



United Nations
Economic and Social Commission for Western Asia (ESCWA)

**NATIONAL PROFILE FOR
THE INFORMATION SOCIETY IN QATAR**

This document has been reproduced in the form in which it was received, without formal editing.

NATIONAL PROFILE FOR THE INFORMATION SOCIETY IN QATAR

Qatar has become one of the user of ICT in the Arab region, with annual growth in the fixed and mobile teledensity of 15% over the last 5 years¹. Newer services such as mobile and Internet are driving ICT use. Mobile subscription surpassed fixed line in 2001 and continues to show astounding growth. Internet use is also becoming popular, with an annual growth rate close to 47% over the same period.

Economic growth has contributed to the development of Information Communication Technology (ICT) society, in areas of communication infrastructure. Both the government and the private sector are using the nationwide spread of an information system. Information Technology (IT) at public and private schools and universities is being taught and utilized.

Qatar, being an oil-producing country, is ranked 3rd in the world of natural gas reserves. With a small population of around 760,000 in 2004 (where 57% live in Doha, the capital city), Qatar has the highest per capita income (GDP per capita around 38,000 USD in 2004) in the Arab region, with the GDP real growth rate of 14.62%. Despite Qatar's diversification efforts, the economy is still dominated by oil and gas (62% of GDP)² and the industry continues to be the main source of revenue. In 2003, services accounted for 30.9%³ of Qatar's GDP of which only 3.3%⁴ are from transport and communications services.

Table 1. Basic Indicators

	2002	2003	2004
Total population (M)	0.67	0.71	0.76
Population density (per km2)	59	62	69
Total GDP (USD Billions)	19.7	23.6	28.46
GDP per capita (USD)	29,403	33,239	37,600

Source: ITU Data, 2005, Qatar National Bank.

1. Policies and Strategies

National information society policies and strategies

In 2002, the Information Communication Committee (ICC) was established to implement and run national strategic ICT projects to provide data and information to various sectors, and support their development plans, programs and policies. In 2004, ICT Qatar was established, by decree number 36, as the highest authority responsible for devising ICT policies as well as ICT organizational framework for Qatar.

As part of the e-government initiative, the committee of Management (established in 2002) aims to define IT strategies, implementation plans, define a plan of action and organize the structure of e-government systems. The committee is divided into 4 areas of interest namely, Management, Business management, Policies and procedures and Information Technology (IT). There are About 1,350 services provided by the government in which 130 services are undertaken by e-government.

A plan to implement this ICT strategy by 2006 is divided into six in projects (Table 3).

¹ International Telecommunication Union (ITU) Information note January, 2005

² World trade Organisation. Trade policy review: Qatar

³ Chamber of Commerce and Industry (2004).

⁴ Planning Council (2003). Planning Council (2003). Planning Council (2003), *Annual Statistical Abstract 2003-2004*. Online: <http://www.planning.gov.qa/QIF/QIF2004/QIFIndex.htm>

Table 2. Aspects of Political Leadership to promote use of ICT

ICT Strategy Clearly Spelled out	ICT implementation plan clearly articulated	Operational ICT-Dedicated research facilities	Plan of ICT-dedicated Research facilities	Existence of Technology Incubator	Planned Technology Incubator
✓	×	×	×	×	✓

Source: INSEAD 2003⁵

Table 3. ICT Strategies 2006

Infrastructure of ICT	Building national communication network and framework
Literacy of ICT	Establish e-education projects, emails to public, IT education, make Internet accessible to whole population
Innovation in using ICT	Promote optimal environment for health, education, sports/youth, emergencies
Government services	Supporting e-government projects, secure local web in ministries and develop public services entities
Enhancing commercial services	Promoting e-trade, establish electronic gateway and adopt laws and conventions relating to web security and standards of personal rights
Use of ICT	Support future initiatives and establish funds for scientific research and strategic development

Source: Ministry of Foreign Affairs⁶

2. Legal and Regulatory Frameworks

National Intellectual Property Rights, Privacy status and status of Freedom of Expression

Qatar has an Arab agreement on Copyright Protection, and a Penal Code of crimes related to violation of Intellectual Property Rights with membership to the World Intellectual Property Organization (WIPO) and ITU (Table 4). In 2002, Qatar enacted a law to protect copyrights, and as such was removed from the special 301 watch list. Qatar has taken steps to bring its copyright law into compliance with international standards. However, software piracy remains at high levels due to Qatar's failure to enforce its copyright law⁷.

