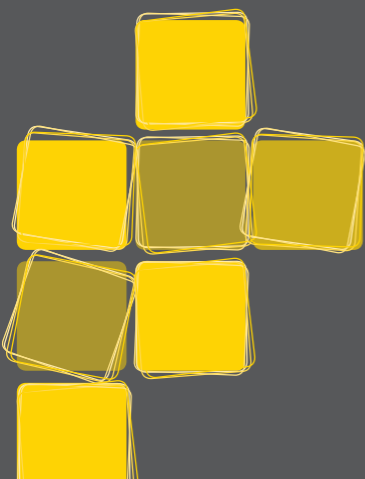


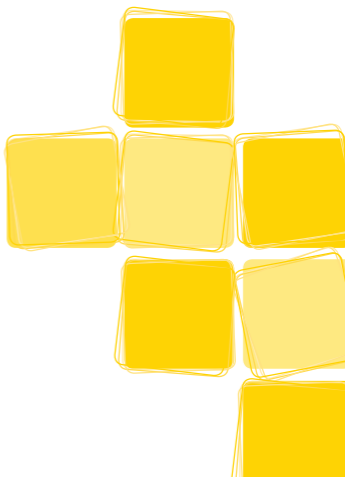


Arab Republic of Egypt  
Ministry of Communications  
and Information Technology  
[www.mcit.gov.eg](http://www.mcit.gov.eg)

# Policies of the Communications and Information Technology Sector 2012-2017



**Policies of the Communications  
and Information Technology Sector  
2012-2017**



A strong ICT sector is one of the main pillars for any country looking for achieving progress and development, as the impact of the sector goes beyond securing communications and knowledge, to changing the lifestyle of the society as a whole. As ICTs have become an empowering tool enhancing the performance of all sectors, it becomes imperative to formulate and update the guiding policies touching on ICTs' use in across the different sectors. Concomitantly, there is a need to follow up the latest developments in general and targeted policies on the regional and international levels. This exercise allows for the development of existing ICT sector policies and practices at the national level in light of relevant and similar international experiences. It is also important to monitor the changes in the ICT environment to ensure the compatibility of such policies with the public policy and national strategies.

The dissemination of these policies at all levels has become a necessity, especially with the boom in services offered by the high-speed internet that will continue to expand reaching out to a wide range of users.

This brochure focuses on the major policies developed by the ICT sector, to be implemented during the coming period in the framework of the new ICT Sector Strategy (2012-2017).

The policies include: green ICT, Arabic digital content, cloud computing, digital identity management, access to information, e-Commerce, mobile applications for development, using ICTs in education through the tablet computer, open-source software and empowering people with special needs.



The following considerations were taken into account in drafting the strategy and policies:

- Flexibility; in responding to the increasing demand for telecom services, through a continuous support for the development of the ICT infrastructure. This can be facilitated by market studies determining the priority needs of consumers and the business sector.
- Ubiquitous access; expanding the use of ICTs for development. This can be achieved by availing the ICT infrastructure in marginalized areas, reaching out to Arabic speakers, and providing support for SMEs, which can play an important role in ICT service exports and the production of Arabic digital content.
- Quantification: putting quantifiable objectives whose progress is easy to monitor. MCIT will review the policies of the strategy and make modifications as and when required, in accordance with government policies and priorities, in response to relevant developments in the ICT and innovation field.

The ICT policies are divided into three groups according to the audiences they address:

- **The government sector:**

Certain policies should be diffused through the government sector first, as the main demand driving sector of the state, including its various agencies and institutions, and in view of its business size and diversified activities. The diffusion of the policies through the government sector ensures their dissemination and spread, especially if they are new in nature. The government sector is the first place where such policies can be incubated, and adopted at their inception phase, before being adopted by the private sector and civil society.

These policies include the following:

- 1- Cloud Computing
- 2- Digital Identity Management
- 3- Open Source Software
- 4- Access to Information
- 5- Green ICT
- 6- Arabic Digital Content

- **The Civil Society:**

A number of other policies are already adopted and implemented by civil society view their popularity among citizens. Thus, they are better diffused through NGOs. These policies include:

- 1- Mobile Phone Applications
- 2- Arabic Digital Content
- 3- Empowering people with disabilities

- **The Private Sector:**

Other policies concern the private sector in particular as the main beneficiary and adopter, and thus should be diffused through it first, such as the e-commerce policies.



