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**NATIONAL PROFILE OF THE INFORMATION SOCIETY  
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## **Introduction**

Building the information society relies on ICT opportunities to achieve real progress in several public domains. Egypt achieved immense progress in building the information society by providing a powerful legal and regulatory framework, in addition to an enabling ICT infrastructure. Egypt's efforts to build the information society include e-governance, e-business and e-learning applications as well as other economic and social development requests.

ICT civil service integration was a huge success. Some Ministries have an interactive presence on the Internet and national initiatives for an e-government are underway to increase the number and reach of Internet services. Egypt occupies a modest position if measured according to the standards of the WSIS work plan and the UNDP report on human development. But in general, Egypt is undertaking a major development program in ICT.

## I. THE ROLE OF THE GOVERNMENT AND ALL STAKEHOLDERS

The government's and stakeholders' active involvement is crucial for building the information society. It is important to use policies, and draft strategies that mobilize the efforts of all public sector institutions and encourage them to use ICT and promote opportunities created by the information society.

### A. NATIONAL INFORMATION SOCIETY POLICIES AND E-STRATEGIES

Committed to using ICT in several fields of socio-economic development, Egypt has been launching major ICT programs since 1999, when the Ministry of Communications and Information Technology (MCIT) was created to facilitate Egypt's transition to the International Information Society. The new Ministry was entrusted with creating Egypt's Information Society and its first achievement was the establishment of the Egyptian National Communications and Information Technology (CIT) Plan<sup>1</sup>. The national plan was a move towards sustaining and encouraging the Information Society in Egypt, in collaboration with the relevant government bodies and the private sector. These commitments led to the development and enhancement of telecommunication infrastructure, the establishment of hundreds of information centers, an increase in skilled labor, and the creation of information systems and databases between public and private entities. The Egyptian plans were reviewed in the Egyptian National Communications and Information Technology (CIT) Plan (1999/2000-2001/2002) which was followed by the Egyptian society framework, which lays the foundations of the Egyptian information society for the next twenty years.

The National Communications and Information Technology Plan paved the way for the Egyptian Information Society Initiative, which lays the foundations for the development of Egypt's Information Society until 2020. In 2003, Egypt renewed its National Communications and Information Technology Plan through the Egyptian Information Society Initiative. The Egyptian strategy and vision were detailed in the document entitled "Building Digital Bridges. Egypt's Vision of the Information Society" that was submitted during the WSIS Phase I. The document, which outlines Egypt's progress in building its Information Society, included seven main axes:

- E-Readiness aimed at developing and renewing the Information Network in fixed and mobile phones;
- E-government providing citizens and investors wherever they may be with fast and easy services through the Internet;
- E-business aimed at transforming the Egyptian society into an information society keeps pace with global development and can access state-of-the-art technology;
- E-learning aimed at promoting knowledge and information using electronic technology through the Internet;
- E-health using information technology to improve therapeutic and medical services especially in remote areas;
- E-documentation aimed at documenting cultural and natural traditions by building integrated information systems to introduce Egypt's civilization on the national and international scenes;
- Enhancement of technological industries by improving the quality and increasing the global competitiveness of Egyptian companies.

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<sup>1</sup> Egyptian Information Society – MCIT, May 2005.

## B. PUBLIC/PRIVATE PARTNERSHIP (PPP) OR MULTI-SECTOR PARTNERSHIP (MSP)

Egypt's National Strategy was designed to support an ICT export-oriented industry. Fostering the ICT industry could be a powerful instigator of export growth and job creation. The Egyptian government created the Information Technology Industry Development Agency (ITIDA) and provided the necessary infrastructure to promote success in the ICT sector. Local companies such as Telecom Egypt have created clear value chains in the ICT sector. To develop its services, Telecom Egypt launched strategic partnerships with the private sector under different restrictions and structures ranging from partnership in telecommunications infrastructure to equity partnership, as is the case with mobile and public phone companies. Moreover, international foreign companies spearheaded major investment activities in Egypt. MCIT supported partnerships between the private and public sectors in several fields, including the Arab Digital Content Initiative<sup>2</sup>.

## C. ROLE OF NON GOVERNMENTAL ORGANIZATION

NGOs are actively involved in developing the ICT sector in Egypt and creating Egypt's information society. Existing NGOs include The Software Industry Chamber of Egypt, the Egyptian Software Association, the Internet Software Consortium, and the Egyptian Association for Computer Companies. Many NGOs cooperate with both public and private sectors to develop the software industry, the Arab Digital Content industry as well as other fields.

