Information Technology Observatory

Introduction

The survey for collecting ICT indicators is conducted annually in accordance with international recommendations of the Partnership on Measuring ICT for Development (ITU, UNCTAD, WB, OECD, Eurostat, etc.).

The objective of the Information Technology Observatory is to :

- Complete the information collected from operators about fixed, mobile and Internet market; and deal with the issues of use and behavior towards ICT in order to analyze the qualitative aspects, such as habits or barriers ;
- Promote an accurate knowledge and an assessed status and trends of information society in Morocco ;
- Direct and monitor the impact of regulatory decisions and government initiatives on ICT development and the degree of use and appropriation of ICT by citizens and businesses ;
- Establish a communication support at a national level ;
- Be able to fill databases (ITU, UNCTAD, etc.) and help calculate the ICT index, which rank countries in terms of their level of ICT development.

The sixth edition of the National Survey on Information Technology in Morocco initiated by ANRT has been performed in continuity with previous surveys to allow comparison and monitoring of key indicators.

However, the list of indicators has been updated and expanded following the international recommendations and the development of the domestic market.

ICT indicators collecting survey

Methodological elements

Indicators

ICT indicators measured can be grouped into four main categories:
- The level of equipment
- Access
- Use
- The expectations and opinions regarding ICT

"Households / Individuals" sample

The target population for the "Households / Individuals" survey consists of people aged 12 and over living in urban or rural areas with access to electrificity (96% in 2009 based on the 2008 rate released by ONE : 95.4%). 71% of the national population are covered by the survey.

The baseline for the population to cover was drawn according to 2004 census and 2009 projections made by the Haut Commissariat au Plan (HCP).

The sample was set to 1300 respondents (850 urban and 450 rural), which corresponds to a + / - 2.5% error margin.

To ensure a representative sample of the population, quotas were set according to the following criteria:
- sex
- age
- professional category
- place of residence (urban / rural),.

The questionnaires were administered face to face, in French or Arabic dialect (depending on the linguistic profile of the sponsor) during the period between February 22 and March 9, 2010.

"Businesses" sample

The characteristics of target companies are:
- Businesses based in Morocco
- Having a workforce greater than or equal to 4 people

The sample consists of 500 companies (half with a workforce of between 4 to 19 employees and the other half with 20 or more employees), which corresponds to a + / - 4.4% error margin.

In the lack of a reliable and complete database in Morocco, the sample was determined by a random process in the Kompass business directory.

The companies surveyed were classified into 4 sectors defined as follows:
- The technology sector, including companies whose activities cover the following areas: web and multimedia, networks, integrated business solutions, software development, mobile (mobile applications and services), call centers (CRM), tele-services and outsourcing, equipment, electronics, computer services, distance education, consulting
- The primary sector, including companies whose activities cover the following areas: fishery, forestry / hunting, cultivation, livestock, activities incidental to agriculture
- The industry and construction sector, including companies whose activities cover the following areas: electricity and water, oil and fuel extraction and preparation of various minerals and ores, metal processing, chemical industry, food industry, beverages, tobacco , textile and garment, leather and footwear, wood and furniture, paper and paperboard, printing press and publishing, construction materials and public works
- The services / transportation sector , including companies whose activities cover the following areas: transportation and communication, trade, finance, catering, intermediate and auxiliary service industry, real estate, household services, health other services

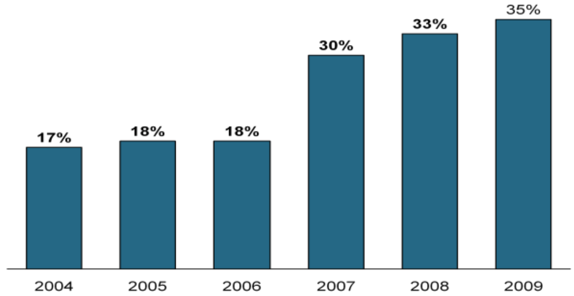
The survey was conducted by telephone in French or Arabic dialect (depending on the linguistic profile of the sponsor) during the period between February 22 and March 9, 2010.