## 1. Green ICT

Green ICTs have become a principal need in the current age, in view of the deteriorating environmental conditions and climate change impact and the potential inherent in ICTs in mitigating the effects of climate change. The state is expected to mitigate the effects of climate change through the adoption of national policies that correspond to the global trends, while taking into consideration national needs and priorities. ICT tools can play a significant role in mitigating and adapting the effects of climate change. They contribute in offering solutions for reducing the greenhouse gas emissions caused by other sectors. Therefore, a group of policies should be adopted in this regard. They are as follows:

- Linking ICTs, the environment and energy policies to improve environmental performance
- Linking and coordinating ICT, environment and energy policies
- Promoting energy efficiency and sustainable management of resources through the use of ICTs
- Integrating ICT policies in the national adaptation plans with the aim of reducing emissions and facilitating climate change adaptation
- Developing and adopting methodologies to measure and mitigate the impact of ICTs on the environment
- Development of indicators to assess the potential of green and smart ICTs in reducing the negative impact of other sectors on the environment.

a-Developing policies for the sustainable management of ICT equipment

- Sustainable management of ICT devices from cradle-to-grave including; manufacturing, importation, distribution, use, reuse, recycling and disposal
- Adopting e-waste management policies and developing an integrated legislative framework in this regard
- Capacity building and training of local professionals in Green ICTs

b-Promoting private sector's investments in green ICT  
Promoting investments in green ICTs

- Compiling and distributing of information related to best practices in green ICT
- Preparing feasibility studies, guidelines and studies to support investment in green ICT
- Developing legislation to regulate and support investments in green ICT

c-Strengthening national, regional and international cooperation in the field of sustainable development

- Taking part in international decision-making forums concerned with defining and supporting sustainable development goals (SDGs)
- Promoting the culture of clean technologies on the national level through the exchange of experiences and knowledge transfer
- Creating partnerships between developing and developed countries to address global environmental challenges
- Tapping into global and bilateral funds to enhance policies targeting sustainable development and encouraging the creation of funding mechanisms on the international level
- Integrate ICTs as a facilitator into the international dialogue on climate change in the framework of the international organizations in charge
- Participating in international efforts to formulate green technology standards and disseminating on the local level

d-Reducing the negative environmental impact of the government sector through the use of green ICT

- Observing environmental standards in the public procurement of ICT equipment
- Using smart ICTs to increase the environmental efficiency of public utilities
- Fostering an environment friendly business cycle through the use of smart applications, such as teleconferencing and video conferencing

e-Raising public awareness about the sustainable and rational use of ICTs

f-Supporting research and development



## 2. Arabic Digital Content

The development and diffusion of Arabic digital content is of primordial importance for Egypt. Indeed, this is a principal gateway to opening up the internet to Arabic-speaking communities around the world, while preserving and promoting the Arab heritage for the coming generations. The Arabic content industry encompasses hardcopy and soft products in different fields from tourism, education, government to media, environment, business, culture...etc.; an integrated industrial process that is more of an information base and investment establishment. The Ministry of Communications and Information Technology adopts a set of policies in this regard, including:

### a- Creating a favorable environment for the development of Arabic digital content

- Availing the necessary infrastructure through the National Broadband Initiative “e- Misr”
- Establishing an effective system of cooperation between the relevant stakeholders to ensure coordination and continuity
- Stimulating the market to create, publish and preserve digital content
- Supporting research, development and innovation related to the creation, dissemination and preservation of digital content; related digital networks, software and hardware; and open standards and interoperability
- Implementing initiatives aimed at bridging the skills gap in the field of digital content through training, education and human resources development
- Promoting the creation and dissemination of knowledge by facilitating access to information, data, research and publications, and stimulating investments in this field
- Safeguarding the freedom of expression and freedom of access to information and ideas
- Adopting the necessary legislation
- Promoting the effective use of and access to open government data
- Promoting investments in network infrastructure, content, software and applications

- Improving the regulations applicable to digital content providers
- Promoting the use of open source technology, securing interoperability and open standards to address the technological issues related to the creation, publishing, usage and preservation of digital content
- Updating and improving the applications used for the provision and use of digital content to foster access and maximize usage
- Promoting universal access to digital content with a view to achieving the full benefits of an Internet economy
- Building confidence in the creation and use of digital content through effective consumers’ protection measures targeting identity fraud and theft, infringement on privacy, child online safety, and strengthening information and network security
- Cooperation with other Arab states with a view to achieving synergies and avoiding duplication
- Cooperation with relevant regional organizations
- Development of value-added digital content for Egyptian and Arab consumers
- Periodical monitoring of progress and assessment of obstacles