## D. PROGRESS TOWARDS FULFILLMENT OF NATIONAL POLICIES AND STRATEGIES

The Egyptian government prepared a comprehensive Telecommunication Regulation Law, which was approved by the Egyptian People's Assembly in February 2003 and was aimed at liberalizing Egypt's telecommunication sector and adopting transparency in the different telecommunication applications. The law governs the regulations necessary to the different telecommunication services and encourages investments in this vital sector.

The National Telecommunication Regulatory Body (NTRA) was created to govern the telecommunication sector by implementing the approved policy for the development and promoting telecommunication services so that they are in line with developments in telecommunications technology.

In particular, the Body aims at:

- Guaranteeing the implementation of public plans to provide all types of telecommunication services so as to heed the needs and desires of all beneficiaries in all regions and areas of economic growth and increased construction activity including urban, rural and remote areas;
- Protecting national security objectives and interests and the State's Rights;
- Ensuring the optimal use of wireless frequency spectrum to control generated revenues;
- Abiding by the provisions of international conventions and regional agreements related to telecommunications.

In December 2004, the Egyptian government submitted an ambitious strategy to meet local challenges and create new opportunities. In the past five years, the Egyptian Information Society Initiative took major steps forward in terms of modernizing ICT infrastructure. The challenge now is how to invest and use such progress in socioeconomic development. In fact, Egypt's main characteristic is that it continues to offer affordable telecommunication services including phone, mobile services, Internet, and PCs.

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<sup>2</sup> Egypt's ICT Golden Book –MCIT, December 2006.

In 2005, the Egyptian government approved the establishment of the Information Technology Industry Development Agency (ITIDA), an autonomous body in charge of developing IT industries to increase exports. It aims to:

- Develop and improve IT industry on the national level;
- Transfer and use advanced IT;
- Increase export opportunities for advanced Egyptian IT products;
- Develop and improve companies working in the IT business;
- Coordinate and manage the IT industry;
- Look after the common interests of the IT sector;
- Develop investments in the IT industry.

## **II. ICT INFRASTRUCTURE**

ICT's basic infrastructure is a mainstay in bridging the digital gap between countries and societies. It ensures safe communication on the national and regional levels especially in remote and rural areas.

### **A. INFRASTRUCTURE**

The Egyptian government based its vision to modernize the ICT infrastructure on abolishing regulatory restrictions, gradual liberalization, real public/private partnership and wide access for subscribers. With the exception of the GSM operators' infrastructure, which is owned by the private sector and international companies, nearly all telecommunications infrastructure in Egypt is owned and run by the state monopoly, Telecom Egypt, which has serious plans to privatize the company's main shares.

Egypt has at present an advanced telecommunications network. Other operators have a combination of access and transmission infrastructure and generally use the transmission network of Telecom Egypt. In addition to Telecom Egypt, local market players include mobile phone companies Mobinil, Vodafone and Etisalat, which entered the Egyptian market in May 2007, six public telecommunication operators, public phone operators, and VSAT operators. Table 1 shows ICT indicators in Egypt.

**Table 1. ICT indicators in Egypt, 2003-2006**

Details	Indicator	2003	2004	2005	2006
<b>Indicators of Telecommunication Infrastructure</b>					
<b>Fixed services</b>	Centrals capacity (in millions)	10.9	11.6	12.1	13.2
	Number of fixed lines subscribers (in millions)	8.35	9.1	9.6	10.8
	Waiting list for fixed phone lines (in thousands)	302	70	66	36
	Number of centrals in remote rural areas	1008	1082	1112	1215
	Public phone booths (in thousands)	48.614	48.98	54.35	56.4
<b>Mobile lines</b>	Number of mobile phone subscribers (in millions)	5.04	6.1	8.6	18.5
	Number of mobile phones for every 100 persons	6.45	8.9	12.3	25.6
	Mobile service companies	2	2	2	2
<b>Internet expansion</b>	Internet capacity	850 Mb/s	1.1 Gb/s	2.0 Gb/s	9.3 Gb/s
	Number of Internet users (in millions)	2.1	3.15	4	6.3
	Monthly Internet subscription	Local call fees	Local call fees	Local call fees	Local call fees
<b>PC expansion</b>	Number of PCs in millions	1.5	1.7	2.0	2.8
	Number of PCs for every 100 person	2.2	2.5	2.85	3.9
<b>Human development indicators</b>					
	Number of trainees enrolled in basic skills development programs	48339	89383	101669	140300
	Number of IT clubs	401	826	861	1420
	Number of trainees enrolled in specialized training programs	10990	20900	21834	27200
<b>ICT Operations</b>					
	Number of ICT companies operating in Egypt	807	1115	1320	2070
	Number of users in ICT sector	25624	34250	37372	42400

Source: MCIT<sup>3</sup>

#### B. INVESTMENTS IN ICT INFRASTRUCTURE AND DEVELOPMENT OF NEW SERVICES

As a result of tax incentives and private economic zones, the government managed to create an enabling environment that promotes ICT development. Case in point, the smart village. The last incentives in the new tax law and the customs law (2005) encourage foreign companies to invest in Egypt's ICT sector.