Households and ICT

Fixed and mobile Telephony

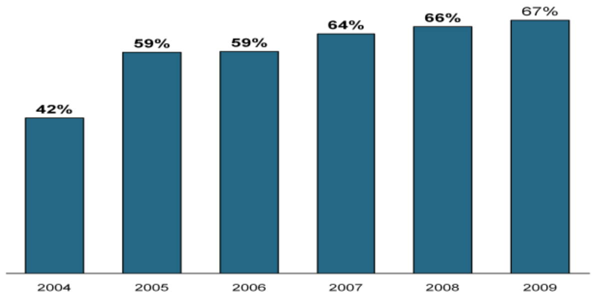
After a significant increase between 2004 and 2007 (100%), the growth of fixed line penetration slows in 2008, although it remains positive (7% from 2007 to 2008 and 6% from 2008 to 2009).

Households equipment with fixed telephony had experienced a significant increase in 2007, partly due to the arrival of new fixed telephony offers limited mobility and programs to improve access throughout the territory.



Household equipment with fixed telephone
[% Of total households]

In 2009, the mobile equipment in households has continued to increase slightly with a rate of 67% of total households.



Household equipment with mobile telephone
[% Of total households]

The main use of mobile remains making and receiving calls (100% of individuals equipped mobile).
The SMS messaging is very used (53% of individuals equipped with mobile).

Paging remains high (spontaneously mentioned by 46% of individuals equipped with the mobile).

About 27% mentioned listening to music and taking pictures / videos.

Surfing the Internet on mobile phones remains unusual (<2%), because in general the phone itself do not allow.

Churn

7% of individuals equipped with mobile have churned over the past 12 months.

For those who have churned, the two main reasons are :
- The network coverage to 46% of them
- The call charges for 33%

5% of individuals equipped with mobile operators plan to change operator in the next 12 months.

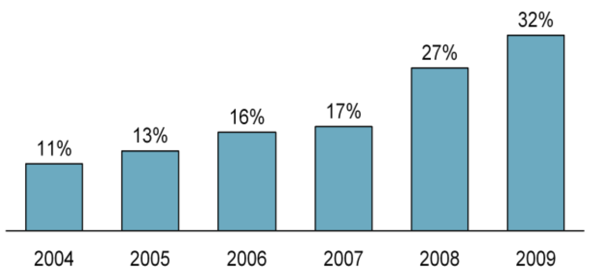
3G

3% of individuals equipped with mobile use 3G services on their phone.

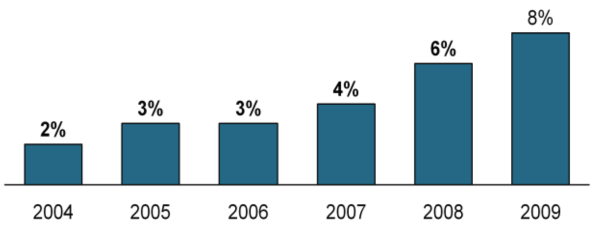
- The type of mobile phone is the main obstacle mentioned (phone not compatible with Internet browsing).
- A third of Moroccans say they have no use.

7% of individuals equipped with mobile plan to use 3G services on their phone in the next 12 months.

Personal computer



Household equipment with PC
[% Of total households]



Individuals equipment with PC
[% Of total individuals]

- The rate of personal computer equipment is increasing (+19% since 2008)
- In 2009, 45% of individuals' computers are laptops, against 30% in 2008

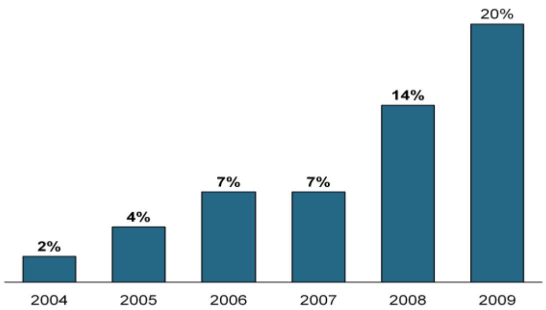
It can be assumed that Internet providers' offers, selling computers at attractive prices with an Internet subscription, promoted an acceleration of the equipment since 2008 as well as government initiatives

Depending on the environment, the equipment rate remains uneven: there is a 50-point gap between urban and rural areas.
Depending on the professional category too, there is a difference of 72 points between categories B and D.

The main barrier to buying a computer is the price too high. This is the reason mentioned by more than half (61%) of individuals who do not have any computer in their homes. Other reasons for non-computer equipment are the lack of need (34%), then the problem of illiteracy (17%) and finally a too complicated use (7%).

