Communications and Information Technology Commission

Internet Usage in the Kingdom of Saudi Arabia

Health Sector

The first year (2007) Report .

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1.0 Background

Communications and Information Technology Commission (CITC) was established under the name of Saudi Communications Commission pursuant to the Council of Ministers Decision No. (74) Dated 5/3/1422H. The Commission was entrusted with new tasks related to information technology to become (Communications and Information Technology Commission) under the Council of Ministers Decision No. (123) dated 21/5/1424H and the name was changed to CITC. The Mission Statement of the Commission is to **"Ensure the provision of universally available, high quality and affordable communication and information technology services"**

Internet service was officially made available in the Kingdom of Saudi Arabia in 1997. Internet is becoming an integral part of the Saudi Society and Economy. CITC wants to understand the Internet status and potential growth within the Kingdom. To this end, a comprehensive study covering a wide range of the Internet related indicators in Saudi Arabia was needed. Nielsen was entrusted to conduct the study in 2007.

The study evaluates the current situation of Internet in Saudi Arabia. The study aims to identify the penetration levels, habits and usage patterns and the future potential of Internet in Saudi Arabia. It covers a wide range of information areas from infrastructure to satisfaction. It covers different types of users – individual users, home users, government agencies, educational institutes and corporate users. The research was such designed, to ensure national representation. Further, the study would be repeated annually for a minimum of three times in order to measure progress and growth.

> **Salient Features of the Research**
> ▶ **National Representation**
> ▶ **Across Customer Types : Consumers, Corporate and Government**
> ▶ **Annual Tracking to measure progress**

This document details the findings of the survey carried out among **Health Sector** in the Kingdom of Saudi Arabia.

2.0 Methodology

2.1 Research Design

- A quantitative research exercise was conducted.
- **A total of 400 interviews for the listing module and 100 interviews for the detailed module were conducted.**

2.2 Target Respondents

Respondents interviewed for the survey were:

IT / Telecom managers or the officials who are responsible for such decisions.

2.3 Coverage and Sampling

- Interviews were conducted across all the provinces of Saudi Arabia.

- Since there were no official numbers for the health sector universe available in the Kingdom. The sample for health industry was designed using the Ministry of Health (MoH) data.

2.4 Research Instrument

- Interviews were conducted using a structured questionnaire. The questionnaire was translated into Arabic. Interviews were done in Arabic / English as convenient to the respondent.
- The questionnaires were a mix of close and open-ended questions.
- The length of the listing interview was around 10-15 minutes while the detailed interview was approximately 30-35 minutes long.

2.5 Quality Control

- Rigorous quality controls were followed at both the field and data processing levels. A minimum of 25% of the questionnaire were back checked by the Field Supervisors and Field Managers.
- At the data processing stage, questionnaire which were not filled in properly were rejected and only after ensuring 100% cleaned data were considered for the analysis.
- For details on the Quality Control standards please refer to the CITC Inception Report Section 6 and 7.

3.0 Sample Profile

In total, 400 organizations from both public and private sector were contacted for the purpose of this research. The following sectors were covered in the sample.

Exhibit 3.1 Sample Composition by Public and Private Sector
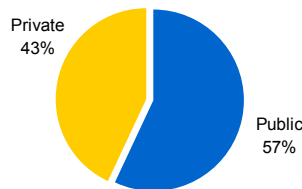
Most of the health centers (82%) do not have any branches. Amongst those who had branches they are relatively more popular in private clinics.

On an average a health center employs about 90 full time employees. The average number of employees employed per public hospital is higher than the average number of employees in private sector.

All the entities approached had the basic Fixed Line.

### Key decision makers on IT related issues
In more than 50% of organizations, IT manager and General Manager are both involved in the decision making process.

4.0 Infrastructure & Investments

4.1 Computer Penetration
Computers devices are integral part of health centers in Kingdom as penetration of computer devices is very high. Although computer devices have made a notable presence in the health sector.

