Measuring the Information Society in Egypt

Information Center
## Ministry of Communications and Information Technology

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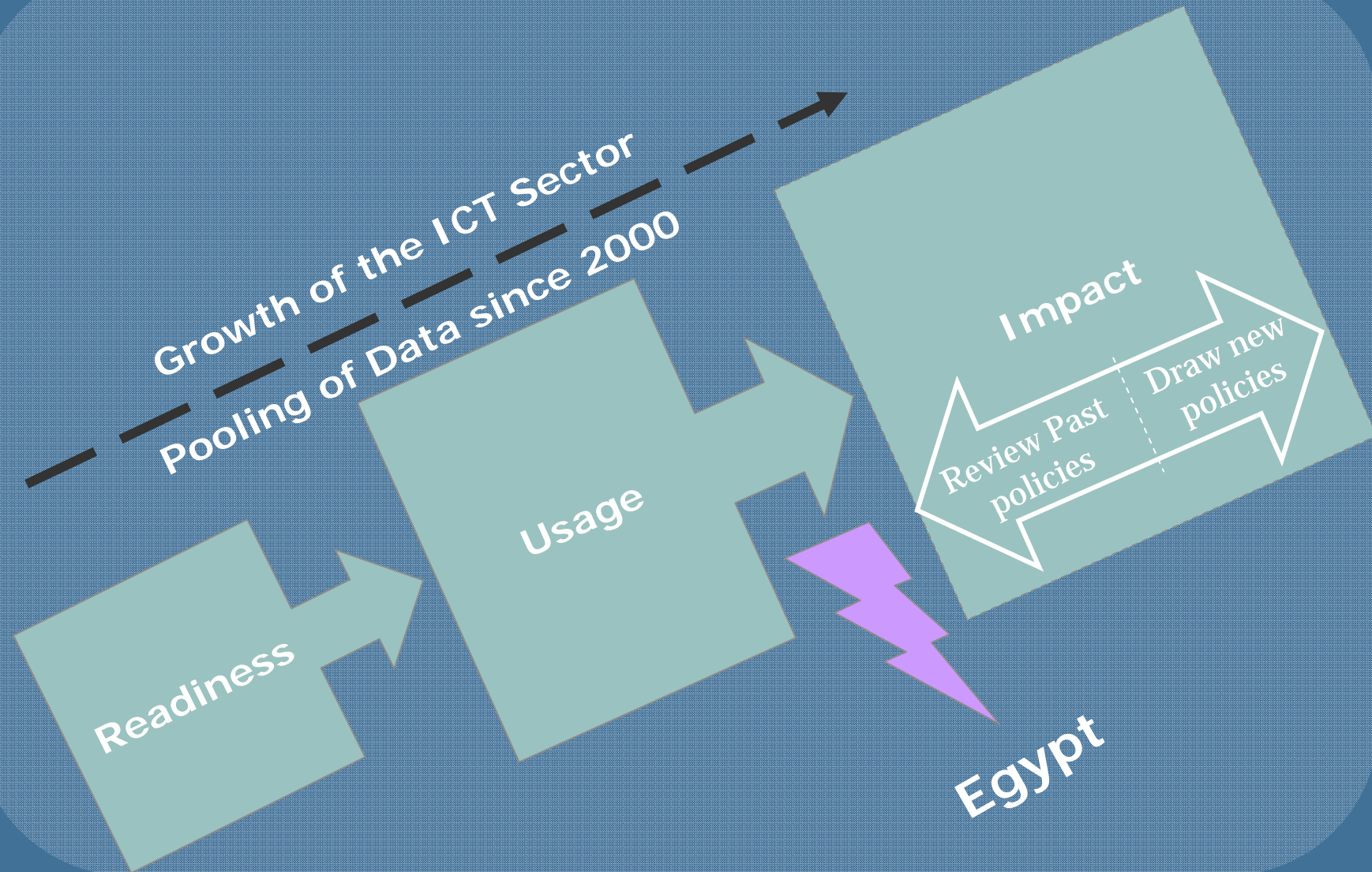- ICT Policy Review project
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Egypt's ICT Plan