Internet access

Internet at home



Household equipment with Internet access
[% Of total households]

- The penetration of the Internet has accelerated sharply in 2009 just like in 2008
- The arrival of 3G has likely contributed to the democratization of Internet access at home
- This growth is to be compared to the computer equipment in homes that has risen sharply in 2009
- 79% of households equipped with a computer have Internet access.

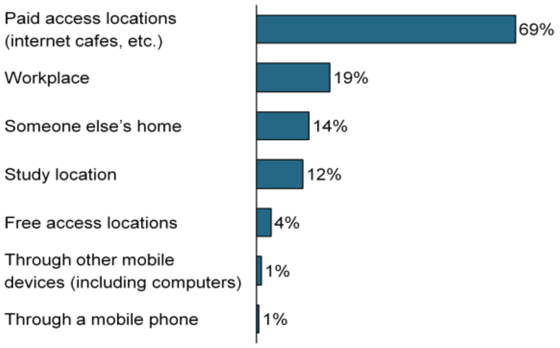
Whereas in 2008, DSL was the most common type of connection (64% of connected households), in 2009, 3G becomes the most common type with 48% of households against 41% of DSL.

Depending on the environment, the equipment rate remains uneven: there is 32-point gap between urban and rural areas.
According to the professional category too, there is a difference of 53 points between categories B and D.

11% of unequipped households plan to get Internet access in the next 12 months.

Internet Access outside home

34% of individuals in 2009 have access to the Internet outside their home.



Out of home Internet access locations [% of individuals connecting out of home]

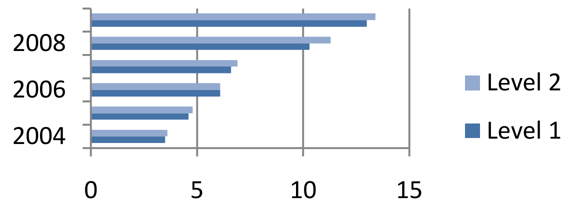
The main place to access the Internet outside the home is the cybercafe (69% of individuals connecting OOH), followed by the workplace (19%).

Number of Internet users

There are two levels of users:

- Level 1 Internet user : any individual who has connected to the Internet at least once during the past month, regardless of location and the access method used.
- Level 2 Internet user : any individual who has connected to the Internet at least once during the last twelve months, regardless of location and the access method used.

Internet users (millions)	2004	2005	2006	2007	2008	2009	Evolution 2008/2009
Level1	3,5	4,6	6,1	6,6	10,3	**13,0**	**+26%**
Level 2	3,6	4,8	6,1	6,9	11,3	**13,4**	**+19%**



Number of Internet users [millions]

Main uses of the Internet

The main use of the Internet by households is the use of electronic mail (57% of spontaneous quote from the Internet users) and the use of social networks (48%). The search for information seems to have become so obvious that people forget to mention it spontaneously (38%).

It should be noted however the growing importance of downloading music, movies, software and video games. Finally, the use of the Internet for electronic commerce or online banking is still very scarce or nonexistent (<5%).

The Internet is perceived by users as an information source, a means of simple and rapid communication, but also of accessing to rich content and multimedia products hitherto inaccessible.

Barriers and fears regarding the Internet

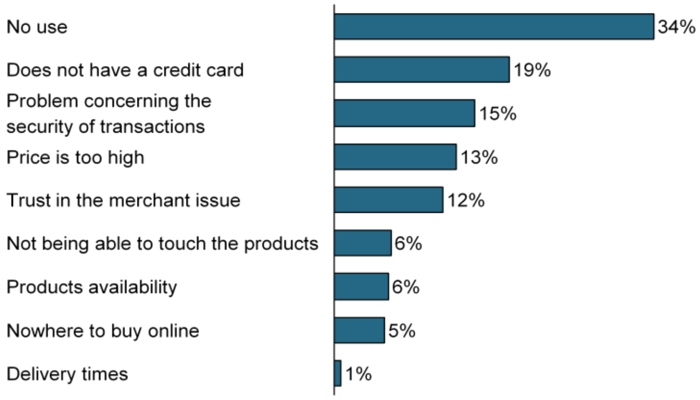
Until 2008, the price of connection was the main barrier to accessing the web (60% of non-equipped in 2008) to the non-computer equipment (33% in 2008). In 2009, non-computer equipment (50%) has exceeded the price factor (49%).
Then there is the lack of training and illiteracy (27%), the uselessness (20%) and the fear that the Internet diverts children from their studies (10%).