Exhibit 4.1 Computers Penetration
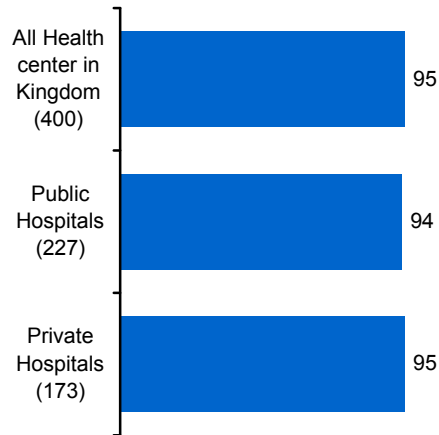
Base : All Health Organizations (400)

Computer penetration: % of health centers owning a computer even if it's only one computer.

The entire private health sector employees have access to computer.

	Base	Ratio of Computer to Employees
Total	**99**	**2**
Public	51	3
Private	48	1

Calculation: No. of employees / No. of computer x % of computer used by employees

4.2 Devices

All the health centers which are computerized mainly use Desktop computers. The contemporary devices like Laptops and PDAs have a better presence in the private hospitals.

Exhibit 4.2 Computer devices
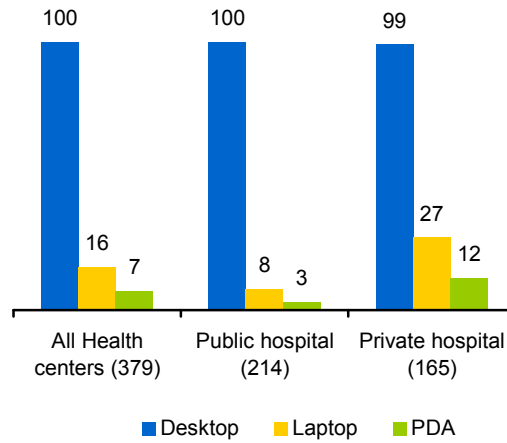
Base : All Health Organizations which use Computer Devices

The computer devices used in Health sector are predominantly branded, with more than 9 out of 10 computer devices currently used are branded.

4.3 Depth of usage

The computers play an important role in the management of health care centers as about 20% of full time employees are provided with computers.

Exhibit 4.3 Distribution of computers by users

Administrative staff	40%
Management staff	29%
Doctors	25%
Nursing staff	5%
Other staff	1%

The computers are predominantly used by the administrative and management staff. Almost one out of every four computers is also used by doctors.

4.4 Operating Systems

Windows is the dominant operating system used in the heath care centers. Window XP is the most popular version of windows in use.

Exhibit 4.4 Operating systems used
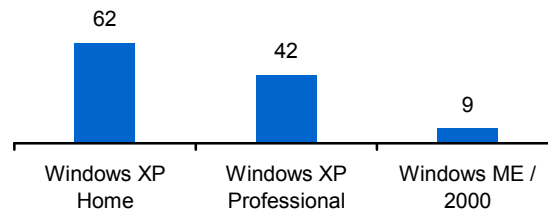
Base : All Health Organizations using computers (100)

Arabic is the most popular language of the operating system currently used by health centers. English is also used as another language for operating systems. Arabic is preferred mainly by the administrative and management staff. None of them were aware of open source application.

4.5 Investments

On an average a health center spends about 2,300 SR every year on IT related expenses like hardware, software, training etc. The amount is higher for private hospitals.

The practice of providing IT training to employees is relatively uncommon as more than 50% of health care centers do not provide any training to employees. Amongst health centers that provide training, accounting packages, database management and Microsoft Office are more popular aspects covered.

Low monetary investments on IT

IT Training not a practice in the Health Sector

4.6 Computer Applications

Among health centers, computers are primarily used to maintain patient databases and running work related applications. Arrangement of doctor appointments and handling government related work are some of the other uses mentioned.

Exhibit 4.6 Computer Applications

	%
Base: Among health centers with computers	*100*
Store patient documents	68
Run work related applications on it	67
Store personal documents	58
Appointment arrangements	57
To do government related work	51
Surf the internet	47
Communicate with people via internet	27

5.0 Opinion about Internet

Internet is perceived as a medium that provides access to all the information in a convenient and simpler way. It is also believed to be a medium that is critical for the next generation.