Table 4. Status of Qatar on Intellectual Property Rights

WTO member	Paris Convention	WCT	PCT	Madrid Agreement	Hague Agreement	TLT	PLT	Nairobi Treaty	TRIPS
✓	✓(2000)	✓(1976)	×	×	×	×	×	✓(1983)	×

Source: INSEAD 2003⁸

⁵ Global Information Technology Report 2002-2003. Chapter author: Dutta, Soumitra, INSEAD, *ICT Challenges for the Arab World*, Chapter 8

⁶ Ministry of Foreign Affairs, Qatar, Information Society in the state of Qatar December 2003

⁷ 2003, international intellectual property alliance (IIPA) International Intellectual Property Alliance (2003), *2003 Special 301 Report: Qatar* [Online]. <http://iipa.com/countryreports.html#Q> [7 July 2004]

⁸ Global Information Technology Report 2002-2003. Chapter author: Dutta, Soumitra, INSEAD, *ICT Challenges for the Arab World*, WIPO: World Intellectual Property Organization; WCT: WIPO Copyright Treaties; PCT: Patent Cooperation Treaty; TLT: Trademarks Low Treaty; PLT: Patent Law Treaty

Telecom regulatory framework in the country

Qatar Telecom (Qtel) is the national telecommunications regulatory authority and the Radio Regulator. Qtel is also responsible for issuing licenses to Internet Cafes, mobile telephone dealers and consultants. Qatar is a member of the International Telecommunications Union.

Privacy and security laws and regulations

The e-government initiative is working towards issuing "The Electronic Law" to regulate electronic transactions and facilitate its process and promote official recognition of electronic transactions.

The Committee for Electronic Certificates and Signature has been formed with project using the Public Key Infrastructure (PKI). This project is currently in design and development phase. The committee is responsible to explain legal procedures for issuing and document certificates exchanges.

Other ICT-related laws and regulations

Qatar is a member of World Trade Organization and Paris agreement on Industrial property protection.

3. ICT infrastructure

Throughout its implementation of national GIS system, Qatar is continuing to modernize its infrastructure in order to help in its development. Due to the small size of the country and its small population, Qatar has an advantage over other nations in infrastructure. Qatar is able to invest in the latest technologies without having to spend enormous amount of capital like other larger countries. Qatar is able to finance these projects from its large petro-revenues.

Table 5. ICT Indicators

ICT indicators	2001	2002	2003	2004
Local fixed telephone	167,400	176,500	184,500	200,000
Local fixed telephone - Teledensity	27.5%	28.94%	28.91%	
Main lines per 100	25.99	27.45	28.60	25.32
Household mainlines (%)	...	143.2%	144.9%	
GSM Subscribers	177,900	266,700	376,500 ²	490,000
Cellular Penetration (%)	29.3%	43%	59.6%	62.03
Cellular subscribers per 100	17.79	26.67	37.65	62.03
Internet Users	40,000	70,000	126,000 ¹	165,000 [#]
Internet Subscribers	13,450	19,500	32,209 (*)	35,750
Internet Penetration (%)	6.56% ³	11.48% ⁹	...	20.88
Internet Users 100	6.26	10.42	19.93	
Personal Computers	100,000	110,000	...	142,000
Personal Computers per 100	15.66	16.38	18.03	17.97
Internet Host computers	127	171	221	140
ADSL subscribers ²	0	100 ¹⁰	2,800 (*)	10,652 (*)
ISDN Subscribers	1300	1400 ¹		