Investment in ICT programs is the sum of public and private investments.

Table 2<sup>4,5</sup> provides data on main ICT investments between 2003 and 2006.

<sup>3</sup> MCIT, 2007 indicators.

<sup>4</sup> General Authority for Investment and Free Zones, 2006

<sup>5</sup> MCIT website.

**Table 2. ICT investment**

Item	2003	2004	2005	2006
Investments in telecommunications (in USD million)	978.1	981.8	1018.7	1187.6
IT investments (in USD million)	542.4	624.7	756.9	831.7
ICT investments (in USD million)	1520.5	1606.5	1775.6	2019.3

#### C. ICT EQUIPMENT AND SERVICES

Telecom Egypt monopolizes the fixed-line market in Egypt. Its national network relies on several components including access, transmission, relay, signaling/intelligence in support of sound services. Moreover, there is a data coverage network offering x.25 services and frame relay. Increasing investment in the telecommunication network is a constant governmental priority. In 2003, USD 981 million were spent to enlarge, improve and maintain infrastructure, whereas in 2005, spending reached USD 1018 million; and in 2006, USD 1187 million.

Fast Internet services are available in Egypt and include, in addition to ADSL and ISDN, leased lines and satellite options. Overall transmission capacity increased from 850 Mb/s to 9.3 Gb/s in 2006.

#### D. INTERNET GOVERNANCE

Telecom Egypt owns many subsidiaries including Egypt Network Co. and Egypt4IT. It also contributes to both public data networks Egyptnrite and Nile Online. It made several attempts to privatize the company but failed due to the collapse of capital markets at the time. At present, most Internet Service Providers lease a part of the infrastructure's capacity to Telecom Egypt.

The Free Internet Initiative improved the Information Society in Egypt. In 2003, the number of Internet users reached 2.1 million. In 2005, it increased to 4.2 million i.e. 50% of the global population. In 2006, the number of Internet users reached 6.3 million, i.e. 84% of the global population.

### III. ACCESS TO INFORMATION AND KNOWLEDGE

#### A. PUBLIC DOMAIN INFORMATION

Several public and private websites provide information to all. In 2004, the official government network portal was launched ([www.egypt.gov.eg](http://www.egypt.gov.eg)). The website is available in Arabic and provides useful information on several public services. In May 2007, the Ministry of Education launched the ministry's portal ([www.emoe.edu.eg](http://www.emoe.edu.eg)), which contains information on the adopted education, curriculum and technology. MCIT is currently getting ready to launch the Arab Digital Content portal in November 2007.

#### B. ACCESS TO INFORMATION AND PUBLIC INFORMATION

Several community public access points are available in urban and rural areas such as technology clubs that allow the public to use the Internet and access information. The number of IT clubs in 2006, reached 1,420 across several Egyptian cities and villages.

#### C. MULTI-PURPOSE COMMUNITY PUBLIC ACCESS POINTS

In collaboration with the Academy of Scientific Research and Technology, MCIT launched the science and technology portal, which allows free access to scientific and technical knowledge as well as to scientific publications and research.

## IV. ICT CAPACITY BUILDING

ICT capacity building is considered a cornerstone in promoting and sustaining the continuous development of Information Society, which is why capacity building must involve all social categories.

### A. BASIC LITERACY

Human capacity building focuses on the development of a dynamic education and the creation of a trained and globally competitive workforce. In fact, the government is offering several complimentary training and habilitation programs in ICT basics or specializations, thus allowing young graduates to improve their skills and capacities to be able to meet the needs of local and foreign job markets. Human capital is Egypt's best resource; more than 50% of Egyptians are under 25. This workforce is highly appealing to foreign development activities. The Egyptian government adopted the Free Internet Initiative and the One Computer per House Initiative to provide all social categories with ICT tools and to contribute to basic technology literacy.

