



Fédération des Technologies de l'IT
des Télécommunications et de l'IO

Information Technologies Observatory

Introduction

For the second consecutive year, Morocco's National Telecommunication Regulatory Agency, ANRT, has conducted a national survey on Information Technologies in Morocco, with collaboration with "Apebi"- Information Technologies, & Communications and Off shoring federation..

To ensure coherence with the results of the poll conducted in 2005, the same methodology was used.

This observatory is geared to achieving several goals:

- To serve as a platform for communicating with outside parties, allowing open access to information on the ongoing state and development of information technologies in Morocco.

- To harvest information for the databases developed by ANRT's IT component.

- To be an instrument that enables ANRT to fulfill its international commitments, particularly with respect to requests for information from the ITU (the list of indicators used as the basis of this report were derived from indicators suggested by specialized international organizations, notably the ITU).

- And, finally, to be a tool for imparting knowledge of a currently little-known aspect of Moroccan society, and so allow ANRT to fulfill its function as a source of proposals with decision-makers, thanks to the knowledge it can supply on the strengths and weaknesses of Morocco's IT industry.

Data gathering survey for building ICT indicators

A few points on the methodology used

The indicators

The chosen indicators can be classified into three broad categories, according to whether they describe:

- Equipment level
- Internet access
- Internet usage

Individuals' sample

The sample was established taking the Moroccan population's structural quotas into account, and so allowing a breakdown of the population according to:

- Place of residence
- Age and sex
- Location and size of the town/city
- The socio-economic status (SES) of the head of the household (a household is composed of one or more individuals living at the same address in an electrified zone).

The reference base of the population to be polled makes use of a master sample drawn from the latest available census (2004). The target population is composed of individuals of 12 years of age and over, residing in Morocco's national territory, regardless of nationality. When examining the rural setting, the study of this population was confined to individuals living in electrified zones since, for this remote portion of the population, the hypothesis of a lack of IT equipment can be reasonably accepted. Carried out in January 2006, the face to face survey involved a sample of 1,327 individuals: 869 living in urban zones and 458 in rural areas, with confidence intervals calculated as follows:

- Urban: Confidence interval of +/- 3.3% with a 95% probability
- Rural: Confidence interval of +/- 4.6% with a 95% probability

Corporate sample

Analysis is based on the results of a telephone survey conducted in January and February 2006, with a sample of 250 businesses operating in Morocco. They were chosen through a process of random selection from the Kompass business directory – a database that inventories 40,000 Moroccan enterprises according to size and type of activity – to obtain a representative sample of the national structure. The confidence interval of the results is plus or minus 6.2%, with a 95% probability.

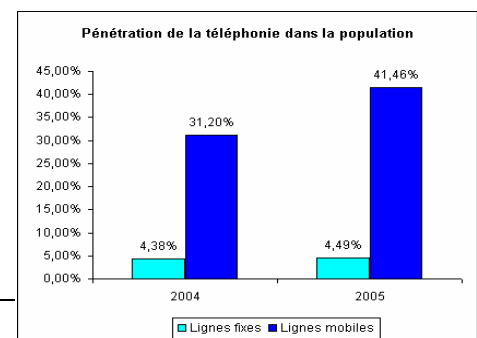
Companies with more than 4 employees were classified into one of four sectors:

- The technological sector: Web and Multimedia, Network construction, Integrated Business Solutions, Software development, Mobile (applications and services), Call Centers (CRM), Tele-services and Outsourcing, Equipment, Electronics, Information services, Distance Learning, Consulting;
- The primary sector: Fishing, Forestry/Hunting, Agriculture, Livestock, Agriculture-related activities;
- The Manufacturing/Construction sector: Electricity and water, Fuel and petrol, Ore and mineral extraction and preparation, Metals processing, Chemical industry, Food industry, Beverages, Tobacco, Textile and clothing, Leather and footwear, Wood and furniture, Paper and cardboard, Printing, Press and publishing, Construction and public works materials;
- The Transport/Services sector: Transportation and communication, Commerce, Finance, Hotel and restaurant, Service and industry intermediaries and sub-professionals, Real estate, Domestic services, Hygiene, Other services.

Fixed and mobile telephony

The residential fixed telephony market has been stagnating since 2004, with scarcely 18% of households equipped with a fixed line. Overall, fixed line penetration totals 4.49% (compared to 4.38% in 2004).

