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United Nations Economic and Social Commission for Western Asia

NATIONAL PROFILE OF THE INFORMATION SOCIETY
IN SAUDI ARABIA, 2013

ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA

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2

CONTENTS

Page

I. THE ROLE OF THE GOVERNMENT AND ALL STAKEHOLDERS

A. NATIONAL INFORMATION SOCIETY POLICIES AND E-STRATEGIES

- *The Ninth Development Plan*

The Ninth Development Plan is the second phase of a long term strategic track extending to 2024, containing four consecutive development plans. The eighth objective of the Ninth Development Plan states: "The orientation towards a knowledge-based economy and the reinforcement of the elements of the information society". The seventh mechanism for the achievement of these general objectives states: "The preparation for an environment suitable for the orientation towards a knowledge-based economy and the gradual transformation to an information society". This is to be done through the implementation of a number of policies such as completely freeing the ICT sector market, the deployment of broadband equipment over all the regions of the KSA, the extension of broadband networks and internet to all government agencies, schools, universities, and so on.

- *The National Communications and Information Technology Plan*

This plan was approved in 2007, its vision is "the transformation to an information society and a digital economy to increase productivity, and to make communication and information technology services available to all the segments of society all over the country, and the construction of a powerful industry in this sector so that it would become one of the main sources of income".

Several objectives must be accomplished to achieve this future vision, these objectives include: raising the productivity and efficiency of all the government, commercial, social, and health services through providing them electronically, the organization of the ICT sector in a fair and encouraging way to draw investments, building a competitive ICT industry so as to make it a main source of income, enabling all the segments of society to efficiently use ICT, putting ICT in the service of the national identity, the Arabic language, and Islam's cultural message, in addition to providing trained and capable cadres from both genders in all ICT domains through training and attracting international expertise. Based on this vision and these objectives, the first five year CIT plan covering the period between 2008 and 2012 was prepared and enacted as the first nucleus to reach the vision aspired to concerning ICT. 26 objectives were implemented and over 98 projects were put into effect in this five year plan, 76.12 per cent of these objectives were reached by the end of the period allotted for the plan. The second CIT five year plan (2013-2017) is now being presented to the higher authorities for approval and implementation, it includes 17 objectives which are to be reached through 83 projects concentrating on reaching a competitive ICT local industry, the training of capable and qualified ICT cadres, and reaching a powerful and integrated national information security system.

- *The Executive Plans for E- Government*

The e-government program (Yesser) developed a national e-government strategy then the first executive plan (2006-2010) with the vision: "By 2010, all relevant parties would be able to attain government services offered in a complete and easy manner through secure electronic channels at any time and in any place". This vision was detailed through ten general objectives including offering 150 high priority services, offering e-government services to no less than 75 per cent of the users and attaining no less than 80 per cent user satisfaction level, increasing electronic channels of correspondence between government agencies, and so on. The plan included a number of projects which are divided into infrastructure projects, e-government projects, and national applications projects. Several achievements were accomplished within this period such as the

legislative framework for e-government transactions which include the regulations for these transactions, a system for countering cyber crimes, the particularization of higher positions for ICT, directing government agencies to forming their own committees for e-government, and preparing the regulations for the use of PCs and information networks in government agencies.

Several e-government infrastructure projects were finished such as the Government Secure Network linking 77 government agencies, the eGov Data Centre, the national e-government portal (Saudi) which offers 1048 electronic services offered from 124 government agencies, the Yesser Framework for Interoperability (YEFI), and the single sign-on through opening 39 offices to check the registration data over several government agencies, in addition to the formation and activation of the PKI Centre.

Some government agencies have launched several national applications which are used by a large segment of users such as the Gov ePayment Gateway, a customs procedures over all of the KSA's ports (land, sea, and air), and the beginning of the national e-government connectivity centre.

As for change management, 10,000 government employees were trained on the basic computer skills and government transactions. An index for change to e-government was implemented to measure this change in 154 government agencies.

Based on these accomplishments, a second e-government executive plan (2012-2016) was developed by Yesser with the participation of government agencies, universities, and the private sector. The main components of this second executive plan consist of four strategic tracks: enabling continuous human resources for e-government, enhancement of the citizens' experience in dealing and responding to government agencies, development of the culture of cooperation and inventiveness, and raising the efficiency of the services offered by the government agencies. These tracks are supported by 22 objectives which are to be achieved over 46 initiatives.

An office was formed within Yesser to manage the strategy, its role includes following the progress achieved through monthly reports from the project manages, developing indices to monitors the overall progress in the general objectives, annual checkups for the suitability of the strategies followed by the various sectors with the general e-government strategy in addition to preparing a quarter annual report to the Director's Committee in Yesser to clarify the progress made in achieving the general objectives and the features of the action tracks and the expected risks.

- *Plan for the Determination of the Priorities of the Information Technology Strategy*
This plan completes the national plan for communications and information technology, four domains of strategic priority have been determined: 1) Automatic processing for speech and language 2) High performance computerization 3) Systems and networks 4) Software engineering and innovative systems.

ICT strategy exists:	Yes
Year of adoption	28th May, 2007
Government Agency in charge (in English and Arabic)	وزارة الاتصالات وتقنية المعلومات (أمانة الخطة الوطنية للاتصالات وتقنية المعلومات) Ministry of Communications and Information Technology (Secretary of National CIT Plan)
Pace of implementation (Excellent/ Good/ Average/ Limited)	76.12 per cent of the first five year plan was achieved

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

- *Overview the existence of structured dialogue involving all relevant stakeholders, in devising sustainable* e-strategies for the Information Society and for the exchange of best practices

In the second national CIT five year plan, the Ministry of Communications and Information Technology made sure that all the relevant stakeholders were involved in the preparation for the plan, more than 60 principal and subordinate agencies were involved in the workshops held for that reason. As for the second e-government executive plan, the stakeholders in this project were involved in the preparation for the strategic conceptions for the future of e-government in KSA, communication with representatives of government agencies through workshops and discussion groups in addition to benefitting from customer satisfaction surveys. This step also included taking the suggestions of the private sector through a workshop attended by 50 representatives of consultation companies and IT project developers. All in all, 58 individual meetings, 20 workshops and several discussion circles were formed at this stage.