### B. ICT IN EDUCATION AND TRAINING

ICT is a necessary tool at all levels of education, be it pre-university or higher education, as it enhances citizens' skills and productivity. Egypt strives to improve the use of ICT in education and to develop a new generation of citizens who understand and are comfortable to use ICT in their daily lives. In Egypt, ICT-based education initiatives are a high priority. Technical skills are taught at all levels at school as well as at university.

To implement MCIT's National Plan with regards to finding qualified cadres for the promotion of the ICT industry, the creation of income-generating job opportunities, several public and private institutions and centers provide ICT training. Several plans were established to implement programs and initiatives related to human development and training, such as:

1. Basic skills development program (2000-2006): a special program for young graduates aimed at enabling them to meet job market needs. 140,342 graduates were trained;
2. Specialized training program (2001-to date): Led by international training companies, this is a special program to create internationally superior technical cadres capable of developing the software and telecommunication industry. Training included 27,200 graduates from computer, engineering and other schools;
3. Professional training program (2003-2006), 9,000 graduates were trained so far;
4. Continuous training program (2004 - to date): specialized programs aimed at developing the service industry on Offshoring/Business Process Outsourcing (BPO) and Knowledge Process Offshoring (KPO); 2,500 graduates were trained so far.

### C. TRAINING PROGRAMMES FOR CAPACITY BUILDING IN THE USE OF ICT

Several public and private institutes and centers offer training programs to improve human resources' use of ICT. On the public level, the National Telecommunications Institute affiliated with MCIT and the E-learning Competence Center (ELCC) offer several specialized training programs in telecommunications and networks. The Information Technology Institute (ITI) affiliated with MCIT offers several specialized programs in developing software, e-government and geographic information systems. Moreover, there are several public and private university training centers providing ICT training programs.

The Software Engineering and Competence Center (SEEC) holds training seminars for companies and software engineers and provides them with specialized recognized certificates on developing software which reinforces Egypt's position as a competitor. Recently, the Information Technology Industry

Development Agency (ITIDA) launched a program to link academic work with ICT industry and market needs.

#### D. RESEARCH AND DEVELOPMENT

MCIT also developed “the research and development strategic plan for 2007-2010” to create systems that are capable of increasing the competitiveness of the ICT sector on the regional and international scenes.

This initiative focuses on:

- Facilitating access to scientific research in ICT;
- Providing necessary guidance to the Information Society transformation process;
- Raising citizens’ awareness on research and development;
- Attracting international researchers and benefiting locally from their experiences.

In 2005, the MCIT funded and managed the “Excellence Centers in Research and Development”. Excellence Centers are akin to coalitions including several leading local and international companies in addition to Egyptian research universities and institutions.

Research and development efforts in the field of ICT are essentially made in research centers and universities as most universities conduct basic and applied research in telecommunications and computers in:

- Computer and information faculties – there are currently 8 public faculties and 10 private faculties;
- Telecommunications and computer department and engineering faculties – there are currently 18 public faculties in addition to several private faculties;
- Most of these faculties conduct Masters and PhD research in addition to several practical research projects;
- Specialized research centers affiliated to the Ministry of Scientific Research and different ministries.

### V. BUILDING CONFIDENCE AND SECURITY IN THE USE OF ICTS

#### A. USE OF ELECTRONIC TRANSACTIONS AND DOCUMENTS

Confidence and security are the main features of ICT usages. Relevant standards must be provided to guarantee confidence and security in the use of online files and transactions that rely on data and network protection. Several public and private bodies in Egypt use tools and methods necessary to protect data and ensure network security and integration.

#### B. ONLINE TRANSACTION SECURITY

Egypt passed the electronic signature law in 2004 and installed a successful structure to guarantee confidence and security in online transactions. The government strives to reinforce the security of online transactions by:

- Organizing and publishing the use of electronic signature;
- Building an electronic signature infrastructure using smart card technology;
- Promoting the use of electronic signature, documents and contracts in government bodies and the

banking sector;

- Providing electronic signature and document services for the public through post offices and IT clubs.

Egypt's ITIDA holds electronic signature activities, licenses accredited bodies and acts as a coordinator and national focal point with local and international participants.

### C. COUNTERING MISUSE OF ICTS

The Egyptian government, in cooperation with the private sector, is implementing initiatives to counter cyber crimes and misuse of ICT by passing relevant laws and raising awareness among users, be they institutions, agencies or bodies.