- Egypt has successfully mainstreamed ICT as part of its national development strategy over the last decade
- Successive strategies based on the domestic and international market realities and developments
  - National CIT Plan 2000
  - Information Society Initiative 2003
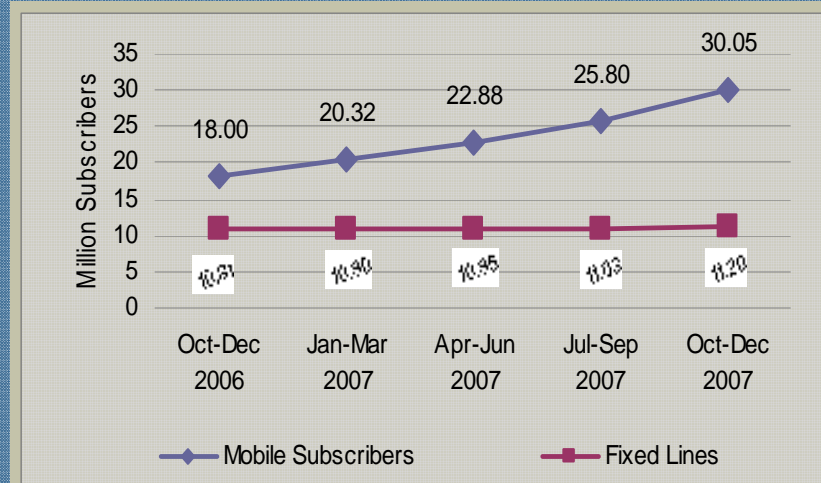 - ICT Strategy Plan 2007-2010
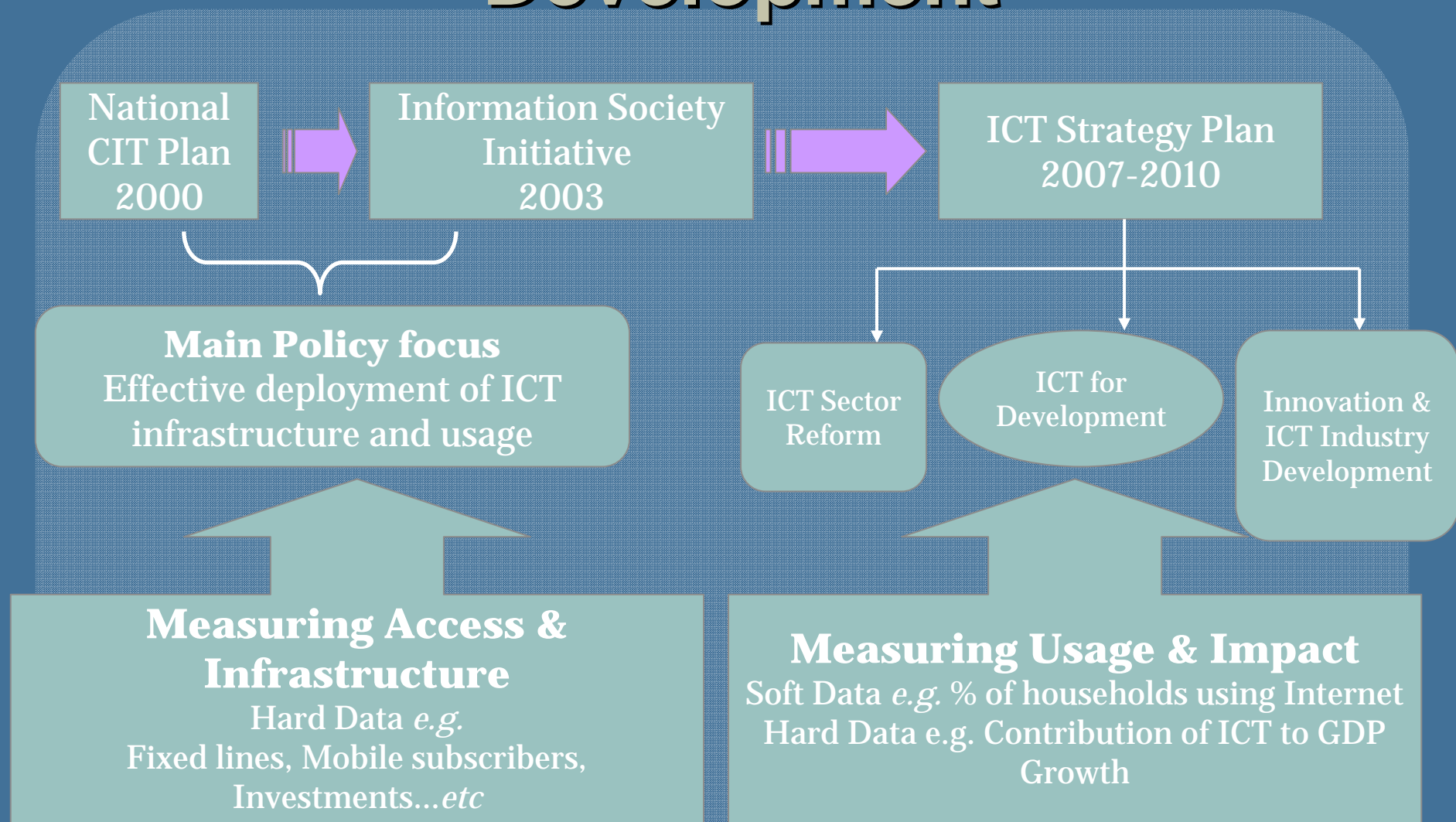
Development of Egypt's Indicators Requirements

