



ICT, private sector and women potential : perspectives in Tunisia

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Summary

- Benefits of the ICTs :
 - The social aspect
 - The economical aspect
- Women : a great human potential in Tunisia
 - Global indicators
 - Insight in the ICT sector
- Actions to capitalize on the human resources in the ICT sector
- Conclusion



Benefits of ICTs

The social aspect

- The new information and communication technologies pave the way to the development of individuals and communities
- Today, many services are available through ICTs in Tunisia
 - Health care : tele-medicine platforms, health information online
 - Access to official information and services : e-government sites, online directories, professional portals
 - E-commerce : the e-dinar initiative (2000)



Benefits of ICTs

The social aspect (cont'd)

- E-banking, m-banking : consultation of transactions by SMS and web
- Communication and culture : leisure sites, forums
- These services are increasingly brought to accessibility thanks to national initiatives :
publinets (cyber-café), PC for the family, the Internet bus
but their use remain limited, particularly for online services : under 15% of Internet usage (UNDP)
□ learning ICTs starts from childhood, within the family where mothers play a key role



Benefits of ICTs

The economical aspect

- Our country mainly relies on services to bring revenues : tourism, telecommunications, IT, commerce
 - These sectors are great ICT-consumers
- During the last 15 years, denationalization has concerned in a great extent the service activities thus augmenting the needs in ICTs
 - 52,2% of companies that were subject to denationalization are working in services (government)



Benefits of ICTs

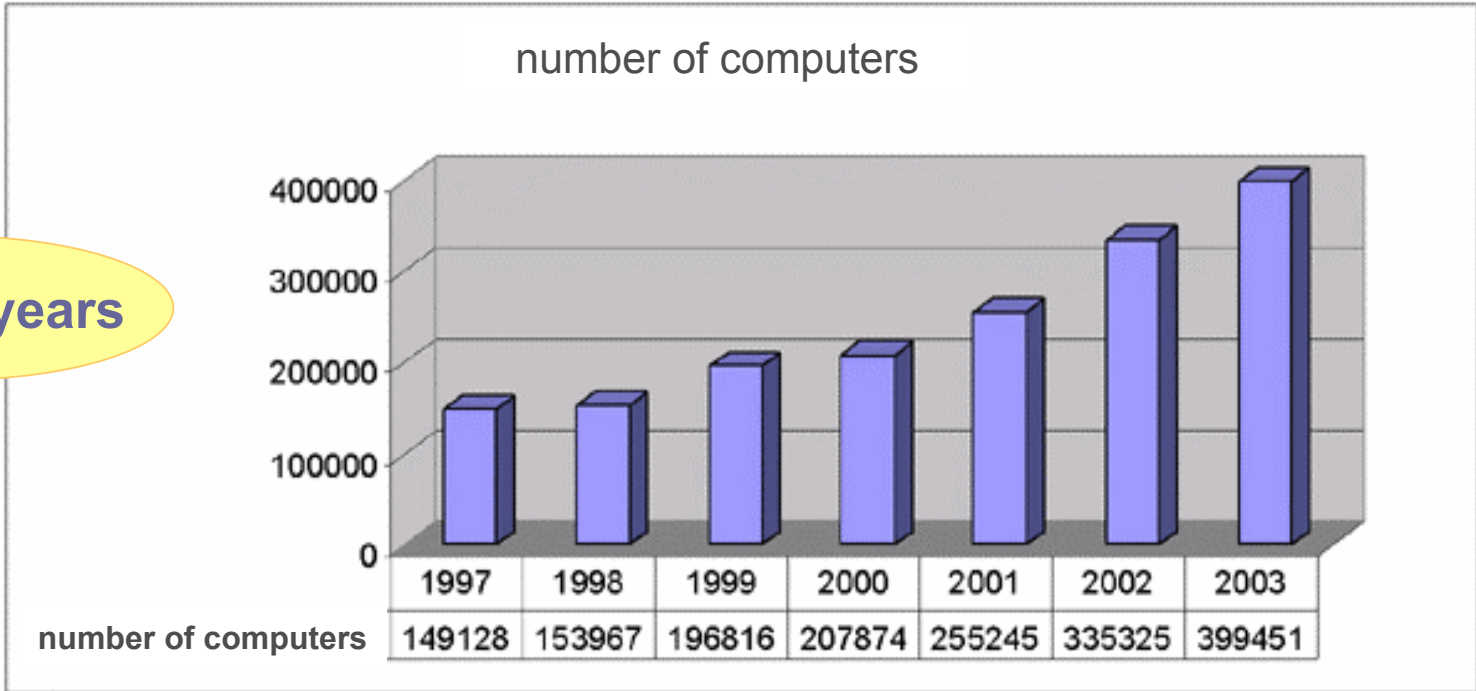
The economical aspect (cont'd)