### D. INFORMATION SECURITY AND NETWORK SECURITY

Through the ITIDA and the National Telecommunication Regulatory Body (NTRA), the Egyptian government is developing the criteria necessary to ensure confidence and security in the use of networks and guarantee network, data and information security. The ITIDA regulates activities on providing electronic signature services and grants the necessary licenses, pursuant to Law No. 15 of the Year 2004 on Regulating Electronic Signature.

## VI. ENABLING ENVIRONMENT

### A. LEGAL AND REGULATORY ENVIRONMENT

Egypt is largely committed to protecting intellectual property and fighting piracy. A WIPO member since 1990 and having joined TRIPS under WTO sponsorship, it took measures to protect intellectual property and reduce piracy.

Table 3 shows how Egypt adopted international laws and conventions.

**Table 3. Egypt's adoption of international laws and conventions**

Law on patents	Yes
Law on trademarks	Yes since 1969
Law on copyrights	Yes since 1992
Paris Convention	Yes since 1951
Madrid Convention	Yes since 1952
The Hague Convention	Yes since 1975
WCT	No
PCT	No
TLT	Yes since 1999
PLT	No
Nairobi Treaty	Yes since 1982
TRIPS	Yes since 1995
WTO member	Yes
Certificates of Origin	Yes
IPR implementation	Yes
BTA	Yes

*Source:* ESCWA indicators database and Egypt overview – 2003.

Egypt adopted progressive legal policies to facilitate ICT growth, including IT liberalization, the enactment of a new law on telecommunications and a law on electronic signature, and the improvement of

the law on investment to provide investment incentives in ICT industries. These initiatives have created a positive environment and paved the way for ICT to play a substantial role in the national economy.

## B. STANDARDIZATION IN ICT

The Egyptian government encourages ICT companies to use international standards and criteria to develop ICT in Egypt. The SCCE affiliated to ITIDA is entrusted with standardizing and training companies, and helping software companies technically and financially to implement and use Capability Maturity Model Integration (CMMI). Until April 2007, 17 companies were able to reach the second and even fifth level of CMMI.

## VII. ICT APPLICATIONS

### A. E-GOVERNMENT

The Ministry of State for Administrative Development worked on developing e-government programs, launching in 2004 the government services portal ([www.egypt.gov.eg](http://www.egypt.gov.eg)). The site is available in Arabic and contains useful information on many government services. Box 1 includes a rundown of these services:

#### Box 1. E-government Services in Egypt

- Tax and customs services
- Birth certificate request
- Vehicle license renewal
- National ID replacement card request
- Vehicle contravention service
- University admission coordination office
- Electricity bills For business
- Telephone bills
- Donors services
- Tourist complaints
- Legal gateway
- Sales tax services
- Driver's license application and renewal
- School enrolment request
- Train tickets information and reservation
- Egypt Air e-Ticketing
- Salary disbursement
- Visa application
- Work permit
- Water bills

The Ministry of State for Administrative Development automates operational systems at ministries, including:

- Planning and resource management systems (budget, public accounts, procurement, stocks, salaries, personal affairs, etc.);
- Electronic archiving and work flow;
- Cadastral register mechanization allowing digital registration of land and maps data in Egypt in order to simplify all registration procedures;
- Restructuring the work cycle to facilitate procedures. The Ministry is executing several projects with different state ministries and government bodies.

## B. E-BUSINESS

The government promotes the initiative titled “towards a paperless and a cashless society” and supports online purchasing orders by:

- Promoting the use of electronic signature, electronic documents, and electronic contracts in government bodies and the banking sector;
- Promoting online payment in public services and utilities;
- Spreading the use of prepaid cards and bank cards;
- Establishing a credit information system for consumers.

The Egyptian government is in charge of connecting the electronic business network to the local and international network. Moreover, the government is considering the establishment of instructions that encourage and sustain online procurement and online payment.

Egypt passed the law on electronic signature and built a successful electronic business infrastructure. The government strives to activate e-commerce and online business orders in Egypt by:

- Regulating and promoting the use of electronic signature;
- Building an electronic signature infrastructure using smart card technology;
- Promoting the use of electronic signatures, documents and contracts in government bodies and the banking sector;
- Providing electronic signature and document services to the public through the post office, IT clubs and social centers;
- Linking electronic exchange networks locally and internationally to increase the use of electronic sale points;
- Encouraging the private sector to invest in developing and promoting software related to e-business, e-commerce, and online payment systems; production planning, management systems and client service systems, and benefiting from international experts and expertise.

In addition to quality e-business initiatives, Egypt focused ICT integration efforts on creating an environment that reinforces business activities. Business licensing applications are available on the Internet. Most chambers of commerce provide local information through direct contact.