Moreover, in Morocco as in many other countries, the Internet has raised fears and misgivings about its use and protection of privacy.

The fear is mainly due to a loss of data due to a failure or a virus (44%) and "adult" content (31%), the most recurring issues among respondents.

Buying online

A majority of respondents (96%) never bought online, a rate unchanged from 2008 and 2007 that confirms that moroccans are not attracted by this.



Barriers to buying online [% of Internet users]

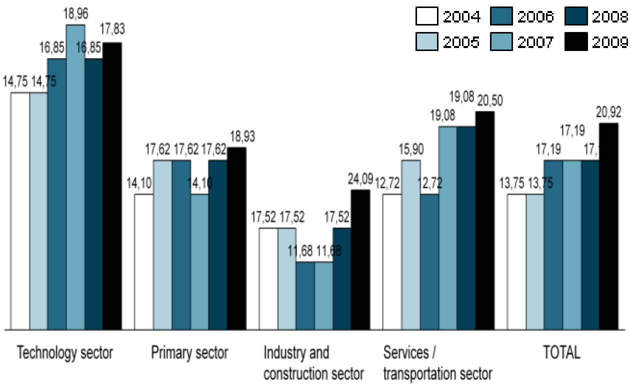
ITC in businesses

Telephone equipment

The average number of fixed lines reached 4.1 lines per company in 2009. The average number of mobile subscriptions is 5.2.

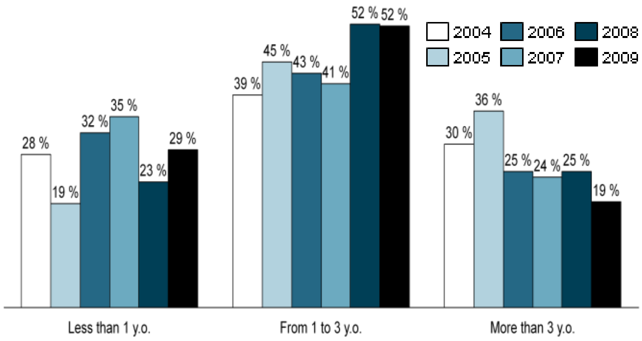
Computer Equipment

The number of computers per employee increased slightly (0.6 PC per employee). The technology sector is naturally better equipped (0.85 PC per employee).



PC/employee ratio

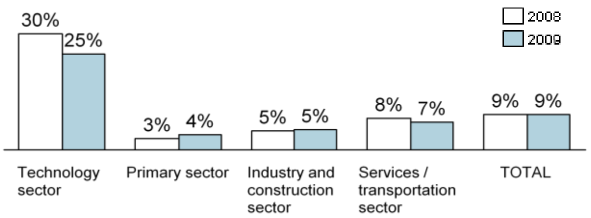
The installed computer base is still predominantly composed of fixed computers 80% (against 85% in 2008, which shows a slight equipment with laptops). There is also a renewal of older computers (more than 3 years).



Distribution of the installed computer base depending on age

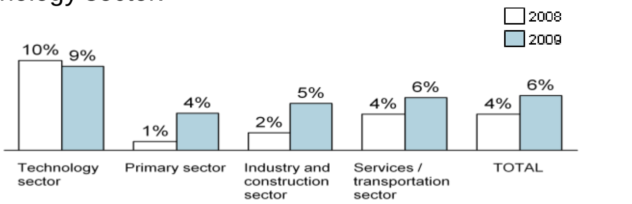
Investment and ICT training

The share of investments in ICT is 9% in 2009. The technology sector is of course where that this rate is highest (25%), followed by services sector / transport (7%).



Share of investment devoted to ICT depending on sector

The share of the training budget devoted to ICT reached nearly 6% in 2009, reaching a maximum of 9% in the technology sector.