### b- Creating a strong Arabic digital content industry

- Enhancing the business environment and regulatory framework
- Promoting the development of innovative business models and best practices in the digital environment
- Clarifying taxation issues related to digital content
- Setting policies for improving digital content
- Providing incentives to create, publish and protect digital content, through open innovation strategies, cooperation between universities and businesses and IPRs
- Facilitating e-commerce through e-payments, e-signature and authentication
- Supporting non-discriminatory policies to promote competition



### 3. Cloud Computing

Cloud Computing is considered one of the recent technological solutions aiming at achieving maximum benefit from the information infrastructure. Cloud computing is characterized by decentralized stores for data and programs replacing traditional computers. The “clouds” designate interconnected computers in remote networks, away from the user. The PC becomes one station to reach the server. Thus, it is important to keep pace with the progress in this technology by elaborating its relevant policies:

#### a-Promoting the use of cloud computing technologies

- Establishing a framework of cooperation with relevant entities
- Stimulating the use of cloud computing through awareness-raising, skills development and education
- Researching relevant legislation
- Developing educational curricula in this field
- Boosting confidence in the use of cloud computing technologies
- Promoting graduate research in cloud computing and encouraging the development of university networks in the cloud
- Examining challenges and the best ways to address them
- Examining possible cooperation frameworks with regional and international organizations

#### b-Developing cloud computing technologies

- Promoting interoperability in cloud computing applications
- Exchanging best practices
- Human capacity building
- Promoting investments in cloud computing infrastructure in developing countries
- Raising awareness of the challenges associated with the use of cloud computing, such as issues related to competition and taxation
- Certifying IT professionals working in cloud computing to ensure privacy, security and quality standards in cloud computing contracts

### 4. Digital Identity Management

Digital Identity Management is fundamental to the further development of the Internet Economy. The growing local, regional and international economies led to the rapid evolution of internet based activities and services. Digital Identity Management emerged as a concept to regulate the privacy and security of such activities. DIM includes: establishing the infrastructure, disseminating relevant applications and securing cyberspace transactions. The Ministry of Communications and Information Technology adopts the following policies in the area of digital identity management:

#### a-Raising awareness about digital identity and promoting its use across all sectors

- Familiarizing policymakers with the main concepts of digital identity and related issues
- Shifting from a paper based identity card system to a digital system
- Raising awareness of the benefits associated with digital identity management, such as e-signature and authentication

#### b-Protecting privacy and personal security in cyberspace

- Developing and implementing digital identity management systems that protect privacy of users and security of data
- Using of technology to support privacy and security

#### c-Promoting digital identity uptake and the development of related standards

- Supporting efforts to increase the quality and quantity of services requiring digital identity
- Incremental mandatory shift to digital identity
- Developing technical standards to guarantee flexible and efficient exchange of data with no prejudice to market competitiveness

#### d-Developing digital identity management practices, and promoting the provision of value-added services via the internet



## e-Developing an integrated national plan for digital identity management:

- Identifying the right partners in the national project and establishing a clear and transparent formula for cooperation
- Integrating beneficiaries from key entities in the work process to ensure the successful implementation of the strategy
- Shifting from the current system of social and economic service provision to a digital system
- Continuous development of the internet economy
- Minimizing the potential risks associated with internet transactions
- Building user capacity and raising public awareness

## f-Coordination of digital identity management policies and practices across e-government services

## g-Addressing the challenges of digital identity management

- Multi-stakeholders cooperation between the government and relevant entities to tackle the challenges related to digital identity management
- Cooperation for a reciprocal recognition of digital identity management
- Promoting interoperability of the different e-services provided by the diverse entities through reliance on regional and international standards
- Drafting or amending the necessary legislation as appropriate

## 5. Access to Information and Data

Many of the leading knowledge economies pursue a policy of availing government information and data to the public in an attempt to reinforce communication and exchange with the beneficiaries of services provided and better meet their expectations. This policy gives the general public the opportunity to participate and express their opinion concerning the services. Public data and information is availed in accordance with the regulations and strategic orientation of different countries. The following principles provide a general framework for the use of wider and more effective national databases:

### a-Increasing the use of electronic transactions and the internet

- Raising public awareness of the importance of national databases and clarifying usage conditions
- Promoting the use of databases and boosting confidence in electronic transactions
- Improving the quality of services provided to citizens
- Ensuring the quality of data by developing a methodology for data collection through cooperation with government bodies involved in building databases, or collecting, processing, storing and distributing their contents