## C. E-LEARNING

The Ministries of Education and of Higher Education and Scientific Research are adopting several projects and initiatives to develop e-learning in Egypt. Among these initiatives is the “Egyptian Education Initiative” adopted in 2006 and implemented by the relevant parties in collaboration with the World Economic Forum and several other foreign organizations. This initiative aims at preparing basic education and university students to work in a developed and advanced environment and at creating a new generation of skilled labor. This initiative includes four main axes:

- i. Pre-university education;
- ii. Higher education;
- iii. Continuous education;
- iv. ICT industry development.

The Ministry of Higher Education created a national electronic education center for higher education. Based in the headquarters of the Supreme Council of Universities (SCU), the Center provides knowledge and the latest developments in school curricula and submits them to the Egyptian University and higher institutes. Furthermore, several public and private universities are developing electronic curricula.

The MCIT, in collaboration with the Ministry of Education, is supporting the smart schools project to develop the use of IT in schools. The project includes two main stages: The first is spread over five years and covers 7,500 elementary schools, including 5 million students. This stage began in September 2003 with a pilot project covering 60 schools in 13 provinces and will finish five years later, in 2008. The second stage is expected to include primary and secondary schools, reaching around 12 million students.

In May 2007, the Ministry of Education launched the electronic portal aimed at using ICT in education. The portal contains 5 main gates:

1. Knowledge;
2. Electronic services;
3. E-learning;
4. Inquiry;
5. Innovative Teachers.

Egyptian universities, in collaboration with the Faculty of Computers and Information at Cairo University, are cooperating to produce the Avicenna virtual university project run by the UNESCO and financed by the European Commission. The project's budget is estimated at around 5 million euros and involves 15 European and Mediterranean countries. The project, which began in January 2003 and ended in December 2006, set the following milestones:

- Establishing a network of 15 e-learning knowledge centers in countries participating in this project;
- Preparing and habilitating 45 experts to work in this domain;
- Preparing and habilitating 300 faculty members for the electronic curriculum production;
- Preparing and habilitating 600 leagues assisting in e-learning;
- Holding 120 e-learning sessions for different education sectors;
- Establishing a virtual library containing curricula developed during the project.

#### D. E-HEALTH

ICT use in the health sector could provide a better quality of life for citizens and an easier work environment for physicians and healthcare workers. ICT can be used to reach remote areas, provide physicians with continuous training, and offer tools necessary to build a national health network. Several projects will be implemented in this regard, including:

- Integrated health record system;
- Information system and national network for citizen health treatment;
- Emergency medical service call center – Ambulance Project;
- Epidemics and wide-spread diseases network.

Box 2 describes the general framework of the e-health initiative.

#### **Box 2. E-health Initiative in Egypt**

E-health initiative aims at:

- Improving medical services;
- Integrating services and diagnosis in provinces and remote areas;
- Creating a diagnostic service system and connecting medical centers in Egypt to medical centers around the world;
- Providing patients with diagnostic services;
- Providing advanced medical services in emergencies;
- Providing the medical community in rural areas with trainings;
- Reducing the cost of healthcare by providing better patient management;
- Acquiring low-cost international consultations for special cases;
- Acquiring early diagnostic of endemic diseases.

Aware of IT benefits for the healthcare system, the Ministry of Health established the e-health program to enable a larger portion of the Egyptian society to take advantage of these benefits. The MCIT is extending ICT services to public sector services including health since new technologies can provide value-added services. The health team at the MCIT is working in collaboration with the Ministry of Health and Population and using ICT to manage health and medical clinical consultation and bring continuous medical culture to remote areas or less serviced areas in Egypt. Distributing health services to remote areas in Egypt, in addition to providing increased needs services to urban areas requires the use of different techniques and applications in the medical sector.

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*Source:* [http://www.mcit.gov.eg/ar/ICT\\_Health\\_1.aspx](http://www.mcit.gov.eg/ar/ICT_Health_1.aspx)

#### **E. E-EMPLOYMENT**

Several private companies are building portals that provide employment opportunities for the youth and graduates in different majors. Most of these portals provide free public services and employment information in both public and private sectors.

