private sector will be promoted, with government taking a leading-by-example role through its e-Procurement initiative.
- The government will be actively involved in partnerships with the local ICT industry to promote economic development by taking an increasing role in the implementation of e-Government projects in line with international best practices in this regard and constantly work to develop this industry as a national resource for all Lebanese.

3.2. e-Government Strategy in Lebanon

Formal initiatives to mainstream ICT in post-war Lebanon (1991) began in the Public Administration, under the National Administrative Reform Programme. The Office of the Minister of State for Administrative Reform (OMSAR), established in 1993, was designated to lead e-Government initiatives through technical assessments, preparation of specifications, and outsourcing functions. The UNDP (United Nations Development Programme) spearheaded the establishment of a Technical Coordination Unit in OMSAR, whose primary mission has been to promote the modernization and development process within the public administration, and keep the general public aware of these achievements through various communication channels [2].

In October 2003, the Lebanese Government, through the United Nations Development Programme (UNDP) and OMSAR, completed the development of the "National e-Strategy" and e-readiness report. The e-Strategy vision aimed at "moving the economy and society of Lebanon towards a Knowledge-Based Society in the shortest possible time while at the same time addressing related challenges and opportunities that Lebanon is facing". Thirty-two policies, grouped under seven initiatives, were proposed as vehicles for implementing the strategy. A portal was designed and developed to incorporate all information and data pertaining to the various initiatives that are related to the project [6].

In mid 2010, OMSAR prepared an action plan for the prepared e-Government strategy of 2008. The plan divided the implementation of the strategy into 4 phases [6]:

- **Phase 1**: Informational, E-Forms, E-Payment and Pilot E-Services;
- **Phase 2**: E-Services and Pilot E-Government Interoperability;
- **Phase 3**: E-Services and E-Government Interoperability; and
- **Phase 4**: Signature based E-Services and E-Government.

The plan is scheduled to run over 5 years, from 2011 to 2015.

3.3. Pillars of The e-Government Strategy in Lebanon

e-Government strategy in Lebanon is mainly revolved around four key pillars [1, 3, 11], namely:

- E-Reform (G2G) (G2E)
- E-Citizen (G2C)
- E-Business (G2B)
- E-Community (G2C)

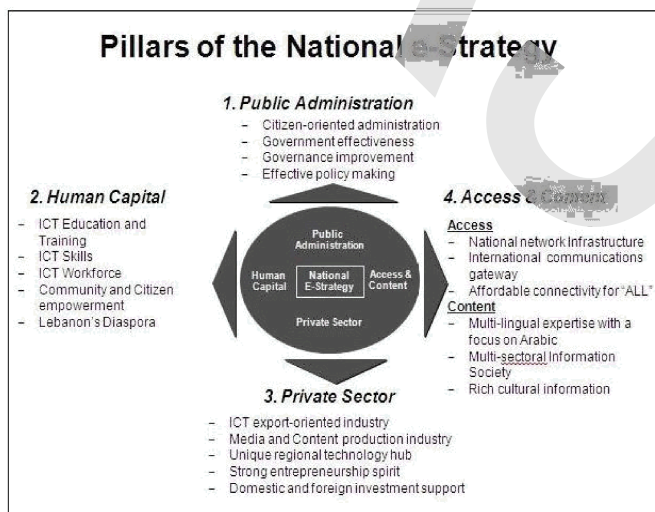These pillars are depicted in Figure 1, and explained in further detail below.

Figure 1. Pillars of the National e-Strategy [2,6].

3.3.1. e-Reform

e-Reform seeks to improve the overall efficiency of the government and achieve significant cost savings through:

- Introducing Chief Information Officers (CIOs) in Ministries, and forming a CIO Council.
- Achieving interoperability of all government systems by interconnection through a standard-based intra-Government portal. This is accomplished by providing a data center that links through the intra-Government Portal and allows data to be backed up and recovered in a standard format shared by all government systems.
- Keeping comprehensive data on government transactions and making this available to the Central

Administration of Statistics for compilation of agreed standard indicators for ICT.
- Providing systems to enable government employees to receive online training, empowering them through the use of collaborative tools to support work across different departments and entities, and using mobile tools to enable them to work from anywhere.

3.3.2. e-Citizen

e-Citizen seeks to deliver services to the citizen in a fast, reliable and easy to understand and use service. This will be achieved by using a variety of electronic systems including the Internet, the telephone, the mobile phone, the community centers, as well as the traditional systems. It will:

- enable a better sharing of infrastructure in delivering services to citizens and business by moving to 'one-stop-shop' operation for the delivery of government services facilitated by the use of common standards;
- help citizens obtain Tax Forms, and make the required payments (and receive them) online;
- help citizens file passport applications online;
- help citizens file applications for permits (and receive them) online;
- help citizens obtain copies of educational records, certificates, etc.;
- help citizens register life events – births, deaths, marriages, name changes;
- help citizens to access public service facilities, such as health and retirement information;
- help citizens, in case of Smart Cards (when introduced), report lost cards or stolen cards, and file new applications;
- help citizens file job applications; and
- provide citizens with mechanisms to better understand and communicate with the government.