- *Identify mechanisms, at the national level, for the initiation and promotion of partnerships among* stakeholders of the Information Society

The KSA government formed the National Committee for Information Society for monitoring change to the information society. The suggested plan for the tasks and activities of the committee was approved. 16 government agencies, private sector companies, and civil society organizations are represented in the committee.

- *State the presence or establishment of at least one functioning Public/Private Partnership (PPP) or Multi-Sector Partnership (MSP)*

The e-government program (Yesser) developed the standards and regulations for PPP for e-government projects, this partnership materialized in several IT projects such as the user quick guide, the detailed user guide, and several other forms and studies.

- The King Abdullah Initiative for Digital Content

King Abd Al-Aziz City for science and technology has established several partnerships with related bodies, such as the Ministry of Media and Culture, the Ministry of Education, and several Saudi universities to enrich the World Wide Web with Arabic digital content. The City also undertook several projects with global corporations and organizations such as Google, the Arab League Education, Culture and Science Organization, Arabic Organization for Translation, the Arabic Thought Foundation, and the Semanoor multimedia site.

C. ROLE OF NON GOVERNMENTAL ORGANIZATION

- *The Saudi Computer Society*

This was the first national scientific non-profit organization involved in activities and research related to the scientific and cultural advancement in the computers and IT sector. Some of its accomplishments are: the preparation of the national IT plan, holding more than 19 national computer conventions, offering academic services for more than 29 training and educational organizations in the public and private sectors, and many other such achievements.

- *The Saudi Telecommunication Society*

This society was established in 2003, its first general assembly was in 2006, and its headquarters are in the School of Engineering in the King Saud University. The society has several objectives such as the development of scientific and engineering research in the ICT sector, coordination between the active sectors

in ICT, encouragement of research and study in this domain, and the development of standards in communications related jobs.

- *The Saudi Library and Information Association*

This association includes all the institutions and bodies related to libraries, information, and publishing. It also includes individuals having library and information related degrees and work in these fields, as well as the students of these fields in the kingdom's universities and colleges. The objectives of the association include the development of scientific thought and the advancement of the library and information services in the KSA.

II. ICT INFRASTRUCTURE

A. MARKET STRUCTURE AND REGULATORY LANDSCAPE

- *The Telecom System*

The Telecom act regulates the communications sector, according to this act the ministry decides the general policies, plans, and development programs and it grants the licenses needed for this system and its projects in coordination with the parties involved with the services given to government agencies, the ministry represents the KSA in the local, regional, and international agencies relating to the communication sector and has the right to give license to the commission and agencies it deems fit to represent it and to approve the rules and principles and conditions relating to the general service and the right of public use suggested by the commission, this commission would perform its tasks according to this system and regulation and the rules pertaining to them.

The Communication and information technology commission (CITC) Ordinance was issued as a result. The e-transactions law was issued in 2007 with the purpose of regulating e-transactions and e-signatures, in addition to the approval of the rules regulating the private sector's participation in governmental electronic projects. In 2006 the e-government regulations was approved, and in 2007 the cyber crime law was issued. The general service policy and the right to public use were approved by the Minister of Communication and Information Technology in 2006. The Communication and information technology commission also issued several other regulatory frameworks such as the regulatory framework for definition of markets and control in the communications sector, regulations for service retrieval in the events of emergencies and disasters in the ICT sectors, the standards and conditions for the use of the Bluetooth technology, the regulations for the use of the local WLAN/WiFi networks and several other regulations.

Type of License	Number of Licenses
Fixed-Line Phone Services	2
Mobile Phone Services	3
RSS services	2
VSAT Communication Services	19
GMPCS communication services	2
ISP services	39
AVL services	69
Audi Text Services	5
Network Administration and Monitoring Services	4
SMS services	130
Mobile Phone Prepaid Recharge Cards Services	1
Communication Center Services	20
Hosting ICT Devices and Equipment	6

	Please specify whether service is competitive, duopoly or monopoly
Mobile Telephone Services	Competitive
Fixed Telephone Services	Competitive
Internet Services	Competitive

B. PENETRATION OF ICT SERVICES

- *Fixed-Line Communications Services*

By the end of 2012, the number of the active fixed phone lines reached more than 4.8 million lines, 3.4 million of these are residential lines (70 per cent) making the fixed phone line tele-density 16.4 per cent of the population and 67.6 per cent of the residential areas themselves. The demand for fixed line phone services is expected to increase in the major cities as a result of the increase in demand for fixed-line broadband services offered by fibre optics networks (FFTx).

- *Mobile Communications Services*

By the end of 2012, there were 53 million subscriptions. Pre-paid subscriptions formed the vast majority of these subscriptions (over 86 per cent) making the mobile tele-density 181.6 per cent of the total population which is less compared with 2011, the cause behind this decrease is upgrading the user data and the fact that the licensed companies cancelled all subscriptions whose owners did not upgrade their data which affected the total number of subscriptions this year.