Exhibit 5.1 Opinion about Internet

Statement	Disagree	Neither agree nor disagree	Agree
Internet gives people all the information they need in a convenient manner	8	15	78
It is very critical to have access to the internet as this is the medium of todays generation	6	18	76
Internet has made access to information so much simpler	10	17	73
This is the medium which will keeps people abreast with all the up to date information	9	23	68
Internet is the best way for people to express themselves	21	30	48
Internet makes people less sociable	41	28	31
Internet embeds wrong ideas and concepts into the mind of the new generation	38	43	20
Internet is not good as it has a lot of immoral content	48	39	13

■ Disagree   ■ Neither agree nor disagree   ■ Agree

However these advantages of internet also come with a fear of making people less sociable.

The officials in the health industry are convinced that internet is critical and it provides information in a convenient and simple manner.

6.0 Internet Usage

6.1 Internet Penetration

Although computer devices have made a notable presence in the health sector, internet penetration is relatively low. The low internet penetration is primarily a function of low penetration among Public Health Centers.
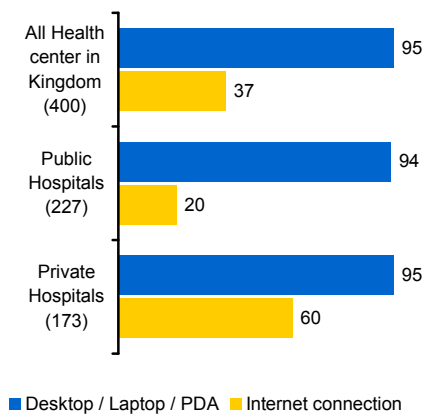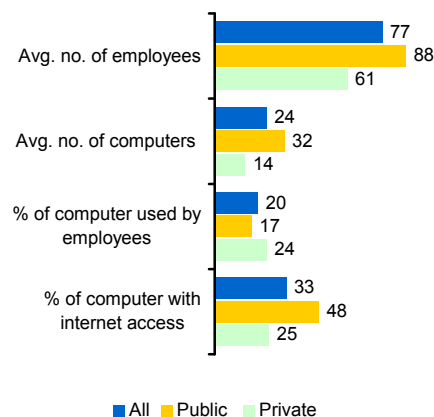
Exhibit 6.1a Computers and Internet Penetration

	Desktop / Laptop / PDA	Internet connection
All Health center in Kingdom (400)	95	37
Public Hospitals (227)	94	20
Private Hospitals (173)	95	60

■ Desktop / Laptop / PDA ■ Internet connection

Exhibit 6.1b Internet Access

	All	Public	Private
Avg. no. of employees	77	88	61
Avg. no. of computers	24	32	14
% of computer used by employees	20	17	24
% of computer with internet access	33	48	25

■ All ■ Public ■ Private

6.2 Barriers to using Internet

'*Lack of identified need'* for internet is the key barrier mentioned. Other key reason mentioned by heath care centers is that internet is '*not allowed/ prohibited'.*

Exhibit 6.2 Barriers

	All
Base: Non-users of internet	*52*
It is not necessary for the work	37%
Not allowed/prohibited	29%
Employees don't know how to use it	10%
It is not affordable	6%
Employees misuse it	6%
Administration staff don't know how to use it	4
Management staff don't know how to use	4

6.3 Type of connection

The broadband connection is most popular, especially amongst Private Health Centers. The dial-up connection is still being used by 33% of health centers. Other internet connections like wireless and satellite connections are less popular.

Exhibit 6.3 Types of Internet Connections

	All	**Public**	**Private**
Base	*148*	*45*	*103*
Dial-up	33	44	28
DSL / Broadband	64	48	69
Others	3	6	3

Base : All organizations using internet.

Low internet penetration despite high levels of computerization in the Health Sector.

6.4 Online Activities

Internet connection is predominantly used to deal with government organizations. Mailing, browsing and seeking information on services are some of the online activities undertaken by health centers.

6.5 Browser

'Internet explorer' from Microsoft Windows is the most dominant web browser in Kingdom with current usage at 94%. Other web browsers like Opera and Netscape have negligible usage.

6.6 Mobile Internet

The usage of mobile internet among health care centers is very low at 4%. About 35% of sample was not even aware of a mobile internet connection.

6.7 Websites

Only 20% of the internet using health centers have a website. Most websites are in English and Arabic. Website is predominantly used to provide information about the organization.