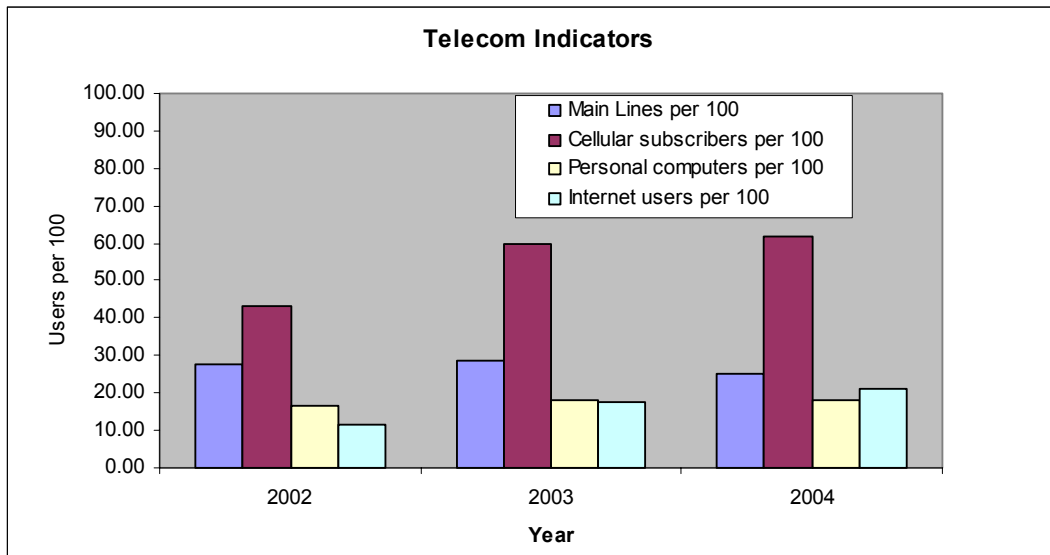
Source: ITU (2004), Telecommunication Indicators, Geneva and Madar Research.

Note: # -ITU figures – Hosts (www.isc.org) (*) Source: feedback from focal point in Qatar.

⁹ ITU data 2004

¹⁰ Arab Advisors August 2004

Figure 28. Telecom Indicators



Source: ITU data & Madar Research Group.

Telephone penetration

Qatar Telecom (QTel) is 45% privatized and was granted exclusive telecommunications rights until 2013. QTel is excluded from all tax obligations for 10 years. In return it pays 25% of its net profit¹¹ to the government. Thus, QTel has a monopoly on fixed line, mobile (subsidiary QatarNet) and Internet, which would limit foreign and local investments in telecommunications and Internet. Late in 2002, it signed contracts with Motorola and Alcatel in a US\$60 million deal, to add 99 new base stations and two GSM switches with a target of increasing the capacity from 214,000 to 400,000 subscribers. Qtel also owns a cable TV operator, Qatar Cable Vision.

Qatar has a communication network through two submarine cables that join Qatar, Bahrain, Kuwait and the United Arab Emirates, and is used for voice, data, and image communications between the four countries. A satellite network enables the international telephone, data links and live television broadcast through three satellites: Inmarsat, Intelsat and Arabsat. Q-Tel supplies Thuraya services, which own and operate a mobile telecommunications satellite system.

In 2002, Qtel reduced charges for international calls by 25% and plans to transform data networks to integrated communication network (NGN).

Qatar is currently ranked 4th amongst Arab countries on the ICT use Index which is calculated by dividing the cellular subscribers, main line users, internet users and personal computer installed base divided by the total population of the country. Qatar ranked 3rd in main line penetration with a penetration rate of 25.32% while in the cellular and internet users penetration it is ranked fourth with a penetration rate of 62.03% and 20.88 percent respectively¹².

Internet backbone

In 2002, Qtel conducted a major network upgrade based on a Cisco backbone. In the same year, it launched ADSL service available to 80% of population and completed the first stage of network program to

¹¹ 2004 Telcoms in Middle East, Paul Budde Communications

¹² Madar Research – Arab ICT Use Study 2004

set up of Internet Protocol, unified network system and MPLS technology, with 256Kb/s and upload at 128Kb/s.