- *Broadband (or Broadband Internet) Services*

The demand for broadband internet recently increased greatly compared with the last few years. This is caused by society's increased need for these services as the government supported high-tech projects which demand a good digital infrastructure and after many government transactions became available on the internet. What added to this demand is that internet use within society changed its trend as it became the source of a great number of applications for smart devices such as social networks, business applications, chat programs, protection tools, games, and so on. Both fixed and mobile phone services offer broadband services.

- *Broadband Services over Fixed-Line Communication Networks*

Broadband subscriptions over fixed-line communications networks –including DSL, fixed-line wireless connections, fibre optics and other wired lines- reached 2.54 million subscriptions by the end of 2012 reaching a density of 40.8 per cent on the level of residences.

- *Broadband Services over Mobile Communication Networks*

The total number of broadband subscriptions over mobile communications networks has reached 12.28 million subscriptions by the end of 2012 including RSS services and the other audio communications services. The density of mobile communications network broadband services has reached 42.1 per cent. It is worth mentioning that the increased penetration of smart phones led to a vast increase in subscribers over the last few years.

- *Internet Services*

The penetration of internet services increased highly over the last few years. It has risen from 5 per cent in 2001 to 54.1 per cent at the end of 2012. There are approximately 15.8 million internet users in the KSA which –as indicated by surveys and estimates- are mostly broadband mobile and fixed-line internet services having more than one user for the same line as the fixed-line services are linked to residence. There is an average of three users for the one line. Furthermore, the one user may have more than one subscription to the fixed-line and mobile broadband internet services. As mentioned earlier, the demand for the use of internet is expected to increase over the next few years.

To support electronic services projects, the communication and information technology commission issued licenses and cancelled some others, the total number of issued licenses reached 292 by the end of 2012. Furthermore, the committee conducted some studies on the KSA's ICT market, updated the interconnectivity guidelines, prepared ICT market indices, raised the preparedness of the KSA for moving to the IPv6 protocol, developed the internet plan, developed a incentives program for the ICT sector, restructured the mobile communications market through issuing new licenses to virtual mobile network operators, and extended the communications services to distant areas which are financially unprofitable, in addition to providing broadband internet and audio services for 3,421 residential areas in addition to preparing the tender documents for two more projects to serve 3,417 more residential areas in the year 2013.

D. ICT CONNECTIVITY

What relates to this part has already been discussed.

E. INTERNET INFRASTRUCTURE

This is formed of the several elements in the KSA:

- *The National Network*
The cities of the kingdom are connected through an advanced telecommunications network for internet services constructed by licensed service providers. The instant network depends on Synchronous Digital Hierarchy (SDH) in addition to connections which connect the international transmission centres to the ground stations and support equipment. The network design has met the requirements of the ITU recommendations.

- *The International Network*
The kingdom's infrastructure service providers have constructed high capacity international networks to serve the current and expected loads and offer extra capacities for their use in restoring services in the case of emergencies or interruptions. The international network has the following components:

  - Sea Cable Networks: the KSA is one of the least affected countries by sea cable interruptions in the region;

  - Optical Fibre Networks for Border Connectivity: these are available with neighbouring countries, and have been designed to have "No Single Point of Failure";

  - Satellite Networks: There are several satellite complexes in a number of locations in the KSA to reach the countries where there is no direct contact so as to provide reserve or backup capacities to be used in the case of emergencies.

- *National Networking*
A number of service providers who have their own infrastructures are connected to the KSA through token ring networks which cover all the major cities. One of the most important of these networks is the Saudi Telecom Group (STC) network which extends to tens of thousands of kilometres to connect most of the cities and regions in the KSA. There is also the National Fibre Network (SNFN) to which a number of service providers are connected. Both networks use the DWDM technology. The total capacity of this

network is very high, mounting to hundreds of GBs with the possibility of future expansion to speeds in Terabits when the need calls for it.

- *Plans and Projects Relating to the Development of the Internet Network for the Service Providers*

Service providers have many projects for 2011 as new sea cables are being added, new inter-city trajectories are being constructed, and fibre optical cables with speeds ranging between 40 and 100 MBs/sec are being connected to citizen residences. Mobile phone networks have increased capacities reaching 42 MBs/sec, and the expansion of the fibre optical network between cities.

- *WiFi and WiMAX Service Points*

All internet service providers offer WiFi and WiMAX services through access networks in Riyadh, Dammam, Jeddah, Khobar, and other major cities. Free wireless internet services are offered in the holy sites in the religious seasons. The operators also have a great interest in the WiFi hotspots service which allows the users to browse the internet without a modem.

- *Internet for Academic and Research Agencies*

King Abdulaziz City for science and technology completed several projects such as the following: (1) enhancing the capacity of international lines adding to the reserve internet lines until they reached 55 per cent of the total international lines. Capacities given to those connected to the internet through the city have increased by 34 per cent and (2) the calculation of the averages of internet use which have the objective of allowing for conducting statistics for the city helping it to make decisions concerning the raising of the total capacities given to the users.

The city also continues to offer other internet services such as safe browsing, the academic news service which has 20 agencies connected to it, data storage services, and the service for hosting websites.

III. ACCESSIBILITY TO INFORMATION AND KNOWLEDGE

A. PUBLIC DOMAIN INFORMATION

The national e-government portal (saudi.gov.sa) is the main portal for government agencies. It has all the internet links relating to the government agencies which offer electronic services and the relevant information about this agency.

B. ACCESS TO INFORMATION AND PUBLIC INFORMATION

- *The national e-government portal*

Citizens, residents, companies, and visitors can all reach e-government services in the KSA from anywhere through this portal.

C. MULTI-PURPOSE COMMUNITY PUBLIC ACCESS POINTS

- *The Google Initiative*

See part 4.