3.3.3. e-Business

e-Business seeks to provide integrated services to the business community and make it easier for the private sector to do business with government. This will be achieved by:

- electronic tendering for government businesses, including specifications, terms of reference, the receipt of bids, the evaluation of bids, contract negotiations and payments.
- commercial registration of businesses that are conducted entirely online, including the payment of fees.
- filing of business tax forms online and payment of dues.
- making available online relevant documentation on all government processes that impact businesses, e.g. laws on legislation of e-Procurement,

Intellectual Property Laws, Digital Signatures, Public Key Infrastructure (PKI), government policies on outsourcing, and Public-Private Partnership (PPP).

- having the Government adopt standards on ICT issues, including security, architecture, and e-Government.
- readying the availability to government ICT policies and strategic plans for information and comment.
- publishing progress reports on ICT matters under consideration by the government, outcomes of Ministerial ICT Committee (MICTC) meetings, e-Government program.
- allowing focused services to be offered to specific classes of businesses, e.g. Small and Medium Enterprises (SMEs), doctors, teachers, social workers, Lebanese expatriates, trade agreements and investment incentive policies.

3.3.4. e-Community

e-Community seeks to promote regional developments as well as promoting the quality of life in communities and target citizens who are disadvantaged due to location, economic circumstances, education, language, physical handicap or visual impairment. This will be achieved by:

- Providing targeted information services that have a regional focus, such as:

  - Services for SMEs in regions whereby all information and forms, etc on government and regional regulations (e.g. taxation, commercial registration, municipal rules) are grouped together in a single website.
  - Services aimed at specific businesses e.g. farmers, fruit growers, retailers, hotels with information specifically targeted at each region giving for example information on weather, market prices, costs of fertilizers, demand, crop information, information on diseases, contact details of suppliers with cost of transport.
  - Allow regional SMEs to market their services (local products) on the e-Government system and provide a low cost/free service to set up their own website (in many cases, this could simply be a "business card" image with name, address, telephone, services offered etc).
  - Adopting a Private Public Partnership (PPP) that allows the sharing of advertising revenues between the PPP and the community.
  - Empowering communities by providing information on their region e.g. hotels, local products, tourist sites and contact information.

- Providing online training on ICT and a range of other subjects to meet the specific demands of the region and the communities within the region thus empowering the citizens, raising their capabilities,

and expanding their access to life choices and opportunities.

4. ICT Applications in Lebanon [6]

4.1. ICT in Public Administration

The UN e-Government development index for Lebanon in 2008 was 0.484 with a rank of 74. It has witnessed a noticeable drop in 2010 with an index of 0.4388 and a rank falling to 93. Most ministries and autonomous agencies are currently working on making their Websites more interactive and trying to provide transactional services. The Standardization of Government Transaction Forms project will provide a push in that direction whereby standardized interactive government transaction forms will be made available on some government web sites.

4.1.1. Computerizing Public Administration

In April 2011, the Minister of Water and Energy, announced the launching of Water Evaluation And Planning (WEAP), an electronic system for the ministry that interrelate the ministry's information that was for years distributed on different automated systems of different platforms. The system will help the ministry to provide a water forecast much like the available weather forecast, which will help the ministry to better plan water distribution and usage strategy.

4.1.2. Computerizing Customs Processing

The first automation achievement of the Lebanese Customs Administration was in the mid-1990s through the NAJM project (a Customs Clearance automated information System) that adopted the International Harmonized System tariff ASYCUDA (Automated SYstem for CUstoms Data) through a World Bank loan. The latter was followed by the NAJM Online Operation (NOOR) project that was implemented since May 2001 in phases and which allows traders or custom brokers to track declarations from their offices. With further attempts to ease the customs processing, the customs administration set up in 2007 the customs intranet which connects all regional offices together with a main connection line and a backup line. At the end of 2005, the customs department began the upgrading of the ASYCUDA++ to its latest version ASYCUDAWorld (AW).

4.1.3. Computerizing Taxation and Revenues Management Systems

The Ministry of Finance announced on February 2011 the launching of its e-taxation service together with its new portal. The E-taxation service is now available for public use on the ministry's portal: www.finance.gov.lb

4.1.4. Digitizing Information

Many initiatives have taken place since the early 2000s to digitize public information in the Lebanese Government. The National Archives and OMSAR worked jointly on the digitization and indexing of all historic documents that were available at the directorate in 2005. Furthermore, many government agencies' sites were initiated as information portals with Informs.gov.lb (OMSAR's information portal), a centralized nationwide government information portal.