The national network for Geographical information Systems (GIS) has been setup to link ministries, government institutions, the University of Qatar and private companies to exchange digital maps and sector data, using Fiber optics Digital Data Interface technology (FDDI).

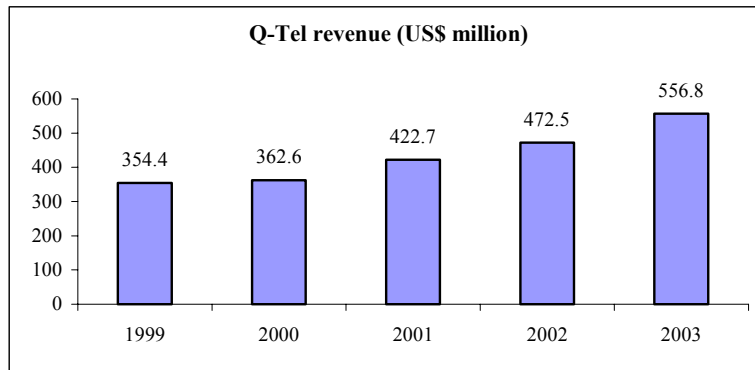
ISPs and ASPs

QTel is the sole ISP. There are about 170 Internet host computers in 2002.

Access

All telephone calls within Qatar are free of charge, fees are only charged for international calls. A prepaid service, W-Card can access international and mobile phones. Qtel provides GSM, direct call service, collective wireless telephone services, radio, and satellite services through Inmarsat and Al-Thurayya. SMS, news service (Qinfo), mobile data service (GPRS), multimedia messaging (MMS) and Multimedia messaging service centre (MMSC) are available, and Internet roaming service can be used from outside Qatar at local rate.

Figure 1. Q-Tel revenue (US\$ million)



Internet access charges (\$55USD per month) were considered high by regional standards according to Arab Advisors report, although connection costs (\$55USD) were substantially reduced. ADSL is about \$66USD per month (3% of GDP per capita). In addition, QTel launched a prepaid Internet card called ‘EBHAR’.

PC dissemination

Qatar has been reported to have a PC installed base of 142,000 units, which calculates to 180 PCs per 1000, and PC penetration rate of 17.97% in 2004.

4. ICT Capacity-Building

Qatar has a relatively young educated population with 26.6% of the population under 15, and an 84.2% adult literacy rate (2002). This would encourage development and use of new technologies.

In January 2006, the “Digital Skill” project will be launched with the objective to build the capabilities of all segments of the Qatar society in developing skills for using the computer, including the provision of certificates.

Awareness and dissemination

Qatar has interest in eradicating computer illiteracy through development projects. Computer literacy and awareness have been enhanced through courses within the University or vocational training centers.

Computers in schools

A plan was drawn up in 1995 to introduce technology in secondary education. The policies include introduction of computer science as a class activity and use as a teaching aid to primary education. Depending on the level of success, this may be turned into an independent subject of study.

The Ministry of Education has started a drive as early as 2000 to increase the use of PCs internally and in schools, which was followed by two IT projects. As a broad modernization policy, the ministry deployed a high-speed data network in its new quarters during the first half of 2002, to connect all major departments and centralize its processes through shared services. It complemented the network with new software applications and additional PCs, to serve up to 2,000 users. By July 2002, the ministry had purchased a total of 3,000 PCs for use by ministry departments and schools.

The automation of public schools is part of a project launched in 2001 that aimed specifically to incorporate PCs in the learning process. The ministry has already connected all public schools with a single, centralized network. Starting with primary schools, it is now developing methods to increase PC literacy and enhance PC-based learning, in addition to linking all schools to the Internet. The ministry expects to complete the project in all 115 primary schools in the current school year (2004-2005).

In November 2005, the “knowledge Net” project (which aims at introducing computer skills in the education curricula) will be announced.

Vocational training

The institute of Administrative Development was set up in 1996 to contribute to more than 120 training programs to organize programs in the IT field. However, only 1% of total secondary and 5% of upper secondary enrolled in technical and vocational programs¹³.