IV.   ICT CAPACITY BUILDING

A. ICT IN EDUCATION AND TRAINING

- *The National Centre for e-Learning*

This project has the purpose of enabling e-learning and encouraging it through recommending the legislations and policies relating to distance learning and implementing a unified prototype for distance learning according to high quality standards. The Ministry of Education represented by King Abdullah Bin Abdulaziz Public Education Development Project worked on several electronic projects to enable e-learning such as building an e-portal for the centre, developing a system for the administration of the educational process, developing virtual classes, developing cooperative encyclopaedic and educational forums systems, e-student websites, e-school websites, and the digital library system. The centre, however, is facing difficulties in providing highly qualified expertise to enrich the process of developing the centre.

The Ministry of Higher Education constructed the National Centre for e-Learning and Distance Learning, distance learning rules and regulations were adapted, as was the virtual university, and the satellite educational transmission which produced 12 programs. Several program packages were launched such as Saudi Guidance and Support Centre (Saneed), the Saudi Repository for Learning Objects (MAKNAZ), the second version of the Jussur system, and the Saudi Support and Guidance Centre which was given the reward for the best new communication centre in the Middle East in 2011. There is also the digital library and the virtual examination system. The centre is also active in offering training programs so that 5,000 interested people gained from them, an annual E-Learning and University Distinction Award was introduced as was a Centre of Excellence for Digital Production which supports educational staff in developing digital curricula, the centre, however, is facing certain difficulties such as financial fluctuation, the lack of qualifications, and the lack of connectivity with other universities.

- *The Employment of ICT to Support Teaching and Learning Project*

This project aims at developing curricula electronically and interactively in the forms of CD-ROMs or publishing them on the internet. There are several projects based on this general project such as the content administration project, the video connection project, the e-portal project and others. The ministry has signed a contract with a company which specializes in developing interactive books for the Saudi curriculum. A virtual national e-portal is being developed, 60 per cent of the Noor system, which is an information system inclusive of the whole of the educational process and covers all the schools administered by the ministry. The Ministry of Higher Education developed the infrastructure necessary to interconnect the universities in addition to offering e-learning in universities, changing the courses into digital ones.

- *The Introduction of Computers and Internet in Curricula and Courses Project*

This project aims at introducing computers at all the levels of education making the study of computers and internet compulsory just as the courses concerning Islamic culture and the Arabic language. The project is complete for intermediate and secondary school classes, but it is still being implemented at the elementary level. The project undergoes a continuous process of development. Computer courses were introduced to 12 public universities and 4 private ones. Computer courses also enter into the preparatory materials of all the other universities.

- *Spreading ICT systems in Educational Establishments*

This project aims to provide students and learning staff with e-mails, schools with e-classes, multimedia and video equipment. The Ministry of Education is working on a number of projects compatible and

complimentary to this project such as the Electronic Educational Administration System project, the Financial, Administrative, and Human Resources system, and the MOE portal.

Although the ministry did implement a project for providing e-mails for all students and teaching staff, both the students and the teachers did not activate the e-mails as e-learning services are not yet put into effect, so the project was postponed until e-learning services are provided.

The ministry of higher education owns a network infrastructure, an academic system, an electronic admissions system, an e-learning system in addition to e-classes. The universities are working on the completion of their administration and financial systems and completing their technical infrastructure.

B. TRAINING PROGRAMS FOR CAPACITY BUILDING IN THE USE OF ICT

- *The Google e-Training Initiative*

The objectives of this initiative, which is mostly directed at the residents of rural areas and the lower income segments of society as well as elementary and intermediate level school students, include computer and internet literacy, raising awareness of the importance of ICT, awareness of ICT uses, providing the target segments with basic computer and internet skills, making government services more accessible through raising the awareness of e-government projects in the KSA, and encouraging the residents of rural and desert areas to train using computer and the internet by providing them with basic skills.

As for the mechanism of this initiative, it takes place through a mobile class with training equipment, an instructor, and a driver. It moves between the cities and the villages within a course of action determined by the ministry and remains in each place for one week. 10 training hours are offered to the trainees.

- *Lectures for Dissemination of Digital Knowledge and Culture*

This initiative has the objective of enhancing awareness concerning the use of communication and information technology, with special attention to the younger segments of society. The initiative mostly targets school pupils.

- *Training Educational Staff on the use of ICT*

This project aims at training 200,000 teachers on the basics of ICT uses through attaining an international certificate, as well as the formation of an e-portal for training courses to be offered over the internet. The ministry has finished implementing all the objectives of this project. The Ministry of Education also offers various ICT use programs to train teachers.

V. BUILDING CONFIDENCE AND SECURITY IN THE USE OF ICTS

A. USE OF ELECTRONIC TRANSACTIONS AND DOCUMENTS

There are several rules and regulations offered by the ministry to enhance e-transactions and virtual documents such as:

- The e-transactions law
  (http://www.Yesser.gov.sa/ar/MechanismsAndRegulations/Regulations/Pages/e-transactions_law.aspx)
- The e-government application regulations
  (http://www.Yesser.gov.sa/ar/MechanismsAndRegulations/Regulations/Pages/controls_application_eGovernment.aspx)
- The National Identity decision
  (http://www.Yesser.gov.sa/ar/MechanismsAndRegulations/Regulations/Pages/Adopt_the_smart_national_identity_decision.aspx)
- The decision to shift from conventional to electronic methods
  (http://www.Yesser.gov.sa/ar/MechanismsAndRegulations/Regulations/Pages/decision_shift_conventional_electronic_methods.aspx)

The KSA also formed the National Centre for Digital Certification whose role is offering an integrated system for PKI administration upon which all actions such as e-commerce and e-government are based.