Measuring ICT Infrastructure

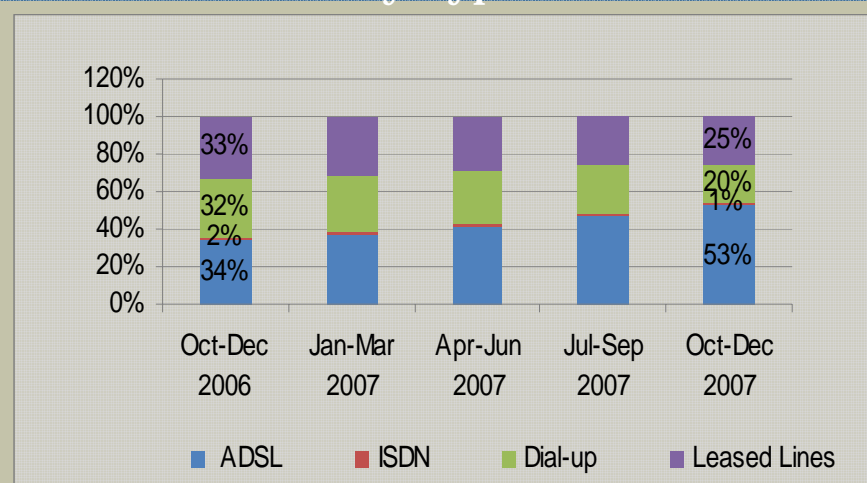## Fixed Lines & Mobile Subscribers
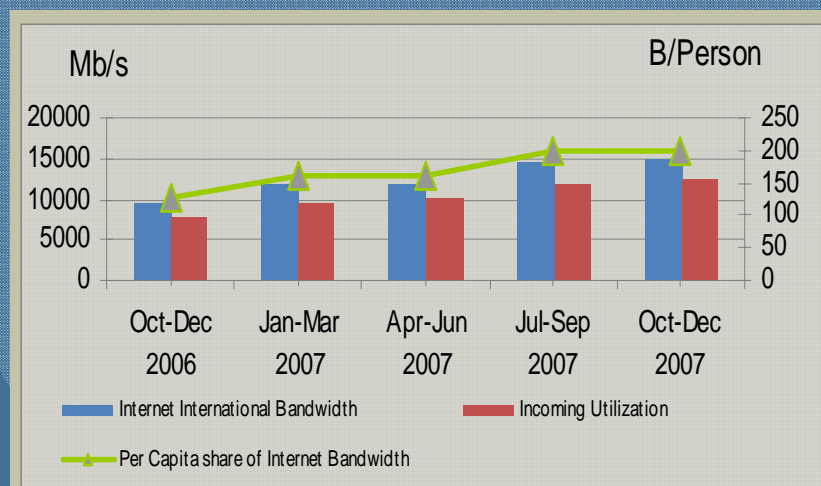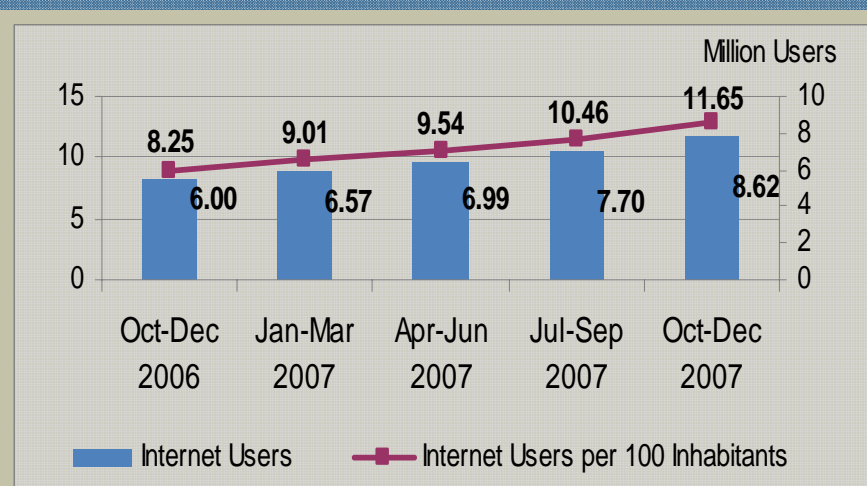