- The new information and communication technologies have become key elements :
 - To increase the productivity : almost all sectors can benefit from ICTs to produce more at lower costs and to manage quality
 - To boost marketing :
 - ICTs offer new ways to enhance sales by prospecting customers, doing CRM, profiling customer's needs, better managing stocks and exchanges
 - To alleviate purchase and sale procedures :
 - The use of ICTs allows efficient and competitive exchanges and speeds up the transactions between actors, especially for the international market

Benefits of ICTs

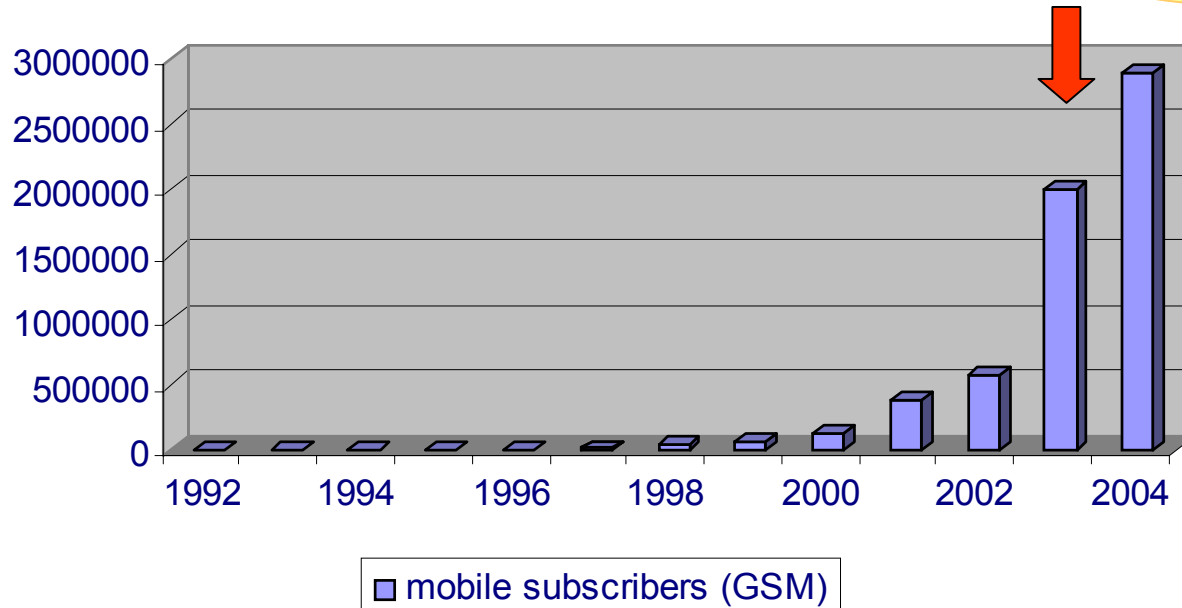
- The economical activities are demanding ICTs infrastructures with an ever-increasing capacity for electronic exchanges
 - telecommunication networks are booming

x2,5 in 6 years



mobile subscribers (GSM)