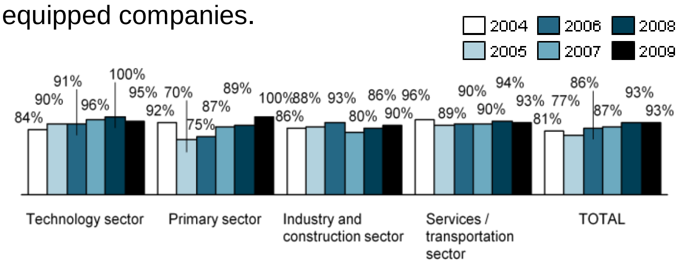


Share of training budget devoted to ICT depending on sector

Internet

Internet access

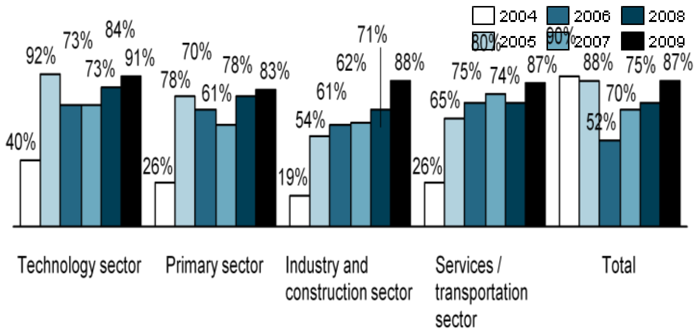
Almost all respondents (93%) are connected to the Internet in 2009.
The preferred type of Internet connection is ADSL (93%). 3G achieves a breakthrough with a rate of 28% of equipped companies.



Companies connected to the Internet
[% of companies]

Internet access for employees

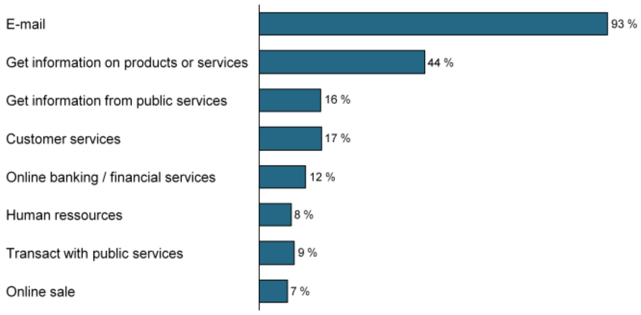
The share of workstations connected to the Internet has continued to increase in 2009 to 87% (+12 points compared to 2008).



share of workstations connected to the Internet
(in connected companies)

Uses of the Internet

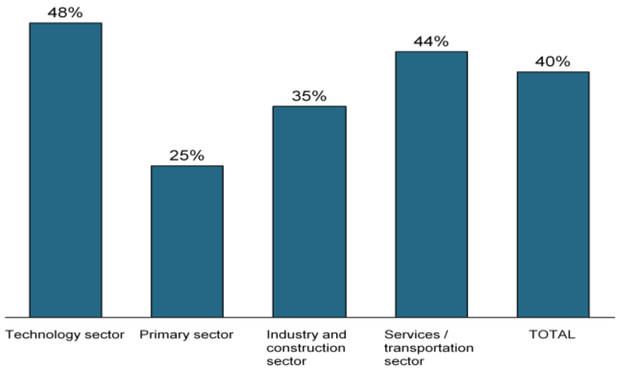
Messaging and information retrieval are the main uses of connected companies (respectively 93% and 44% of them). The "44%" can be explained by the fact that finding information is so obvious that people do not mention it spontaneously any more.
Then there are uses for customer services and obtaining information from public services (16%).



Uses of the Internet in connected businesses

Website and domain name

In 2009, 40% of businesses have a website. The majority (71%) of websites are developed by a provider outside the company.



Businesses with a website
[% of enterprises connected to the Internet]

Most companies (89%) who have a website have their own domain name.
The extensions ".ma" and ".com" are most prevalent. There is an increase in the proportion of ".ma" between 2008 (41% of domain names) and 2009 (49%).

3G

3G services have achieved a breakthrough since 2008 (nearly 28% of companies with an Internet connection in 2009) taking in account their very recent entry on the market.

E-commerce

Ecommerce is lagging both in terms of sales and purchases mainly because of disinterest from customers. In fact, in 2009, only 5% of connected companies purchase online and 6% sell online.

The low penetration of e-commerce is confirmed once again this year.

However, while 11% of businesses connected to the Internet say they intend to buy online, 85% plan to sell online in the next 12 months.

Barriers to E-commerce

The risk of insecurity of payment is often expressed as a barrier to E-commerce (40% of businesses connected to the internet). And 38% say that their products are not well suited to E-commerce and 31% that the customer is not ready to buy online.