7.0   Internet Satisfaction and Concerns

7.1 Satisfaction

Currently almost 2 out of every 3 health organizations are satisfied with internet service. Slow connection is the key reason mentioned for dissatisfaction.

Exhibit 7.1 Satisfaction
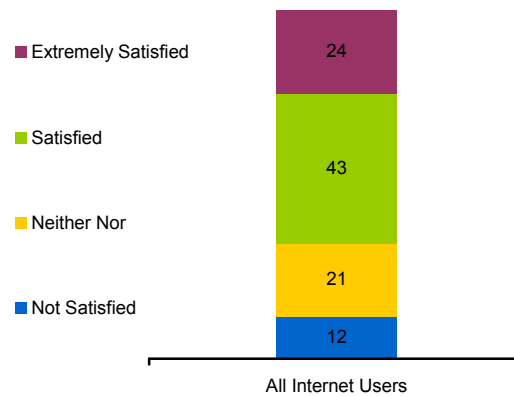
The norm for top 2 box score (extremely satisfied + somewhat satisfied) in Saudi Arabia is 70% as the acquiescence bias in the kingdom is high due to gratitude factor (cultural reasons). Source: Nielsen Studies conducted in KSA.

Slow speed is mentioned as a reason by those who are dissatisfied

7.2 Ease of subscribing

Sourcing a new broadband connection in Kingdom is not perceived to be difficult as most claim that getting an internet connection is easy.

Exhibit 7.2 Ease of subscribing	**All**
Base : All internet users	*51*
Extremely difficult [1]	6%
[2]	12%

[3]	26%
[4]	35%
Extremely Easy [5]	21%

7.3 Cost Perceptions

Most health organizations which use internet do not take a stand on the cost perception; 42% say that it is neither expensive nor affordable.
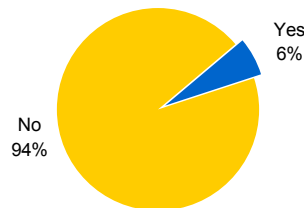
Exhibit 7.3 Cost Perceptions

	All
Base : All internet users	*51*
Extremely expensive [1]	12%
[2]	20%
[3]	31%
[4]	22%
Extremely Affordable [5]	16%

7.4 Concerns

Information filtering is stated as a concern by only 6% of health centers using internet

Exhibit 7.4 Filtering Concerns

Base : All Internet Users (51)

SPAM email is the other area of concern for internet users. On an average, 24% of those with an internet connection receive SPAM mails. However it is not a major concern as most organizations indicate that SPAM mails are less than 10% of their total mails.

8.0 Conclusions

High level of computerization exists in the Saudi Arabia Health Sector. The Management and Administrative Staff along with the Doctors are utilizing the most. Desktops are most widely used; contemporary computer devices like laptops, servers and PDA are more popular in private health centers.

Windows is the most used operating system. Arabic is the preferred language for the operating system. English is also used by nearly half the health centers.

IT Training is not conducted by most organizations. Investments on IT are low as well.

While most decision-making officials perceive Internet is critical and provides information in simple and convenient manner, the internet penetration is low in the health sector, mainly in public sector. The key barrier is 'no perceived need'.

Internet is mainly used for Information Sourcing and Communication by the users. Windows explorer is almost used universally as the browser.

Among those using internet, Broadband is used by most organizations. All Internet users in general are quite satisfied with the performance.

There are no concerns expressed on the ease of subscribing to internet. Some internet users raised concerns about 'Slow Speed'. SPAM mail is another concern area for the internet users.

Websites are relatively less popular as only 2 out of 10 health center with internet connection have their own websites.

Summary – Key Figures

Related to Computers

	Saudi Arabia	
Health organisations with computers	95%	
Type of PC *(among organisations which use computer devices)*	Desktop	100%
	Laptop	16%
	PDA	7%
Operating system usage *(among organisations which use computer devices)*	Windows XP Home	62%
	Windows XP Professional	42%
	Windows ME	9%
Language of the operating system *(among organisations which use computer devices)*	Arabic	42%
	English	10%
	Both	48%
Investments on IT	Average Annually per organisation	SR 2,300