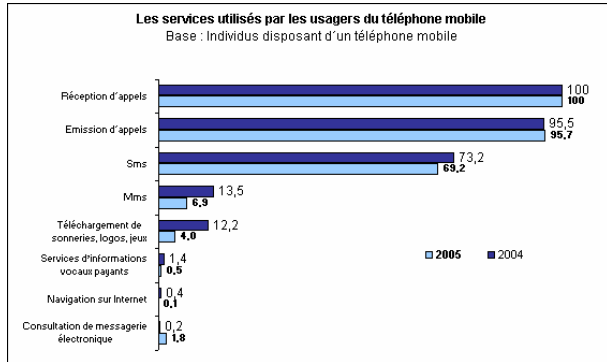
The situation in the mobile telephony sector is very different, with close to 59% of households (or 3.3 million households) equipped with at least one mobile phone. This marks a considerable increase over the 41.5% (or 2.3 million households) figure for 2004. In 2005, mobile penetration totaled 41.46% of the population, compared to 31.20% one year earlier.



Among the most popular mobile telephony services, placing and receiving calls continue to top the bill. Worth noting is that a very small percentage (under 5%) of mobile phone owners do

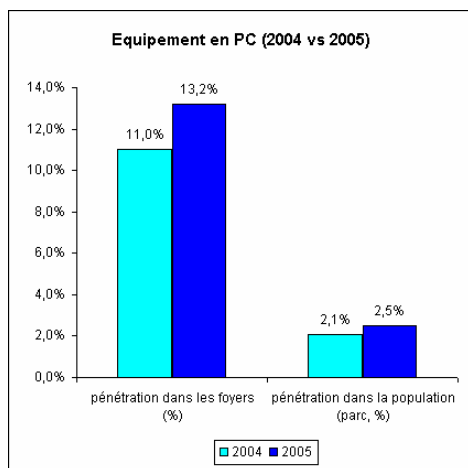
not use the outbound calling feature – their mobile serving primarily for receiving calls. Close to 70% of cell phone owners use SMS and, even if this figure is slightly below the one from the previous year, text messages are still by far Moroccans' favorite value-added service.

Other value-added services available on mobiles (MMS, ring tone, logo and game downloads, paid voice information services, web browsing, e-mail) are still being used by only a tiny percentage of mobile owners, and chiefly city-dwellers.



Personal computers

Households equipment



There has been a considerable rise (19%) in the PC equipment level in households, increasing from roughly 11% in 2004 to 13.2% in 2005. This corresponds approximately to a **base of 745,000 personal computers (up by 125,000 in a single year)**. Among those polled, this increase includes a roughly 3% rise amongst people living in electrified rural zones, and a roughly 30% increase amongst city-dwellers (compared to a 24% rise the year before). There is still a very pronounced digital divide between urban and rural areas in terms of access to computers: while 53% (versus 56% in 2004) of Moroccans in urban areas over the age of 12 still have no access to a computer outside their home, in (electrified) rural areas the rate is 82% (compared to 89% in 2004). The best-equipped households are still those with strong buying power (monthly income generally over 2,500 DH), which are already well-equipped with other ICT gear, and whose members have a post-secondary education which benefits the acquisition of new technologies. The presence of children in the home is another incentive for purchasing computer equipment: there is at least one child (under the age of 16) in 69.9% of households equipped with a PC.

Personal computer usage

Among those individuals who have a PC at home, the Internet – which ranked fifth in the main uses made of PCs in 2004 (23.2% of respondents) – has undergone a massive increase to 50.8% in 2005. In addition to classic uses, such as word proc-

essing/desktop publishing and gaming/leisure, personal computers are being more and more to surf the web.

	Ensemble 2004	Milieu rural 2005	Milieu urbain 2005	Ensemble 2005	Evolution
Achats en ligne	1,4%	7,7%	1,5%	1,8%	→
Internet	23,2%	7,7%	53,3%	50,8%	↗
Travail à domicile	34,8%	38,5%	35,5%	35,6%	↗
Jeux	63,9%	61,5%	70,1%	69,6%	↗
Bureautique	66,2%	84,6%	69,3%	70,1%	↗
Loisirs/Photos	85,0%	69,2%	67,1%	67,2%	↘

Reasons for non-equipment

The main reasons expressed by households (in electrified zones) for not having a computer in the home depended a great deal on where their home was located. In rural areas, "illiteracy" was cited by over 46% of respondents while, among city-dwellers, "too expensive" was the reason given by 50.5% of respondents as the main obstacle to buying a computer.