There are few training centres offering IT training courses. One of the first private computer training centres in Qatar.

University education

The College of Technology offer courses in Library and Computer Science, and at University Qatar, Computer science, Information and computer technology, and information and library science are offered. Carnegie-Mellon University has a Qatar Campus that offers programs in business administration and computer science within a distance education network.

Table 6. IT related course in University of Qatar

University of Qatar graduates in Computer Science	2000/2001	2001/2002	2002/2003
Computer Science	45	34	68
Information and Computer technology	15	34	24
Information and library science	7	57	69
Geographical Information System (GIS)	12	12	12

Source: Ministry of Education¹⁴

¹³ Global education digest 2005

¹⁴ Annual Statistical report, Public Relations Dept. University of Qatar, 2003

Research, Development and Innovation in ICTs

Qatar has initiatives to develop higher education standards. The Qatar Foundation (QF) was set up in 1995 with the main objective to develop educational systems in Qatar that will contribute to the development of the country's educational and scientific sectors and meet future human resource needs.

The QF being a non-profit institution for Education, Science and Community Development, a science and Technology Park (QSTP), designed to integrate education, research, business and education and establish network between industry and education has been established. A multi-national company including EADS, ExxonMobil, Microsoft, Shell and Total also contributed to the foundation.

The QSTP is now in Phase I of development, to create an incubator innovations center, an anchor tenant complex for international firms pursuing scientific and technological applications, and a data center to comprise a digital library and information technology complex, with a vision to expanded to provide services to the public and private sector.

The Qatar Science and Technology Park is now part of Qatar Foundation's Education City complex. The Education City project is an integral part of QF's goals. It has academic programs to include medicine, business management, engineering, and information technology.

5. Building the ICT Sector

ICT firms

Qatar has some local software companies that develop software applications to serve local market demands. It imports all of its software needs from Asia, Europe and the United States. Some companies are now offering web site consulting. In addition, IBM, HP, and Microsoft have a strong presence in the Middle East, offering software and e-commerce solutions. Software piracy is a major issue. Qatar has a large underground market for illegal software.

Investment in ICTs

The Government of Qatar has moved forward on a major privatization program aimed at developing the capabilities of the private sector and increasing local investment opportunities for small investors. QTel dominates the telecommunication sector with expansion programs aimed at bringing local services to international standards including improvements in the GSM network and Internet access. QTel is also pursuing investment policies with international companies in wireless communication to expand mobile telephone network.

QTel has significant investments in regional satellite mobile company Thuraya Satellite Telecommunication. Q-Tel also invested in a global mobile satellite operator, and Sudan Telecommunications, and cooperates with a joint undertaking for Oman's second mobile license.

Government facilitation

The government sees to develop Qatar through the possibility of issuing foreign investors' share from 49% to 100% of the project's capital, with the development plans in Qatar that uses modern technology, and projects with globally well-known industries and national development interests.¹⁵

Export of ICT equipment/software

There are currently no hardware or software exports from Qatar.

¹⁵ Trade Policy Review, Report by QATAR, 2005

6. Applications in Government Establishments

Computerization of public administration

Qatar (e-government readiness index 0.411)¹⁶ has put a plan in effect to develop their e-government programs by giving support to the public access to electronic information, such as rules and regulations. This electronic service is designed to speed up transaction processing. Qatar has higher e-government readiness than many in the Africa or South-central Asia regions⁶. As of 2002, 22 e-government services were implemented as part of the plans to integrate government services on the Internet.

Oracle is the existing financial system, which replaced the financial Information System (FIS), and is based on international Standards Corporate Financial System implemented in 1995. It is integrated with the CSS, allowing Q-Tel to control its costs and at the same time provide subscribers and customers with a cost and efficient service.

e-government plans

The Ministry of Interior is the first to cooperate and utilize the electronic system "Qatar's Electronic Gate"¹⁷ to provide their services electronically. The state e-government committee, E-Government Qatar, is implementing an integration program for all government agencies (Chart 3).