Related to Internet

	Saudi Arabia	
Proportion of organisations who use the internet	37%	
Type of internet connection	Dial-up	33%
	Broadband	64%
	Others	3%
Barriers to using internet *(among non-users)*	Not necessary for the work	37%
	Not allowed	29%
	Employees don't know how to use it	10%
	Not affordable	6%
Web browser usage *(among organisations using internet)*	Internet Explorer	94%
	Netscape	4%
	Opera	2%
Companies with websites *(among organisations using internet)*	20%	
Satisfaction with Internet Services *(among organisations using internet)*	Satisfied	66%
	Dissatisfied	12%
Perception on Internet cost	Expensive	32%
	Affordable	38%

Indicators

Indicator	Definition
Having a web site	The number of organizations having a website (A Web presence includes a Web site, home page or presence on another entity's Web site (including a related business). It excludes inclusion in an online directory and any other Web pages where the business does not have substantial control over the content of the page)
Type of Internet connection	Internet connection types currently used ((Dial-Up, DSL, Wireless, Satellite)
Network Type	What type of Internet connection is the household subscribed to (To present the proportion of households with broadband access, therefore the response categories chosen allow aggregation to narrowband and broadband. As households can use more than one type of access service, multiple responses are possible)
Type of PC	Desktop, portable or handheld computer (e.g. a personal digital assistant
Operating system usage	An operating system (OS) is a set of computer programs that manage the hardware and software resources of a computer. An operating system rationally processes electronic devices in response to approved commands i.e. Windows95, Windows NT, Mac OS etc.
Language of the operating system	Operating system of the computer can be available in different languages relevant to users (Arabic, English etc.)
IT Related Trainings	Trainings taken by the respondents within past 6 months (MS office, programming languages, networking, accounting packages, web designing, AutoCAD, database management etc.)
Current ownership of computer in the organization	Number of computers within the organization (A computer includes: a desktop, portable or handheld computer (e.g. a personal digital assistant), minicomputer, mainframe. A computer does not include equipment with some embedded computing abilities: such as mobile phones or TV sets, nor does it include computer-controlled machinery or electronic tills.)
Proportion of employees using computers	Number of employees using a computer within the organization (A computer includes: a desktop, portable or handheld computer (e.g. a PDA), minicomputer, mainframe. A computer does not include equipment with some embedded computing abilities: such as mobile phones or TV sets, nor does it include computer-controlled machinery or electronic tills.)
Proportion of employees using the Internet	The number of employees that are using the Internet within an organization (The Internet refers to Internet protocol (IP) based networks: WWW, an extranet over the Internet, EDI over the Internet, Internet accessed by mobile phones and Internet email. Employees refer to all persons working for the business, not only those working in clerical jobs. They include working proprietors and partners, as well as employees.)
Proportion of businesses using the Internet	The number of organizations subscribed to the Internet (The Internet refers to Internet protocol (IP) based networks: WWW (the World Wide Web), an extranet over the Internet, EDI over the Internet, Internet accessed by mobile phones and Internet email.)

Frequency of internet usage	How many times does the Respondent use the Internet (Frequency of use can be: at least once a day, at least once a week but not every day, at least once a month but not every week, or less than once a month.)
Web browser usage	Web browser is a software application that enables a user to display and interact with text, images, and other information typically located on a Web page at a website on the World Wide Web or a local area network (Windows Explorer, Netscape, Opera etc.).
Mobile Internet Connection Usage	Usage of Mobile Internet Connections (GPRS – 3G – WIMAX – HSDPA)
Awareness of Open Source Application	Name of the Open Source Applications company representatives are aware of
IT Related Trainings companies provide for the employees	IT trainings provide for the employees (MS Entity, Programming languages, Networking, Accounting packages, Web designing, CAD (Computer Aided Design), Database management)

Diagnostics Information

Indicator	Definition
Reason of Organization Internet Usage	Reasons for Organizations use of the Internet (Internet activities are: use of the Internet for getting information for sending or receiving emails, for performing Internet banking or accessing other financial services, for dealing with government organizations, for providing customer services and for delivering products online. Businesses can respond in respect of more than one activity)
Reasons for not using, Intent to use in the next 12 months	Reactions internet usage, whether people tend to subscribe internet within the next 12 months
Investments in training	IT related trainings provided: – MS Office – Programming languages – Networking – Accounting packages – Web designing – Autocad – Database management