Raisons du non-équipement	% rural 2004	% rural 2005	% urbain 2004	% urbain 2005
Analphabétisme	50,8	46,3	24,2	28,4
Prix trop élevé	30,1	44,0	55,3	50,5
Absence de besoin	22,4	24,5	27,0	30,5
Manque de moyens	17,0	5,8	4,9	1,8
Utilisation compliquée	16,1	8,3	20,0	15,4

Intentions to buy

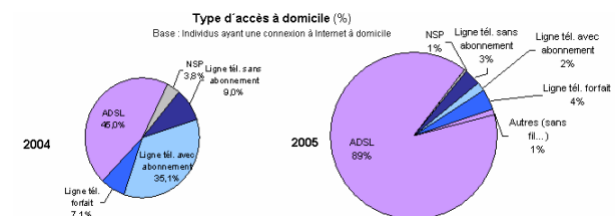
Despite the reluctance expressed, 23% of those surveyed stated that they had plans to buy a micro-computer in the next 12 months (compared to 13% in 2004). These intentions would translate into the sale of up to **4 million computers**.

What is comparable to the stated plans amongst the previous year's respondents is that the desire to buy is real but, for a sizeable portion of individuals, price, among other factors, remains prohibitive.

Internet and Individuals

Internet at home: penetration rates rising, and healthy ADSL take-up

The estimated number of households connected to the web doubled over the year, to reach 240,000 lines, all types of access combined (in 2004, roughly 120,000 households were connected to the internet from home). The penetration rate amongst households is estimated at around 4.3% in 2005 (versus 2.1% in 2004). ADSL penetration, on the other hand, is enjoying a very healthy increase with a total 220,000 households connected (compared to 60,000 in 2004), representing a roughly 3.9% penetration rate in 2005 – up from 1.2% in 2004. **This means that ADSL, which already accounted for close to half of the residential market in 2004, now accounts for 89% of household connections to the Net.**



Outlook still positive...

...but a still very real social divide

In the twelve coming months, close to 28% of households which are still not equipped have plans to equip themselves with an internet connection at home (compared to 12% in 2004), which represents a potential of one million additional connections should their plans be made concrete.

Socio-economic category remains an undeniable contributor to a household's potential connection to the web. We can nonetheless note a certain "democratisation" compared to 2004: whereas the most privileged SES (A, B) accounted for over 80% of residential internet connections that year, they accounted for only 63.4% of connections in 2005. In addition, there is at least one child living in close to 73% of households connected to the internet.

Internet connections outside the home involved close to 16% of the population (12% in 2004), of which 36% also had access at home.

The Internet user concept

Level 1 Internet user and Level 2 Internet user

By its very essence, the notion of Internet user is difficult to pinpoint precisely. Our survey nevertheless established the following two definitions:

- A Level 1 Internet user is an individual who has accessed the internet at least once in the past month, regardless of location and the access mode used.
- A Level 2 Internet user is an individual who has accessed the internet at least once in the past twelve months, regardless of location and the access mode used.

Nombre d'internautes en 2005 (projection population totale)

Internautes	connectés	en % de la population (2005)	en millions (2005)	Evolution 2004/2005 (en %)	Evolution 2004/2005 (en millions)
niveau 1	en décembre 2005	15,6%	4,6	+31%	+1,1
niveau 2	au cours de l'année 2005	16,2%	4,8	+33%	+1,2

The breakdown in terms of sex of individuals who state that they have accessed the internet over the past 12 months is as follows: 41% female and 59% male. These figures are almost identical to those reported in 2004.

Main uses made of the internet

In 2004, 96% of individuals with an internet connection (all locations combined), used the web to perform searches, compared to 91% in 2005: entertainment and use of the different messaging applications (IM and e-mail) are once again among the most common uses made of the internet.

Obstacles to accessing the web

Obstacles to internet access equipment

While the lack of a computer is still the chief obstacle to gaining access to the internet, the price of internet access itself is now an obstacle to only just over 40% of individuals polled (compared to close to 53% in 2004).

Principales raisons de l'absence d'accès Internet à domicile (selon le milieu de résidence)

	Ensemble 2004	Milieu rural 2005	Milieu urbain 2005	Ensemble 2005	Evolution
Vous n'en avez pas l'usage/utilité	21,9%	18,3%	13,9%	15,8%	↘
Vous ne disposez pas d'ordinateur	34,1%	30,1%	37,4%	34,3%	→
Analphabétisme ou manque de formation	36,5%	48,7%	28,8%	37,2%	→
Le prix est trop élevé	52,8%	38,2%	43,5%	41,3%	↘

Base : Individus ne disposant pas d'un accès à Internet à domicile

Obstacles to e-commerce

Results concerning e-commerce are disappointing, with very few households expressing the desire to shop online in the next 12 months.

The main reason stated by a wide margin was lack of security.