Around 1100 transactions have been accomplished through this gateway. The E-Government programme plans to initiate a promotion campaign to spread awareness among the public of this service once the necessary infrastructure has been established.

Services such as visa applications, traffic fines, water and electricity electronic payment transactions and the Zakat Fund, have been completed, and work currently is being done to introduce 37 new services that include 20 major ones accounting for 74% of the total governmental transactions¹⁸. The infrastructure shall be established with view to providing a mechanism such as the "Smart Card".

e-learning

A branch campus (Medical College in New York) opened in Qatar to use distance-learning technology to deliver their presentations using technology to broadcast lectures, seminars and medical rounds from New York to Qatar with real-time interaction, and an electronic library.

In addition, a branch of the Cornell University Medical Faculty opened in Qatar and provides distance learning over a bandwidth estimated at 310 mhz.

Madar Research estimates the e-learning market to be \$2 million by end 2004 and it is expected to reach \$6.5 million by end 2009, growing at a compound average growth rate (CAGR) of 26 percent. Spending breakdown on the three segments of e-learning market in 2004 was \$0.98 million (49 percent) on delivery solutions; \$0.4 million (20 percent) on content and \$0.62 million (31 percent) on services.

7. Applications in Education

A study conducted by the Council of Higher Education shows the following:

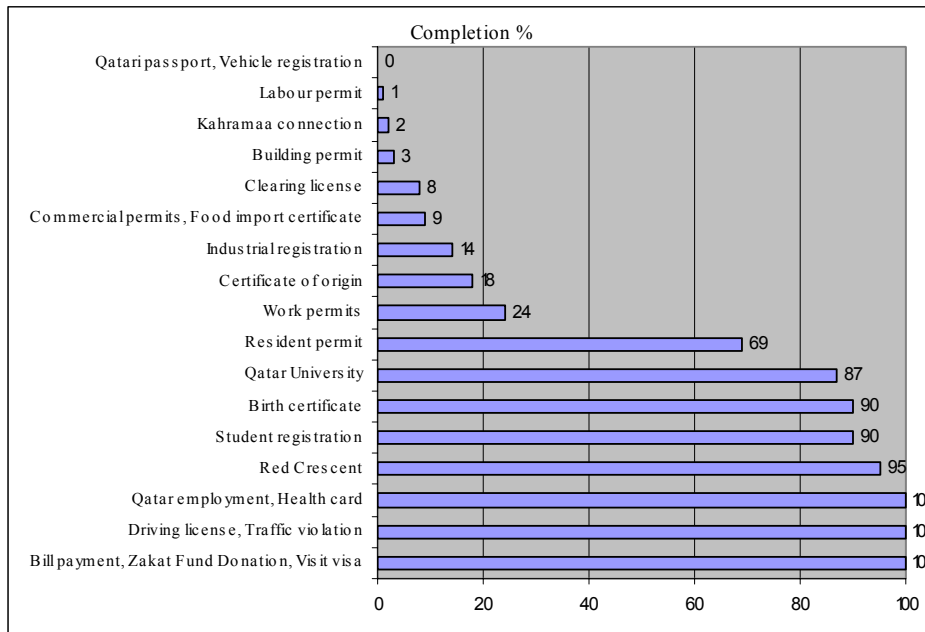
- 60% of students in Qatar have Internet websites;
- 30% of students in preparatory school and 43% in secondary school use email in education;
- 60% of students in preparatory schools and 61% of students in secondary schools use the Internet to access information for education purposes.

¹⁶ United Nations, Economic and Social Affairs. World Public Sector Report 2003, E-Government at the Crossroads

¹⁷ E-government portal: <http://www.e.gov.qa/>

¹⁸ Ministry of Foreign affairs <http://english.mofa.gov.qa/>

Figure 2. Percentage of progress of e-government services 18 May 2004



8. Applications in Commerce and Business

Extent and maturity of e-commerce and e-business applications

E-trading was introduced in 2002. Many businesses have websites on the Internet offering products sales online. Local businesses are making increasing use of local banks and have recently started offering electronic banking services, including payment of electricity, water and telephone bills.