### b-Maximizing the benefits of national databases by ensuring data integrity

- Maximizing data integrity and availability through the use of best practices in information management and the setting up of regulations to protect data from unauthorized access and/or modification
- Promoting the use of technology particularly in archiving, searching and retrieving data, and the development of related skills
- Promoting maximum integration in national databases
- Securing ongoing maintenance, development and technical support for national databases





- Reviewing legislation concerning publishing and intellectual property rights to facilitate the use of national databases, while ensuring that the ultimate goal is the availing of data

- Developing the Open Government Data industry

#### **c-Availing data and facilitating the use of databases**

- Ensuring appropriate legislation on access to data and information
- Assessing the reasons behind restricted access to certain national databases, such as national security, personal privacy and intellectual property
- Facilitating access to national databases via the internet
- Providing and developing automated licensing systems regulating online access to national databases
- Creating a national authority to manage the integration of national databases

## **6. e-Commerce**

e-Commerce offers a great opportunity for companies to increase their efficiency and expand their business. e-Commerce can lead to the development of new products, reorganization of commercial processes, reduction in the cost of external transactions and reaching out to new markets. Governments have encouraged the adoption of e-commerce policies, as powerful tools for the development of the economy, improving competitiveness, enhancing skills, increasing job opportunities, raising productivity and empowering SMEs.

#### **a-Promoting e-Commerce and its contribution to economic growth**

- Developing an integrated strategy with the relevant authorities
- Developing the appropriate legal and regulatory framework
- Availing relevant expertise and information for legislators and policymakers to enable them to set up an effective legislative framework for the implementation of the e-commerce initiative
- Providing training and capacity building for e-commerce service providers for better quality and maximum exposure
- Using e-Commerce legislation to guide market players towards more investments in e-Commerce

#### **b-Establishing the necessary infrastructure for the growth of e-Commerce and the developing related technologies based on specific standards**

#### **c-Increasing confidence in e-Commerce**

- Ensuring the protection of security and privacy through legislation
- Protecting digital identity and authentication
- Fostering consumer protection on the internet through clear and transparent procedures



- Expanding access to digital content
- Activating the intellectual property law

#### **d-Promoting the e-Commerce initiative**

- Raising consumers' confidence in e-Commerce
- Activating the protection for online traders and consumers
- Applying transparent rules for consumers on the internet, while ensuring that companies provide accurate and sufficient information concerning the rules and condictions related to e-transactions, and providing consumers with user friendly and secure e-payment methods

**e-Building capacity and expertise in the field of e-Commerce applications, and Implementing integrated programs to raise awareness about the benefits of e-Commerce and the protection measures applied by the government**

**f-Encouraging innovation and entrepreneurship in the development of applications supporting online and mobile financial transactions on the internet and on mobile phones to stimulate demand for e-Commerce, taking advantage of Egypt's high mobile penetration rate**

## **7. Mobile Applications for Development**

Mobile networks contribute in better communications between individuals and institutions, making the exchange of information easier and more effective, especially in rural and marginalized areas. They bring tangible economic benefits in such regions. Mobile applications are therefore essential in many fields such as business, health care. In economic terms, the development of mobile applications led to a significant increase in labor productivity, saved time and resources and offered the community with better opportunities for development and progress. The most important related policies include:

### **a-Sustaining mobile access and applications that reach out to the citizenry**

- Reducing tariffs for mobile voice and data services
- Facilitating and protecting investments in mobile applications development
- Building intermediate systems to secure the transfer of information and data through mobile devices
- Promoting of the development of mobile applications in vital sectors whether governmental or else
- Ensuring that legislation covering e-Commerce activities include mobile applications
- Promoting the development of mobile applications that are compatible with the current infrastructure of projects

### **b-Providing universal access to mobile services across Egypt especially among People with Special Needs**

- Promoting the development of service models based on voice services
- Promoting of the development of innovative services based on community needs
- Developing free and open sources that are not bound to specific service providers



## 8. Tablet Computer Industry

The development of a national tablet computer industry and software is expected to have a positive impact on the national economy, on national exports and on meeting local needs at affordable prices corresponding to the living standard of the citizen. The Egyptian tablet computer industry will offer a variety of products corresponding to a wide range of needs and incomes. The Ministry of Communications and Information Technology will adopt the following policies for the development of tablet computer industry:

### a-Developing the electronics industry (tablet computer) and increasing its contribution to national income

- Setting up a work system that supports the electronics industry and fosters its global competitiveness
- Adopting initiatives to raise government demand for tablet computers, such as the education development initiative launched in collaboration with the Ministry of Education and the Ministry of Higher Education
- Capacity building for companies operating in the field of tablet computers manufacturing
- Developing standards and specifications for equipment and spare parts used in the manufacturing of electronic products for quality assurance
- Developing an integrated marketing plan to promote the export of low-cost electronics and technology products in Africa
- Including of tablet computers in e-waste management programs to ensure their safe and rational disposal/reuse/recycling