B. ONLINE AND NETWORK SECURITY

- *The National Strategy for Information Security*

The preparation and development of a national information security strategy is underway at the moment. This strategy has the objective of transforming the KSA into a secure information society where information is reliable and competitive, it also aims at building trust in the use of electronic information, increasing the flexibility of information systems to respond to internal and external changes, the increase of awareness of security risks and the common responsibility for data protection, forming a national references for information security administration.

- *The Computer Emergency Response Team*

The Communications and Information Technology Commission devised this team to raise the level of awareness about information security. It coordinates the efforts for data protection, and handles information security incidents in the KSA. The team provided technical support to 17 criminal cases, coordinated with social networks to remove 48 false identities, published 50 alerts on the centre's websites, and sent 141 alerts to registered agencies through the early alert service and the risk management system.

- *Information Security Policy for Government Agencies*

This document was prepared by the Ministry of Communications and Information Technology, and includes the specifications for information security policies for each government agency according to what is suitable to that specific agency. Other relevant documents were prepared in both Arabic and English.

C. PRIVACY AND DATA PROTECTION

One of the objectives of the second five year ICT plan is the protection of electronic privacy. The communication and information technology commission receives all the privacy and data protection complaints, receiving 15,519 complaints including phone abuse complaints.

D. COUNTERING MISUSE OF ICTs

The Communications and Information Technology Commission launched a program to fight spam messages, this includes the protection of the privacy of individuals and institutions and their right not to receive any message without permission. This was done through enhancing the commercial abilities in the kingdom so companies may have the opportunity to promote their products through definitive legal frameworks. The law to counter cyber crime was issued in 2006 and it determines the offenses punishable by law in this respect and the punishments allotted to them.

VI. ENABLING ENVIRONMENT

A. LEGAL AND REGULATORY ENVIRONMENT

e-transactions law available (yes/no)	Yes
e-signature law available (yes/no)	Yes
Management of PKI available (yes/no)	Yes

- E-Transactions Law

  This law was issued in 2007 and its executive list was issued in 2008.

- IT Criminal Law

  This law was issued in 2006 and it aims at checking information crimes through defining them and the punishments resulting from them.

B. DOMAIN NAME MANAGEMENT

The Saudi Network Information Centre (SaudiNIC) continued its activities in registering Saudi domain names and managing them on the internet, several important additions were made to the services provided over its e-portal. Several accomplishments were achieved in 2011 such as preparing a study on Saudi domain names and their marketing, the introduction of a service allowing the centre to send extra documents about registered domain names to the domain name administrator, receiving 10,177 new requests for new domain names, the formation of 4,272 new accounts in the centre, study of the document prepared by the ICANN concerning domain names, study of the draft prepared by the IETF about dealing with domain names, the preparation of an integrated study on the adaptation of the EPP protocol, connecting the centre to the integrated e-government services, and increasing the preparedness of the KSA to move to IPv6 to fulfil the international requirements in this respect. Within the framework of moving to IPv6, the centre held the eleventh and twelfth meetings for the national team for IPv6, published IPv6 Tunnel Broker as an open source program on the internet, linked the e-government program (Yesser) to the IPv6 test lab, and increased the number of agencies which have IPv6 domain names to 35.

Name of ccTLD registrar	*Name in English: SaudiNIC* *Name in Arabic:* المركز السعودي لمعلومات الشبكة
URL of registrar	*(http://nic.sa)*
Total Number of ccTLD registered in the country for the years 2008, 2009, 2010, 2011, 2012	*33,214*

C. STANDARDIZATION IN ICT

The Communications and Information Technology Commission prepares the specifications for ICT devices to be exported from KSA and used in it. These specifications are binding to the parties which manufacture and export it or sell it in the KSA. The commission also supervises the process of fixed-line and mobile phone number transfer. All requests for exporting ICT devices from local and foreign companies come to the commission for approval. The requests are studied and decided according to the regulations.

The commission has published 91 specifications which cover most of the applications within the ICT domains. The commission also updates and prepares new specifications according to the new technologies used in this field. It also studies the requests arriving from customs outlets in the KSA relating to ICT devices' permits to make sure these meet the specifications determined by the commission. The commission also offers technical support concerning these specifications, providing advice and responding to complaints of a technical nature.

A project for an electronic system for the clearance permits for ICT equipment is being developed. This system has the purpose of building a database with all the equipment cleared and permitted by the commission, building an e-portal through the Commission's website to present this system, linking it to the custom's system.

D. ICT INVESTMENTS AND GOVERNMENT-SUPPORTED FACILITATION MEASURES

King Abd Al-Aziz City for science and technology has adopted a mechanism for creating technology incubators through selecting the best international institution in this domain to offer their administrative services and transfer experience to the national work team. The city created three incubators so far, one of them is the Badir incubator for communications and information technologies, several bodies including the Riyadh Chamber of Commerce and Industry, the Saudi Computer Society, the Saudi Telecommunication Society, and the Saudi Inventors Society. 266 projects were presented to Badir, 117 were rejected, 4 were fully incubated, and 10 were transferred to incubators other than Badir, while there are 5 projects under research and development. Badir incubates a total of 31 projects, there are four projects which were incubated but were not successful, and 95 projects were given consultation and were temporarily incubated.

VII. ICT APPLICATIONS

A. E-GOVERNMENT

- *Computerization of the Customs*

  Saudi customs are using the services of an international company for an IT strategy and to transfer its processes to e-transactions. The plan is expected to be completed within the next few months and then Saudi customs would begin its general upgrade of its system and the automation of more of its procedures.