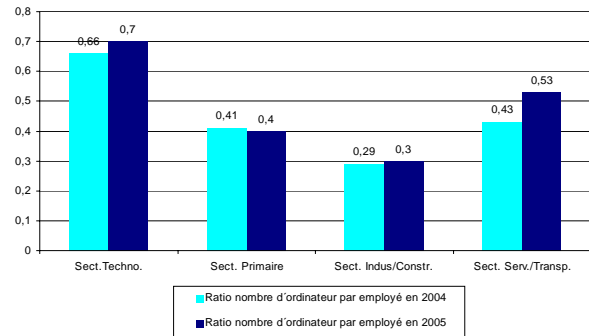
Businesses and ICT: a year of take-up

Computer equipment in businesses

The IT equipment base in the 40,000 Moroccan businesses listed in the Kompas directory includes an estimated 1.22 million computers, marking a 17% increase over 2004.

The average number of computers per employee is up as well, now totalling 0.4 PCs per staff member (vs. 0.37 in 2004).

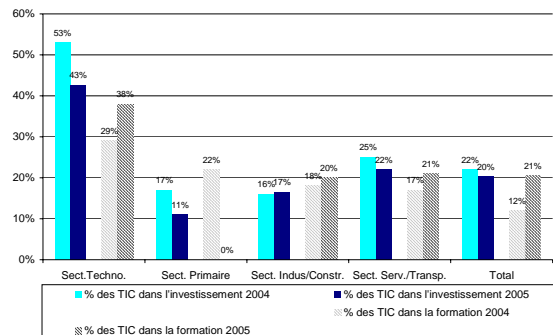
This average ratio for all sectors combined nonetheless hides sizeable disparities from one sector to the other.



Investment and ICT

The importance that businesses place on ICT penetration was measured by the level of investment in ICT hardware and training. It is interesting to note that, while average ICT spending has increased very little on average, investment in training staff is up considerably over the previous year. The emphasis on training is therefore expected to contribute to greater take-up of ICT in Moroccan companies.

ICT's share of corporate spending and training budgets

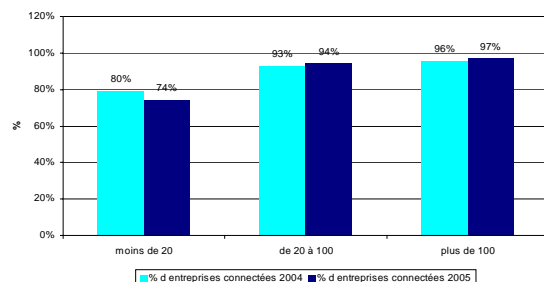


Internet and businesses

Internet connection

On average, 90% of businesses are equipped with an internet connection (or 35,000 connected enterprises), of which 1% via a no subscription access. An analysis of connectivity according to company characteristics (sector and staff size) reveals major disparities.

Percentage of businesses equipped with an internet connection



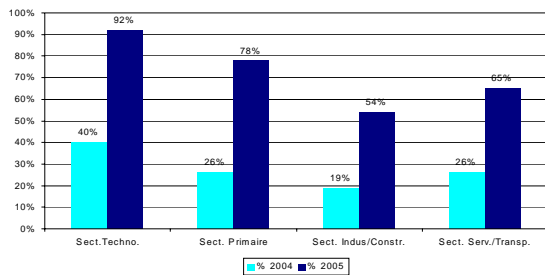
Although the number of businesses equipped with an internet connection has grown very little compared to 2004, connection modes are changing, with a growing number of companies opting for ADSL, including a great many which are switching from dial-up/PSTN. Over 70% of companies are now connected to the web via ADSL, compared to 62% in 2004, while dial-up's share of connections has plummeted from 23% to 6%. Leased line's share of connections is holding steady at 9%.

Personalised access to the internet

The main indicator used to measure the degree to which employees have access to the internet was established by a ratio of number of desktop computers connected to the web vs. the company's total number of computers. The most outstanding change this year was the increase in the number of office computers connected to the internet. The rise is substantial, which translates into growing access to the internet inside of companies. On average, 62% of the computers in companies with an internet connection had access to the web, compared to 56% in 2004.

This figure must nonetheless be offset against the fact that the increase is essentially benefiting to management-level employees.