**b-Promoting advanced research and creative design and engineering in the manufacturing of tablet computers through development of regulations and standards, promoting funding for R&D, entrepreneurship and protection of intellectual property rights in the field of electronics manufacturing**

## 9. Open-Source Software

Open source technologies are nowadays a corner stone for giant establishments and institutions. This shift resulted from the continuous development of the OSS' enabling environment. Some open source projects were selected among the leading programs in manufacturing products used by the government sector. Accordingly, the Ministry of Communications and Information Technology works on boosting the open source software through the following policies:

### a-Ensuring future generations are experienced in open source software

- Promoting the use of Linux operating system and open source software by the Ministry of Education and the Ministry of Higher Education
- Enhancing students' skills, expertise and capabilities in open source software in specialized undergraduate programs
- Promoting research and development in the field of open source software

### b-Increasing the use of open source software by government entities and in developmental applications

- Raising local companies' capabilities in developing, operating and maintaining information systems based on OSS
- Promoting the use of open source software by government entities through the provision of relevant training
- Promoting the use of open source software in suitable government applications
- Promoting the use of open source software in developmental applications
- Giving a priority in the assessment of bids for government tenders to offers relying on viable open source solutions
- Removing procedural barriers to the approval of open source products for the government, with special consideration of different commercial models and relations within the supply chain

## 10. Empowering People with Disabilities

Policies empowering People with Disabilities (PWD) aim to adapt ICT tools to improve their quality of life through: easier access to information and knowledge, providing job opportunities, and opening channels of communication with society. ICT tools enable PWD to develop their skills, enjoy their rights and hence, become active members of the society. The Ministry of Communications and Information Technology adopts a number of policies to ensure the accessibility of the disabled:

### a-Involving PwD in determining government policies and strategies

- Holding public meetings and dialogues with people with disabilities, organizations representing them and other relevant authorities, including NGOs and stakeholders, to ensure the integrating of all phases in policymaking
- Issuing progress reports to allow policymakers to assess the effectiveness of policies and programs
- Collecting detailed information on ICT use by people with disabilities
- Promoting obstacles hindering PwD from enjoying equality in rights

### b-Empowering PwD through ICTs

- Cooperation with relevant ministries and government authorities to disseminate ICT tools that empower people with disabilities
- Availing school books and educational materials in digital formats, including sound files, in accordance with internationally acknowledged standards such as the Digital Accessible Information System (DAISY)
- Availing telemedicine services for people with disabilities, particularly in remote areas
- Promoting efforts to increase accessibility to information and knowledge, including the provision of electronic documents by government entities
- Adapting the work environment to the needs of people with disabilities

### c-Increasing access for people with disabilities through ICTs

- Enhancing accessibility to services provided over the internet, including e-government services, in accordance with internationally acknowledged standards such as those developed by the web accessibility initiative
- Developing highly accessible websites for people with disabilities
- Promoting the development and production of auxiliary technologies for people with disabilities
- Supporting of technical innovations and services that increase ICT access for people with disabilities
- Supporting efforts to develop mobile devices and software that serve the needs of users with disabilities, such as through predictive text, speech-to-text, text-to-speech, text-to-avatar, voice recognition and video-calling features
- Providing public phones that are easily accessible to people with disabilities
- Providing appropriate devices for people with disabilities to make conversation over the phone, such as voice headset or text device or videophone or devices that include the three features

### d-Integrating people with disabilities in society and developing their skills through ICTs

- Providing of computers and software for vision and hearing impaired students at inclusive and special education schools
- Providing technology training for those working in the training and education of people with disabilities
- Eradicating computer illiteracy among people with disabilities
- Providing of computer training for people with disabilities to increase their employability



## e-Activating local, regional and international partnerships in support of people with disabilities

- Encouraging partnerships between the public, private sectors and NGOs supporting people with disabilities
- Promoting corporate social responsibility in support of people with disabilities
- Participating in regional and international events concerned with disability issues
- Forming international partnerships to exchange expertise and establish joint programs in support of people with disabilities



Copyrights © Ministry of Communications and Information Technology  
All rights reserved. No part of this publication may be produced, stored  
in a retrieved system or transmitted in any form or by means, electronic,  
mechanical, photocopying, recording or otherwise  
without prior permission or reference to this source



Scan Me