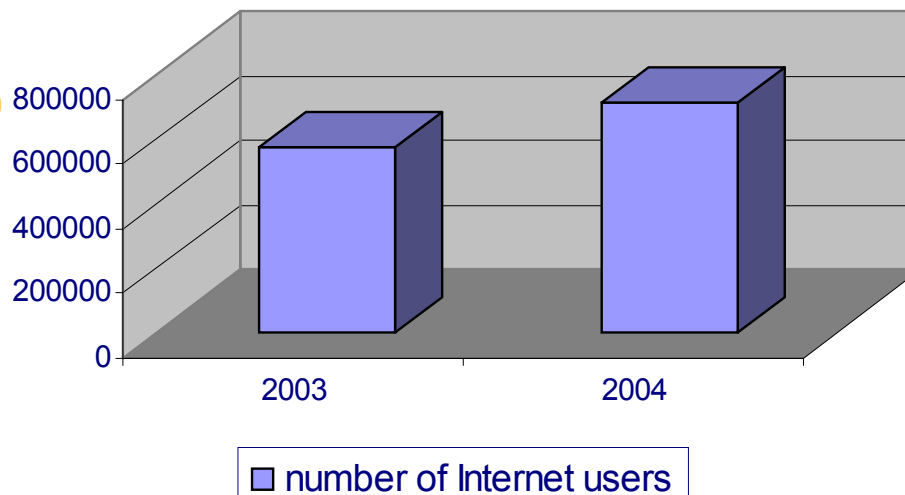
introduction of the private operator



■ mobile subscribers (GSM)

number of Internet users

+25% in 1,5 year



■ number of Internet users



The ICT sector in Tunisia

- The ICT sector is seeing a large expansion in Tunisia
 - Employment evolution in the private IT sector : 4377 positions in 1997 against 7412 in 2001 → **69,4%** increase
- Tunisia aims at exporting high value-added services and seeks to be competitive on the international market
 - Higher value services such as professional services, system integration, software design
- The ICT sector needs more than ever **qualified** human resources to meet the new challenges



Women : a great potential in Tunisia

- Women represent 49% of the Tunisian population (World Bank, 2000)
- In 25 years, illiteracy has dramatically stepped back on the man side, as well as for woman

Youth illiteracy rate (% of 15-24 years old people)	Tunisia (year 1980)	Tunisia (year 2000)	MENA (year 2000)	Lower middle income countries (year 2000)
Male	14,4	2,6	13,8	3,8
Female	41,9	10,9	26,4	6,5

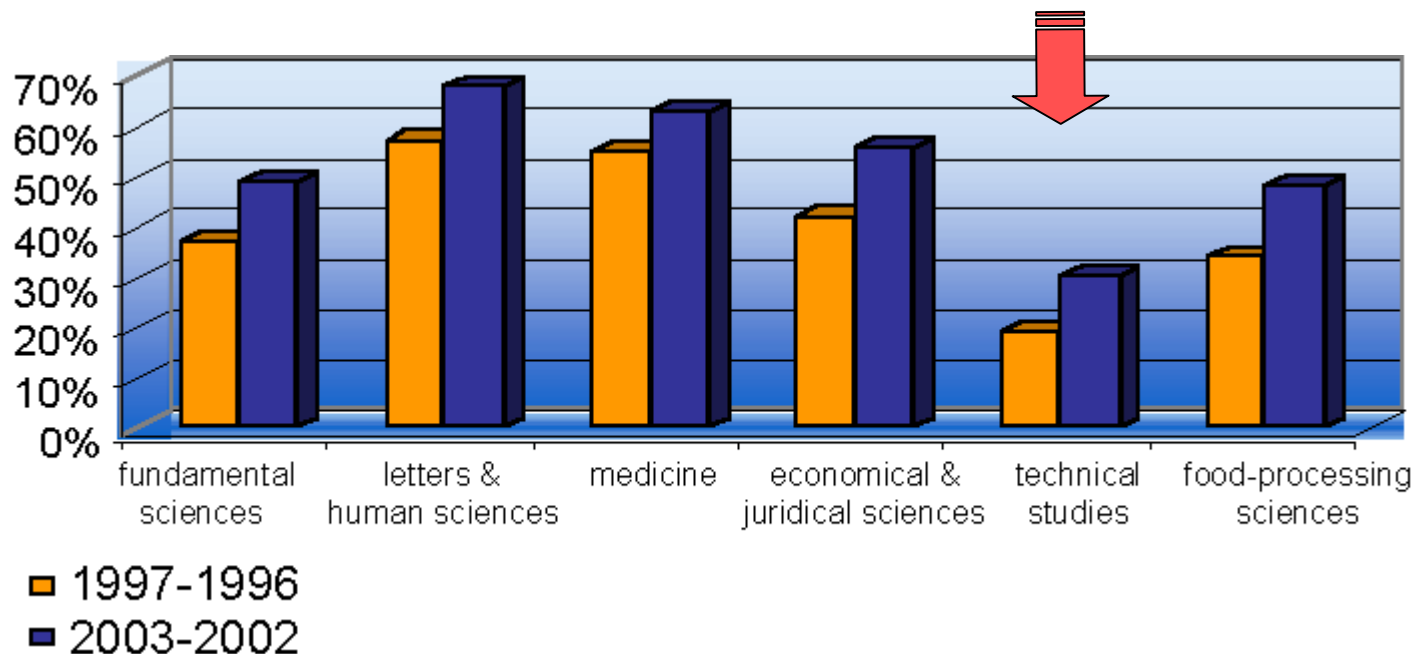
- Women represent 32% of the labor force (world bank, 2000)
 - **39,6%** of the public sector positions are occupied by women (National Institute of Statistics, 2002)