- *Computerization of Revenue Management and Tax Systems*

  The Department of Zakat and Income Tax has an automatic system to handle the data of citizens and their Zakat and tax returns, this system is one of the most important ones in this field. Citizens may then update their data before paying their taxes through the Sadad program.

- *Availability of e-procurement.*

  The Ministry of Finance began working on a strategic project for government e-procurement. This project is being developed gradually over several stages.

- *Single Sign On (SSO)*

  This service is one of the most important regulations enforced for e-government transactions, each individual has a unique ID number which gives him access to all information systems, and it is created by the e-government portal and verified by the registration office. By 2012, the SSO service has achieved a noticeable improvement as the number of facilities benefitting from its services increased to 17,735, the totality of procedures performed by the SSO service reached 56,448 performed by 115 employees in 40 offices.

- *National Contact Center (Amer)*

  Yesser's Supreme Supervisory Committee decided to establish the National Contact Centre to support all government agencies through various channels. The centre responds to inquiries raised by the public and beneficiaries of e-Government services. It provides support and information about e-government and e-services provided by government agencies. The objectives of the centre include professional instant response to queries relating to e-government issues, providing solutions and response to individual customers, businesses and visitors, facilitating processes of searching and e-communication with individuals and organizations, reducing load on main service providers, improving response time in government agencies particularly in emergency and critical situations, and gaining more skills and knowledge and to keep up with the progress in ICT. The services of the centre will take place through phones (fixed-line and mobile), internet, fax, mail and in both English and Arabic.

- *Support of the e-government services systems*

  A number of systems were launched by the Yesser program such as the electronic system for social development, the system for general control over government agencies, and the system of the ministry of housing. Yesser also continues to support government agencies in funding their e-services projects. The program is coordinated with a number of ministries to offer their services and for correspondence between each other.

URL of e-government portal: *(http:// saudi.gov.sa)*		
Information	General	*Yes*
	Laws	*Yes*
	Directories	*Yes*
Services	Static Info	*Yes*
	Downloadable Forms	*Yes*
	Interactive	*Yes*
e-payment		*Yes*
Online account		*Yes*
Bilingual		*Arabic/ English*
Citizen Participation	Blogs	*Yes*
	Polls	*Yes*
Social Media	Facebook	*Yes*
	Twitter	*Yes*
	LinkedIn	*No*
	YouTube	*Yes*
	Other	*(indicate)*
Additional Services	RSS	*Yes*
	Web Statistics	*Yes*
	Search	*Yes*
Mobile version	Support for smartphone/tablet	*Yes*
	Dedicated App (iOS or Android based)	*Yes*
Other features		*(indicate)*

Name of Authority in Charge of ICT in Public Administrations (in English and Arabic)	هيئة الاتصالات وتقنية المعلومات Communication and information Technology Commission (CITC)
Name of e-Government authority (in English and Arabic)	برنامج التعاملات الإلكترونية الحكومية e-government programe
Number of implemented government e-services	1300
Number of planned government e-services	

B. E-BUSINESS

- *Electronic Services in the Ministry of Commerce and Industry*

The ministry offered diverse electronic services on all levels (G2C, G2B, or G2G), the most important of these services are:

  - Electronic Connection to other Government Agencies (G2G): the most important of these is the payment system, also the connection to the General Customs Authority and the Ministry of Interior Affairs, providing some institutions them with commercial registers;

  - G2B: the ministry has enabled businessmen to register a commercial name electronically. This service is present at the level of the entire kingdom. More than 5,000 applications were forwarded within four months of issuing the service. The ministry also enables the beneficiaries from issuing electronic commercial registers without going to the ministry itself, this service is applicable to Riyadh only at the moment, work is being done to generalize it all over the country;

- Another G2B service offered by the ministry is industrial permits service to make this procedure easier and thus motivate the industrial domain within the country. The license is issued to the applicant wherever he is in the KSA within three working days at most.

- *The E-Mall (www.e-mall.com.sa)*

This is the first e-market in both Arabic and English, it is a subsidiary of Saudi Post, it offers both sellers and buyers the service needed to buy and sell certain goods, with tools necessary for this, dealing with shipment and payment issues easily.

- *E-Payment System*

The Sadad system, supervised by the Saudi Arabian Monetary Agency, is a central system for issuing and paying bills and other payments electronically in the KSA, payment can be done through any means and any bank easily. This system has aided government agencies collect their dues quickly and efficiently so that most of the government's non-oil income is achieved electronically.

Availability of e-banking services (yes/no)	Yes	Law number:
Availability of e-commerce law (yes/no)	No	Law number:
Availability of e-transactions law (yes/no)	Yes	Law number:
Name other laws on e-services	Yes	Law number:

C. E-LEARNING

- *The King Abdullah Bin Abdulaziz Public Education Development Project (Tatweer)*

This project has objectives relating to the general development of education through building international standards for the educational process and its elements, the development of an integrated system for the correction of education through quality indices, and the development of the different elements of the education process. The first stage of the project includes the preparation and connection of 25 cities and villages through fibre optics to serve the schools of these areas. 50 schools were equipped with wired, wireless and modern technologies. The e-portal was prepared to serve this phase in addition to training the schools' staff and offering the technical equipment and PCs to each teacher and student in these schools.

- *The Education e-management System*

This system offers more than 2,700 e-services whilst training all the users of the system through strategic agreements with INTEL and Microsoft to offer specialize training to all the teachers and management and teaching staff dealing with these systems.

- *The Saudi e-University (seu.edu.sa)*

This is a public educational institution based on ICT, e-learning, and distance learning technologies. It offers degrees compatible with the needs of the employment market. The faculties present in the university include business and finance, computers and informatics, and health sciences. The university will offer BA and BS degrees and higher studies.