#### **E-AGRICULTURE**

The Egyptian government supported the use of ICT in agriculture as the Ministry of Agriculture and Land Reclamation in collaboration with the FAO's regional office implemented several projects servicing the agricultural sector:

- NARIM: to develop national agriculture research information management system;
- VERCON: to improve participation in agricultural information;
- RADCON: to develop an integrated network for agricultural research;
- NARIC: to develop an information center for the Agricultural Research Center (ARC);
- Establishing an information strategy for ARC

## **VIII. CULTURAL DIVERSITY AND IDENTITY, LINGUISTIC DIVERSITY AND LOCAL CONTENT**

### **A. USE OF ICT IN SUPPORT OF CULTURAL AND LINGUISTIC DIVERSITY**

The Arab Digital Content, especially the one published on the Internet, preserves and develops common language, promotes national heritage and sustains socioeconomic development. The promotion of Arab Digital Content can play an essential role in enhancing the region's leading role. ICT can be used to protect Egypt's cultural identity by using the tools necessary to preserve documents, manuscripts, guide's material, and archives and facilitate global access to cultural and historic material as well as increase interest in Egypt's cultural life and heritage.

The MCIT created a Center for Documentation of Cultural and Natural Heritage. The largest part of cultural and natural heritage was published in Arabic on the Internet. And the Ministry of Education published the curriculum of elementary, primary and secondary education in Arabic on the Internet.

### **B. LOCAL AND NATIONAL DIGITAL CONTENT DEVELOPMENT**

Egypt promoted the use of the Arabic language by using Arabic in websites. Most of the Arabic Internet Content in Egypt includes:

- News websites, i.e. TV and newspapers;
- Cultural websites;
- Encyclopedias and translation.

In May 2005, the Digital Arabic Content Initiative was announced. A protocol of cooperation was signed between the MCIT, the Union of Egyptian Publishers and the Educational Software Union, resulting in a private partnership between all three parties. The MCIT is financing a USD 13 million three-year project to digitize and create an Arab portal for several Arabic books, which was launched in May 2007.

Three other protocols were signed in July 2006 between the MCIT, the Ministry of Education and Dar el Maaref:

- Protocol to digitize a selection of cultural books from Dar el Kotob (50,000 books);
- Protocol to digitize plays from the national theatre;
- Protocol to digitize books at Dar el Maaref (10,000 books).

The MCIT is in charge of uploading the national content on the Internet through [www.kenanaonline.com](http://www.kenanaonline.com), in order to serve and help citizens in remote areas use necessary ICT tools to improve their livelihoods. This content was prepared by NGOs, research centers and local companies to meet local needs.

Among Egypt's efforts to develop the production of the Arab Digital Content is the "Egyptian Contest for Electronic Content", an annual contest that has been taking place for the past two years within the framework of the International Contest held in February/November 2005 in Tunisia by the International Summit of the Information Society – 2005. The contest aims at:

- Encouraging companies and bodies to produce Arabic e-content;
- Promoting award-winning projects executed by companies and individuals and giving them the chance to exchange experiences and develop their work.

### **C. ICT TOOLS AND R&D PROGRAMMES**

In 2007, the MCIT released Egypt's strategy to develop digital content production, including conducting research and developing programs necessary to produce the Arab Digital Content, using Arabic

in IT tools and methods such as Arab Internet Explorer, typing URLs in Arabic; and developing research tools in Arabic.

## **IX. MEDIA**

### **A. MEDIA INDEPENDENCE AND PLURALISM**

Given its wide reach and its ability to disseminate ideas and information, the media plays an essential role in the development of the Information Society and is regarded as an important contributor to freedom of expression and diversity of information.

Egypt encourages the enactment of laws that guarantee the autonomy of the media and the Internet, all while setting the standards to protect copyrights. The past years saw the convergence of media and ICT to allow the user to use different media in one bundle as the MCIT in cooperation with the Ministry of Information created a news portal enabling access to different news broadcasts.

### **B. THE MEDIA AND ITS ROLE IN THE INFORMATION SOCIETY**

The media in Egypt plays a major role in building ICT society. In May, a major conference titled “Convergence of ICT and Broadcasting Industry” was held and defined several domains and projects allowing the media to contribute to the creation of the Egyptian information society. Several experts attended the conference to discuss ICT and media convergence and the means to use the large telecommunications industry to publish, and develop media material allowing the user to access timely and needed information.

## **X. INTERNATIONAL AND REGIONAL COOPERATION**

### **A. FINANCING OF ICT NETWORKS AND SERVICES**

Egypt encourages partnership between public and private entities as well as multilateral partnerships, regional and international cooperation. For example, Egypt’s National Postal Authority and the EU signed a partnership agreement covering the institutional development of the authority. Egypt is also part of the Arab Network for National Telecommunication Regulatory Authorities, which was born from the symposium of the Arab Telecommunication Authorities held in Algeria in April 2003. Egypt is an active contributor to the conferences of ICT Ministers in the African Union.