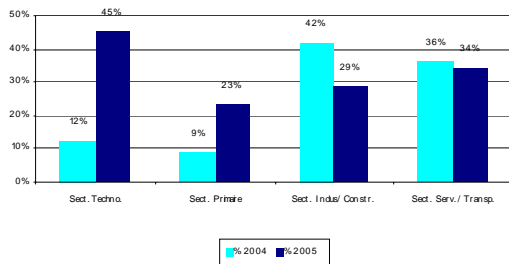
Percentage of office computers connected to the internet



Businesses' use of the internet

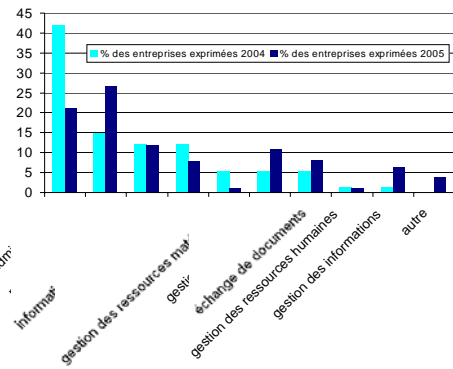
On average, 32% of enterprises stated they were equipped with an Intranet, virtually the same percentage as the previous year. The disparities from sector to sector remain considerable with, unsurprisingly, the Technological sector reporting a sharp rise in the number of companies equipped with an Intranet.

Share of companies equipped with an Intranet



Furthermore, the way that businesses use their Intranets is changing. Whereas, in 2004, most companies were using their Intranet essentially for administrative purposes, they are now being used more and more as a tool for distributing information within the company.

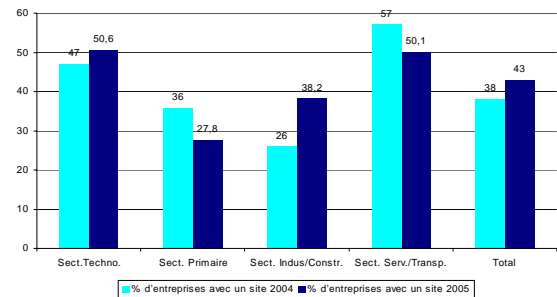
Intranet usage amongst equipped businesses



Websites and domain names

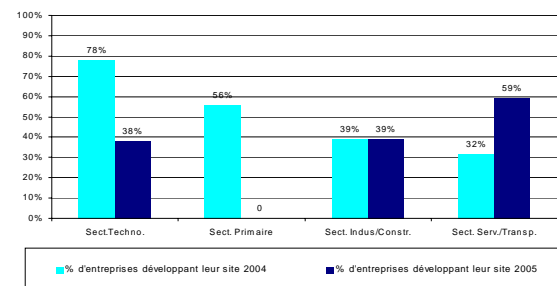
Of all of the companies polled, 43% report that they have a website (versus 38% in 2004). The trend here is one of "professionalization", with 88% of companies that operate a website (78% in 2004) also having their own domain name.

Share of businesses with a website



The website development process also provides an interesting bit of information concerning companies' increasingly "professional" attitude towards websites. While in 2004, half of all companies developed their sites in-house, 53% of them now outsource this function. This trend is particularly prominent in the "Technological" and "Primary" sectors.

Website development modes

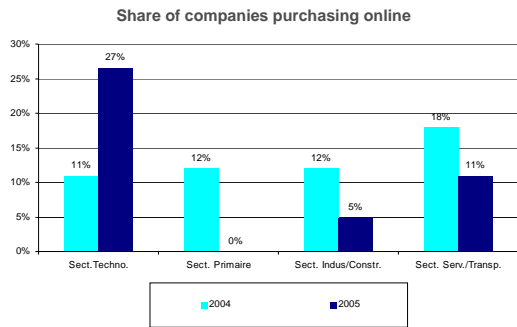


e-commerce

E-commerce continued to be the stumbling block again this year, a practice that appears unable to get off the ground.

Online purchasing

Of all the companies polled, only 8.4% report that they have made purchases online (compared to 14% in 2004) and, in 95% of these cases, they were purchases which involved no more than 4% of the companies' total spending. The size of the company has little influence on their tendency to buy online, much less so than their sector of activity – which does reveal sizeable disparities. The "Technological" sector is more apt to make use of online purchasing, and is in fact the only sector to report an increase in the number of companies making use of the web in this way. This could be attributed in part to the fact that the products central to the sector (software, high-tech hardware) are by definition more likely to be bought online from foreign sites.



Online sales: practices, volume and intentions

In the same vein as online purchasing, online selling too is struggling to take off. Only the “Transport and Services” sector is reporting an increase but, here again, by its very nature it is the sector of activity which is the most likely to engage in sales to consumers, with products such as travel and accommodation. The lack of online sales in other sectors underscores the need to encourage the development of this area of activity, both through an appropriate regulatory framework and a promotional campaign aimed at users.