- *The Safeer Program (safeer.mohe.gov.sa)*

The Safeer system links the ministry of Higher education to all Saudi cultural centres around the world in one network to activate the ministry's contact with Saudi students studying abroad. This is a cloud system offering more than 230 services to these students through making their applications easier to manage and complete.

- *The Saudi Digital Library (sdl.edu.sa)*

This library was formed by the Ministry of Higher Education, in contains more than 242,000 full text books in addition to 70,000 magazines and periodicals, three million university dissertations, 10 million educational sources and pictures, and 2,000 hours of educational videos.

Student to computer ratio	
Percentage of schools with Internet access	56 per cent

D. E-HEALTH

The Ministry of Health uses ICT website browsing services on its computer network spread all over the KSA, providing the ability to reach health databases in international websites, the ministry's website (www.moh.gov.sa) is an outlet through which many international organizations and commissions offering a large amount of data may be reached including the World Health Organization and UNICEF.

The ministry also prepared a strategy for e-health which began in 2011 and has two five year stages. It provides a road map to an integrated number of projects to achieve the vision of an efficient and secure health system based on patient-centred health care directed through standards and empowered through e-health. The strategy is administered by the Strategy and Change Management Office, the tasks of this office are the preservation of the vision of a smart e-health strategy, guaranteeing that the e-health strategy is compatible with the ministry of health's general strategy, monitoring and developing the techniques and standards required for e-health, and the management of the change required for the strategy.

A project management office was also introduced to guarantee the planning and management and monitoring of e-health systems with the objectives of adapting a broad conception of e-health strategies and transforming them into applicable and manageable action plans, managing these plans and their budgets, directing feasibility studies and so on.

Another project is the Saudi e-health exchange platform which is project for the exchange of data and health information between e-health systems to determine the health data needed for health service agencies.

Another project in this domain is the Saudi e-health standards committee which has the tasks of developing a road map for standards and policies for e-health data operations, building a system for the local standards and policies for data exchange, and building a testing platform for primary data and classifying and adapting compatible systems.

There is also an integrated project for telemedicine which aims at improving the level of health and medical services in the distant regions of the KSA which lack the necessary medical expertise. This project makes periodical nursing and doctor services easier without having to go to the service's location. The project will begin with three hospitals which offer this service, 20 medical agencies will benefit from it. This will be implemented at the end of the current five year plan.

E. E-EMPLOYMENT

- *The National Program for Aiding Job Seekers (Hafiz) (hafiz.edu.sa)*

This program is the beginning of a number of incentives and regulations to aid job seekers in ICT. One of the elements of this program is to give financial aid to serious job seekers on a monthly basis. It is given to the job seekers who meet the requirements of the program. The program is not confined to monetary aid; it includes other elements such as providing a training program for the period those job seekers deserve.

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

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

King Abdulaziz Foundation for Research and Archives (Darah) founded the Saudi Digital History Centre to preserve the local tradition and serve the Saudi history through modern technology. The project has the objective of digitizing historical sources then to make them available on the internet through a mechanism which will be determined later. The centre is also preparing a local unified index for historical document in coordination with agencies which have a historical intellectual legacy. This index is to be available digitally.

Edusearch is an educational database developed by Dar-almandumah, it covers almost all the scientific education periodicals issued in Arabic, and more than 240 periodicals and hundreds of educational conferences and forums. The database covers all what was published in Arabic periodicals about the field of education since 1940.

B. LOCAL AND NATIONAL DIGITAL CONTENT DEVELOPMENT

- *King Abdullah Initiative for Arabic Content*

This initiative has the ambitious vision of enhancing the Arab content in production and use so as to achieve the development and transformation to the information society whilst maintaining the Arabic and Islamic identity.

King Abd Al-Aziz City for science and technology, which is the party supervising this initiative, prepared a national plan for the digital content with the purpose of enriching the Arabic content in a manner that would serve the local, Arab and Islamic communities. The plan recommended more than 50 projects in five tracks: 1- The environment of presenting the e-content. 2- Arabization and Islamic culture. 3- The contribution of the government sector. 4- The Organizational aspects. 5- The Electronic Infrastructure.

More information on the initiative can be found on its website (www.econtent.org.sa). A number of projects have been accomplished within the initiative such as the interactive Arabic Dictionary (www.almuajam.org), Arabic Wiki (www.wikiarabi.org), the Arabic Bank Analyzer (http://sourceforge.net/projects/alkhalil), in addition to the translation of 33 books in strategic technologies from English to Arabic.

The Ministry of Communications and Information Technology holds an annual award for digital distinction, it honours the best websites having Arabic content in several branches.

C. ICT SOFTWARE, TOOLS, AND R&D PROGRAMS IN ARABIC LANGUAGE PROCESSING

The Computer Research Institute in King Abdulaziz City for Science and Technology (cri.kacst.edu.sa) conducted several R&D efforts relating to written and spoken Arabic systems, these include digital text recognition system, a group of open source Arabic fonts, and an interactive Arabic dictionary. The institute is working on a comprehensive Arabic search engine and automatic translation systems. The institute has also developed several Arabic mobile applications. Here is a list of some of the applications developed by the institute which are available on the internet:

- The Arabic search engine: www.naba.kacst.edu.sa;
- Automatic translation: www.translate.kacst.edu.sa;
- Grammatical analysis of Arabic texts: www.cri_nlp.kacst.edu.sa;
- Prayer program for pocket PCs: androidzoom.

As for open source software, the institute launched a project specializing in this field to prepare national policies for open source standards and technologies and constructing an open source digital library, and offering cooperation to introduce the concepts of open source programming, standards, and content into academic studies. For information about this, visit the following site: www.motah.org.sa.