Line chart showing Million Subscribers (y-axis 0–35) across Oct-Dec 2006, Jan-Mar 2007, Apr-Jun 2007, Jul-Sep 2007, Oct-Dec 2007.

Mobile Subscribers: 18.00, 20.32, 22.88, 25.80, 30.05
Fixed Lines: 10.81, 10.90, 10.95, 11.03, 11.20

Legend: Mobile Subscribers — Fixed Lines

Internet Users by Type of Connection

Stacked bar chart (0%–120%) across Oct-Dec 2006, Jan-Mar 2007, Apr-Jun 2007, Jul-Sep 2007, Oct-Dec 2007.

Oct-Dec 2006: ADSL 34%, ISDN 2%, Dial-up 32%, Leased Lines 33%
Oct-Dec 2007: ADSL 53%, ISDN 1%, Dial-up 20%, Leased Lines 25%

Legend: ADSL, ISDN, Dial-up, Leased Lines

Internet Bandwidth

Bar chart with Mb/s (left axis 0–20000) and B/Person (right axis 0–250) across Oct-Dec 2006, Jan-Mar 2007, Apr-Jun 2007, Jul-Sep 2007, Oct-Dec 2007.

Legend: Internet International Bandwidth, Incoming Utilization, Per Capita share of Internet Bandwidth

Internet Users

Combination chart with Million Users (right axis 0–10) and left axis 0–15 across Oct-Dec 2006, Jan-Mar 2007, Apr-Jun 2007, Jul-Sep 2007, Oct-Dec 2007.

Internet Users per 100 Inhabitants: 8.25, 9.01, 9.54, 10.46, 11.65
Internet Users: 6.00, 6.57, 6.99, 7.70, 8.62
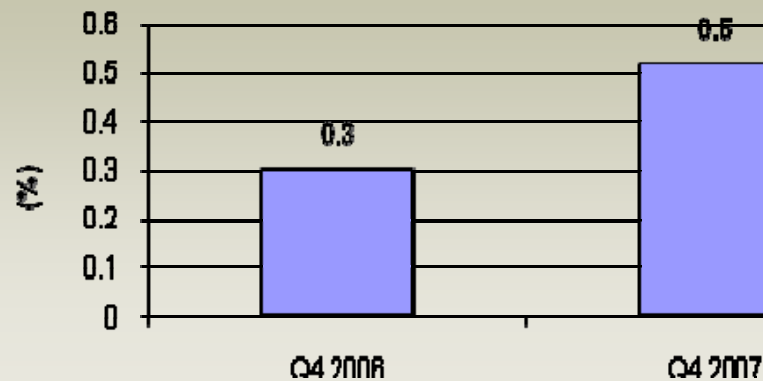
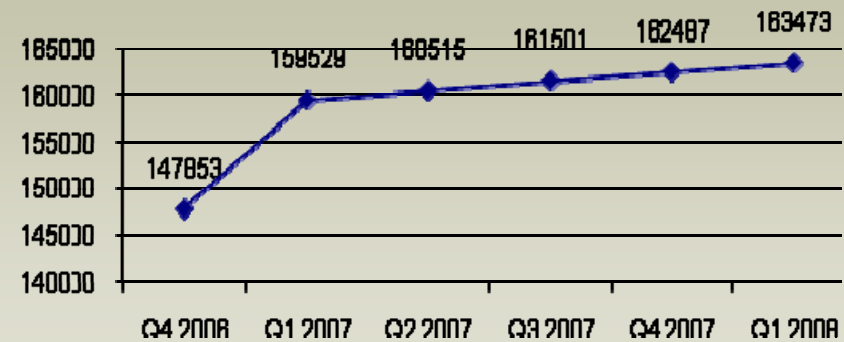Legend: Internet Users — Internet Users per 100 Inhabitants