4.2. e-Government Solutions

4.2.1. G2G Interaction Between Local and Central Governments

OMSAR is currently working on a Workflow, Document Management and Archiving System Enterprise project to be implemented by the Lebanese government. The WFS/DMS (Workflow Systems/Document Management Systems) and the Archiving System Enterprise Project will select a single product that will cater for the government workflow, document management and archiving automation needs in a systematic, standardized and cost-effective approach. One of the Project's aims is to allow a common platform for a strong G2G interaction.

4.2.2. G2C Delivery Models and Government Portals

At the beginning of 2010, the Ministry of the Displaced launched in a press conference its website www.ministryofdisplaced.gov.lb, developed in collaboration with OMSAR. The developed website will enable holders to communicate with the Ministry through the Internet in order to inquire about their applications. It also allows, nationally and internationally, the private and official communication with the Ministry, in order to get to know better about its experience, action plans and achievements.

Through an OMSAR project, MOET, for instance, has embedded on its website, in late 2010, an e-ticketing system for the registration and tracking of all citizen complaints. The system is to serve the consumer protection department in receiving and tracking incoming transactions. The system has been posted on the site for public use.

In December 2010, COOP (Cooperative for Government Employees) initiated an enhancement project to its medical compensation automated system. The project was launched in cooperation with OMSAR to allow civil servants to pay their yearly subscription dues through banks rather than having to visit COOP's offices, as is currently done. In addition, the enhanced system will allow COOP to automatically wire doctors' and hospitals' financial entitlements directly to the respective bank account, thus minimizing any contacts and speeding up the process between COOP and medical institutions (Doctors and hospitals).

At the beginning of 2011, the National Social Security Fund (NSSF) announced the launching of the automation project of the Marjeoun and Hasbaya offices, and the extension of the provided services. This effort comes as a continuation to the automation being implemented in different regional locations and the wide area network that is being built amongst the different regional offices. The main goal of this latest computerization effort is to speed up NSSF's service provision in rural areas, thus allowing regional offices to complete some transactions (such as hospitalization pre-approvals, and affidavits) without having to send them physically to the central location.

In January 2011, the Internal Security Forces announced the launching of a website and a hotline targeted at the complaints of tourists in Lebanon, connected to the Tourism police section in the Judicial Police unit of the directorate. The www.destinationlebanon.gov.lb site and the 1735 hotline will collect tourists' complaints and forward them to the respective unit/section at the Ministry of Tourism for appropriate measures to be taken.

As mentioned earlier, OMSAR has launched at the end of May 2011 a bid for the e-Government portal phase I. The objective of this project is to develop a national portal as a single unified interface for all ministries, agencies, departments, boards and councils within the Lebanese government and the public sector in order to provide an easier access to government information and services for citizens, businesses, Diaspora, as well as the international community. The portal phase I is expected to be completed in one year, followed by another year for maintenance.

4.2.3. G2B Interaction Between Local and Central Government and the Commercial Business Sector

MOET (The Ministry of Economy and Trade) requires all supermarkets and businesses to report their imported and local product lists, as delivered to the consumer. The latter is required every month. To ease up the private sector's reporting and MOET's gathering of data, MOET has built in its latest website version the ability of supermarkets to report their local and imported product prices online.

As noted earlier, the Ministry of Finance announced in February 2011 the launching of its e-taxation service, together with its new portal. The e-Taxation service is now available for use by the public on the ministry's portal: www.finance.gov.lb

4.3. Availability, Adoption and Use of e-Procurement Applications

There is a current project for the implementation of online procurement in the government. However, given

the obstacles facing an e-procurement application as based on the old law and given the status of modernizing the old law, OMSAR and the Development Gateway Foundation teamed up to implement a pilot e-procurement system in 5 public entities and to concentrate on a technical assistance. The project has been on halt for some time, in the hope of re-launching it in the near future.

5. Conclusions

The economic growth of Lebanon, the individual prosperity of its citizens and their integration in the borderless global era is significantly linked to deepening the public understanding of technology through up-to-date education, training and awareness. This process will also have to motivate all involved policymakers, private businesses, academicians, students, researchers and citizens to be successful and sustainable [6].

There is now a significant pool of ICT skills, knowledge and experience in the Lebanese government agencies, but it needs to be better harnessed to develop efficient services to citizens that are the outcome of successful e-Government implementations, including the "one-stop-shop" concept for the delivery of services to citizens and the sharing of infrastructure. However, e-Government is not an end in itself, but a potent implement, a powerful helping hand for a large number of complex policy issues. For it to be a realistic promise and bring a valuable prospective to help meet good governance, development and democracy goals, it requires a dedicated policy strategy, a willingness to adapt to new technologies and leadership to overcome obstacles of many sorts: educational, technical, and infrastructure. Economic growth, empowered constituents, reformed institutions, and more efficiency and effectiveness in policymaking and administration, are a range of potential benefits from a successful implementation of e-Government initiatives in Lebanon [14].

Although telecommunications reform in Lebanon continues to face political and other obstacles, it is believed that the insight provided by the experiences so far have drastically contributed to the momentum for change.

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