D. ARABIC DOMAIN NAMES

Saudi Network Information Centre (SaudiNIC) is responsible for managing domain names under the Saudi top-level domain name (.sa or السعودية.). Arabic TLDs under السعودية. have been approved by the ICANN in the middle of 2010. The centre prepared the regulations for registration and began its actual missions at the last quarter of 2010. More than 1,400 domains were registered by the end of the year.

IX. MEDIA

A. MEDIA DIVERSITY, INDEPENDENCE AND PLURALISM

Media outlets	Number	Language(s)	Ownership			
			Private	Mixed	Government	Foreign
News papers	217	Arabic + other languages	Yes			
Electronic newspapers	600	Arabic + other languages	Yes			
Magazines	1692	Arabic + other languages	Yes		Yes	
News agency	1	Arabic + other languages			Yes	
Radios	11	Arabic + other languages	Yes		Yes	
Televisions	11	Arabic + other languages			Yes	

B. THE MEDIA AND ITS ROLE IN THE INFORMATION SOCIETY

The Ministry of Culture and Information monitors the direction of the information society through all media channels. The ministry installed several radio and TV transmitters in all regions of the country, particularly the remote and mountainous ones. It also provided the facilities necessary so that newspapers would reach the remote regions. Communication with these areas also takes place through literary societies and the activities provided by 85 libraries spread over these regions.

X. INTERNATIONAL AND REGIONAL COOPERATION

A. FINANCING OF ICT NETWORKS AND SERVICES

The Saudi Arabian General Investment Authority (SAGIA) established the National Competitiveness Centre (NCC) in 2006 as an independent agency to follow-up, assess, and support raising competitiveness in the country. This resulted in the establishment of the ICT Cluster Advisory Council in 2007 to encourage cooperation between the public and the private sectors and motivate reform and development in the ICT projects, especially ones relating the economic cities which are to be formed in a number of regions in the kingdom.

B. INFRASTRUCTURE DEVELOPMENT PROJECTS

The twenty-fourth chapter of the ninth development plan clarified that the future vision is to "transform into an information society, and an electronic economy, to increase productivity and provide ICT services to all segments of society in the entire country, and to build a strong industry in this domain so as to become a main source of income".

C. WSIS FOLLOW-UP

The National Committee for Information Society plays a vital role in motivating the national institutions relevant to the activities included in the IFAP program which follows the UNESCO. The committee acts as a mediator to ease the information flow between the IFAP and all relevant national institutions, the committee also works on achieving the strategic goals to enhance and expand information access on civil level to ensure joining the information society which is an essential direction within the national choices. The committee follows the development of the international society in addition to the level of development towards transformation to an information society within the country.

D. PARTICIPATION IN INTERNET GOVERNANCE ACTIVITIES

The KSA participates actively in this domain, in addition to its participation in WSIS in both its first (2003) and second (2005) phases, it was one of the active members in the Working Group on Internet Governance (WGIG). When the WTSA was in session in 2008, the KSA participated in forming the resolution on the establishment of a Dedicated Group on Internet related Public Policy Issues as the KSA participates actively in the group's sessions and also holds the group's chairmanship. In the ITU Plenipotentiary Conference 2010 (PP-10) in 2010, the group's works had been approved and it was directly linked to the ITU due to its importance.

As for the Internet Governance Forum, the KSA participated in three of its meetings, despite supporting this forum. The KSA expressed its concerns concentrates on certain affairs at the expense of enhanced cooperation.

XI. BUILDING THE ICT SECTOR

A. ICT FIRMS

- *The Economic Offset Program*

This program was formed in 1984 with the aim of redirecting "part of the government's expenditure on foreign procurement contracts to transfer advanced technology to the Kingdom and promote social and economic development", this is done through offset agreements signed with the contracting foreign agencies to establish industrial projects and technical services with the Saudi private sector, several bodies, such as Boeing, General Electric, the British and French governments among others, have signed economic offset agreements.

B. GOVERNMENT FACILITATION

C. CONTRIBUTION OF ICT SECTOR IN THE NATIONAL ECONOMY

The revenue of the communications companies was SAR 71 billion at the end of 2012 at an annual growth rate of 12 per cent over the last few years. The revenues from the sector's foreign investments have risen from SAR 455 million in 2007 to SAR 18.7 billion at the end of 2012 making the total revenues from the communications sector SAR 91 billion.

The value added for ICT dropped from 4.4 per cent in 2007 to 2.75 per cent in 2012 due to the large growth of national production. SAR 94 billion was spent on ICT services in 2012 which is 30 per cent of expenditures.

D. R&D AND INVESTMENTS IN THE ICT SECTOR

As mentioned earlier, the Computer and Electronic Research Institute in King Abdulaziz City for Science and Technology has many R&D projects, the institute is building an advanced super computer lab for the requirements of advanced scientific computing such as modelling and simulation. The institute is also working at a large number of ICT projects such as a program for communications research, applications for card accidents and complaints, a program for guiding in the pilgrimage and many others.

E. INVESTMENTS IN THE ICT SECTOR

As we have seen, many development projects were adapted with other government agencies in the ICT domain, the total of these projects is more than SAR 30 billion and this does not include the training programs, maintenance contracts and other things, the total values of these is estimated at SAR 6 billion. SAR 3 billion were allocated for the finances of the first e-transactions development plan in addition to the national science and technology plan to which more than SAR 8 billion are allocated.

As for investment in the e-transactions, there are two companies owned by the Public Investment Fund (PIF), namely Al-Ilm Company which creates advanced solutions to transform public sector services to high quality original ones. The other company is the Saudi Company for the Exchange of Electronic Data (Tabadul).