Madar Research estimates the total e-commerce market to be worth \$156 million by end 2003 – with B2B market valued at \$140 million and B2C market \$16 million.

Availability and quality of e-banking

Internet banking in Qatar was introduced in 2000, with the initial service being provided to retail banking services. With the increasing popularity and usage among customers, the bank started extending this service to corporate clients. Of the seven locally incorporated banks, three banks provide full Internet banking services to retail as well as corporate clients – Qatar National Bank, Doha Bank and Commercial Bank of Qatar.

The common services offered by these banks are - checking account balances, transaction details, account statements, account transfers, credit card statements and bill payments, utility payments, change of passwords, cheque book requests, account to account transfers and loan and deposit details.

Since the launch of Internet banking in 2000, the number of users of this service has increased considerably over the years. This is evident from statements published by Commercial Bank of Qatar. These say that in 2003, daily hits to the bank's website increased by 36 percent and registration for the Internet banking service increased by 33 percent. The number of transfers and payments jumped by 103 percent and utility bill payments over the Internet increased by 118 percent.

Though the two Islamic banks do not offer Internet banking services, both maintain informational websites that give details of the products and services offered by the banks. Al Ahli Bank of Qatar and

International Bank of Qatar does not have a presence on the Internet. Among foreign banks, HSBC is at the forefront, offering both retail and corporate banking services.

9. Applications in Healthcare

The health program has been developed with goals to improve health information systems, provide a mechanism to support systems such as finance, stores, personnel and building infrastructure with an e-government website.

Achievements have been made to modernize network linkage between health centres and central databases. The Hamad Medical Corporation manages four highly specialized hospitals, has completed the installation of an Information Systems Internet linking all local area networks (LANs). This has made quick access to information possible through office computers. In addition, the Hamad Medical Corporation is implementing the Digital Card project, which will include a summary of public Health.

10. Digital Arabic Content

Arabic vs. English content on the Web for national use

Arabic is the official language in Qatar though English is widely used. Most e-Government sites are presented in both English and Arabic, however there are some exceptions.

Table 7. Ministry website with English and Arabic

Ministry/Government sites	Web Address	English	Arabic
Foreign Information agency	http://english.qatarinfo.net/	<input type="checkbox"/>	<input type="checkbox"/>
Ministry of Interior	http://www.moi.gov.qa/English/index.htm	<input type="checkbox"/>	<input type="checkbox"/>
E-Government	https://www.e.gov.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Ministry of Education	http://www.moe.edu.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Ministry of Municipal Affairs and Agriculture	http://www.mmaa.gov.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Ministry of Public Health	http://www.hmc.org.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Ministry of Civil services and housing	http://www.mcsah.gov.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Ministry of foreign affairs	http://www.mofa.gov.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Supreme Education Council	http://www.english.education.gov.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Ministry of Interior	http://www.moi.gov.qa/English/index.htm	<input type="checkbox"/>	<input type="checkbox"/>
Central tenders committee	http://www.ctc.gov.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Planning Council	http://www.planning.gov.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Qatar University	http://www.qu.edu.qa/	<input type="checkbox"/>	<input type="checkbox"/>
National Council for culture Arts & Heritage	http://www.nccah.com/	<input type="checkbox"/>	<input type="checkbox"/>
Centre of environment Friends	http://www.myqatar.org/	<input type="checkbox"/>	<input type="checkbox"/>
Ministry of Economy and Commerce	http://www.mec.gov.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Qatar Telecom	http://www.qtel.com.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Supreme Council for family affairs	http://www.scfa.gov.qa/	<input type="checkbox"/>	<input type="checkbox"/>
Qatar tourism Authority	http://www.experienceqatar.com/	<input type="checkbox"/>	<input type="checkbox"/>
Qatar National navigation & transport	http://www.qatar.net.qa/qnntc	<input type="checkbox"/>	<input type="checkbox"/>
Institute of Administrative development	http://www.iad.gov.qa/	<input type="checkbox"/>	<input type="checkbox"/>