### **B. INFRASTRUCTURE DEVELOPMENT PROJECTS**

Egypt takes part in several regional and international projects in charge of developing infrastructure such as fiber optics cable connection with many countries around the world as well as submarine link between several countries. Telecom Egypt is also part of the Falcon project. The Egyptian National Postal Authority is implementing, in collaboration with the EU, a twinning project for postal authority governance and assistance in liberalizing services while benefiting from EU expertise. A telecommunication consortium between computer, telecommunication and software associations was created in Egypt to market Egyptian products and services on the regional and international levels.

### **C. ICT TOOLS AND R&D PROGRAMMES**

Egypt is an active participant in the regional work plan for the creation of information society, efficiently contributing to the following regional initiatives and programs:

- The project to use Arabic in Internet domain names;
- The NEPAD initiative for electronic schools;
- The African training program;

- The Memory of the Arab World project;
- The Arab Digital Library Initiative.

## **XI. MILLENNIUM DEVELOPMENT GOALS – MDG**

### **A. PROGRESS TOWARD ACHIEVING THE MDG**

ICT use is a major factor in achieving MDGs. Its role is not only limited to enhancing telecommunications and information exchange but also supports development initiatives especially socioeconomic ones. Egypt integrated ICT in its different development plans as several public and private bodies and institutions use ICT in their operations. The Central Agency for Public Mobilization and Statistics in Egypt adopted the project to develop and measure ICT indicators and uses in different fields such as education and e-government. These indicators were shared at the ESCWA experts meeting held in Cairo in March 2007.

### **B. USE OF ICT FOR ACHIEVING THE MDGS**

Several public and private bodies use ICT to achieve MDGs as several applications are ICT-based.

### **C. ICT FIELD PROJECTS AIMING AT ACHIEVING MDGS**

Several public and private bodies have implemented several field ICT projects aimed at implementing MDGs, including:

- Egyptian Education Initiative aimed at developing pre-university and university education through ICT;
- E-health projects aimed at improving healthcare efficiency in Egypt and providing health services to every village and city, especially in remote areas;
- E-government projects aimed at providing citizens with all services via the Internet;
- E-learning projects aimed at providing students with e-curriculum in different stages.

## **XII. WORLD SUMMIT ON THE INFORMATION SOCIETY - WSIS**

### **A. FOLLOW-UP AND EVALUATION**

Egypt actively participated in both the first and second stage of the World Summit on the Information Society held respectively in Geneva in 2003 and Tunisia in 2005. The Egyptian government followed up on the summit's recommendations and evaluated the results. The MCIT was in fact in charge of following up on the implementation of the WSIS initiatives.

Egypt also hosted the 2<sup>nd</sup> Arab Conference in May 2005, held in preparation for the second phase of the World Summit on the Information Society. The Conference led to the Cairo recommendations, the Arab Plan of Action and the joint Afro-Arab declaration. In March 2006, the MCIT also held a conference for all information society partners to discuss the mechanism of following up on and implementing the declaration of principles and the Plan of Action adopted by the World Summit.

In addition, the Ministry formed a commission including representatives from 17 public and private entities to pursue initiatives, projects and programs consistent with the World Summit Initiatives. A database was created to allow all partners to enter their projects data, bringing the number of registered projects until November 2006 to over 120. The projects were later on published in Egypt's ICT Golden Book.

### **B. INITIATIVES AND PROJECTS**

The ICT sector is representing Egypt in world forums to showcase and promote the country's achievements in bridging the digital gap. The geographic domain can contain ICT activities on the regional and international levels. There are in fact several activities in the Arab World and the Euro-Mediterranean and African regions in addition to the cooperation in North American and Asia, as well as the cooperation with international development partners such as the ITU, the UNDP, the EU and the World Bank.

The Arab Plan of Action submitted by the Arab Group and sponsored by the Arab League during phases one and two of the World Summit (Geneva 2003 and Tunis 2005), included Arab Projects, 20 of which were chosen by the Arab Group responsible for formulating the Arab ICT strategy according to specific criteria. These projects, which were adopted by the Council of Arab Ministers of ICT, will be executed on the regional level. For its part, Egypt adopted the following three projects:

1. Arab Digital Documentation Center (Memory of the Arab World) ;
2. Information Society indicators and capacity building to facilitate measuring those indicators in the Arab region;
3. Arab Digital Library.

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