Women : a great potential in Tunisia

- Tunisian women are well educated :
 - 31,7% of 19-24 year-old people were studying at university in 2003
 - **55,11%** of them are girls (Education Ministry), vs. 44,6% in 1996
- Disciplines followed by girls at university :
 - Most of them choose traditional studies (human sciences, medicine) offering less career opportunities than technical branches (engineering, ICT), although we notice an increase of girl participation in the latter

Women : a great potential in Tunisia



- Feminine participation to ICT cursus at university :

Year	1999-2000	2002-2003
% of girl students registered in ICT cursus	29,4	33,4
Number of girl students registered in ICT cursus	4400	7955



Women in ICT sector

- Women that have studied ICTs before 1999 have for a large part of them joined the public sector that was expanding and structuring at that time :
 - Regulation authorities created
 - Technical units for control and IT security created
 - University labs were growing
- Today, they hold **25%** of qualified positions (technicians, engineers, graduated) in the public ICT institutions (government, 2003)



Women in ICT sector

- This generation of women has assimilated the corporate culture, by driving projects and making decisions
 - Among women occupying a qualified ICT position, **1 woman over 5** is a manager
→ the "executive woman" has become commonplace
- An important number of qualified women is expected in the near future on the labor market
 - they will certainly contribute to the development of the ICT private sector
 - The number of girl students in ICT branches has doubled in 3 years



How to capitalize on human resources ?

- National initiatives :

The government has a global vision of the country development and has been drawing guidelines

- Liberalization of the ICT sector to ensure full competition
- Allocation of funds for reconverting and levelling human resources (21-21, TFP), for fostering entrepreneurship (BTS, fiscal and social privileges), and encouraging the exportations (CEPEX)
- Creation of technology incubators
- Information of investors so they can evaluate ICT projects and finance them



How to capitalize on human resources ?

- Promotion of consulting and expertise
 - Trust in local competences
 - Hire consultants to specify the needs (specifications in bids)
 - Externalize more projects with private companies (studies, execution, supervision)
- Actions from private sector
 - University education
 - The private companies must bring their contribution to a dynamical education that takes into consideration industry requirements
 - ➔ Learning using the industry standards : professional certifications, operation of vendor platforms
 - ➔ Professional workshops, senior year projects performed in a corporate environment



How to capitalize on human resources ?

- Private companies have to open their environment more efficiently to high schools and university by animating productive visits for students in their premises
- Professional training
 - The private sector has in a large extent participated to the governmental initiative "21-21" for levelling human resources in ICTs and that has concerned a great number of people :
 - Young graduated people that wanted to reconvert in ICTs
 - Working staff from the public sector



How to capitalize on human resources ?

- A well knowing use of the public funds and resources :
 - Private companies must keep a wide view on the economical tissue and be aware that money invested at the right place will generate in return more business opportunities
- Pioneer companies in the sector can play a leading role :
 - Contribution to the public funds for developing the sector
 - Fostering spin off
 - Information of the general public :
Companies in the ICT sector must contribute to inform the population about ICT, with a special emphasis on the groups of people (women, rural inhabitants) that feel not concerned with the ICT
→ attractive ads, commercials



Conclusion

- The ICT sector is expanding and is in need for qualified human resources
- Women have progressively integrated the sector, today they represent a great potential that is to work more and more in ICT private companies in the future
- The private sector, hand in hand with the government will be able to facilitate the development of ICTs by taking actions to strongly capitalize on existing human resources



Thank you !