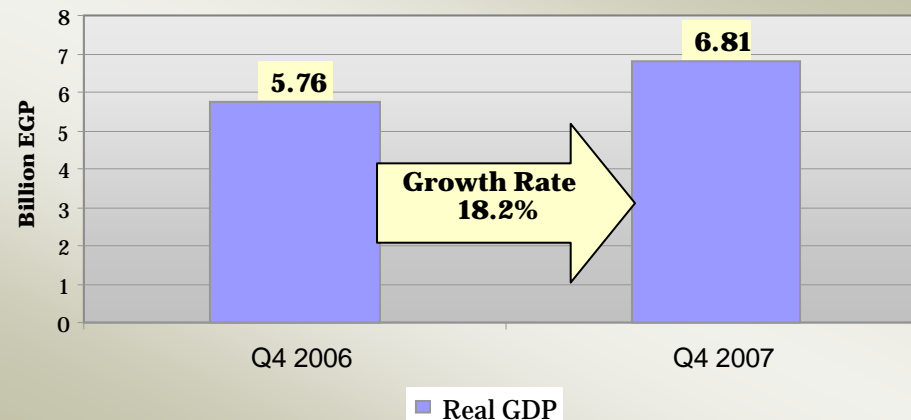# Measuring ICT's contribution to the Economy

Contribution of ICT sector to Real GDP growth (%)

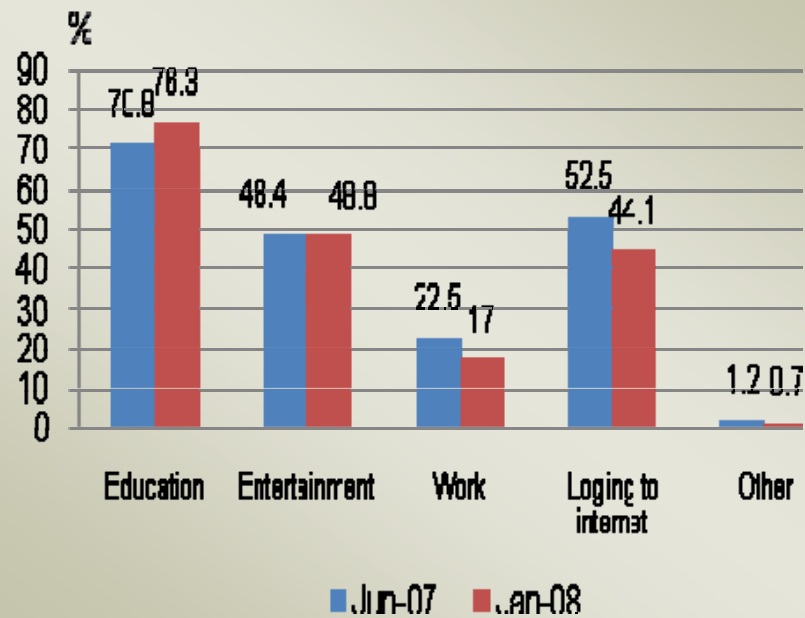### Total Number of employees in the ICT sector

Real GDP Growth Rate of ICT sector (%)

Measuring the role of ICT in Development

Household Usage of PCs in Egypt

Training in ICT

Policies for ICT measurement in Egypt

- In light of a rapidly growing ICT sector in Egypt, a need has emerged for the presence of measurement tools for assessing and monitoring the progress, efficiency and impact of current and past policies.

- In WSIS meeting "Measuring the information society" – It was called upon all countries and regions to develop tools to provide statistical information on the information society.

- Therefore the United Nations in cooperation with many international organizations developed "core ICT indicators to measure both ICT infrastructure and usage in different sectors.

Policies for ICT measurement in Egypt

◆ Upon this, The Ministry of Communication and Information Technology (MCIT) launched national ICT indicators project in September 2005 "Information and Communication Technology (ICT) Indicators Project" with the vision of "Building information society indicators in Egypt".

◆ The project provides the necessary, accurate and meaningful data about ICT usage in Egypt.

◆ The project focuses on unprecedented areas in Egypt; the collection of **soft data** which measures the **"usage"** and **"impact"** of ICT.

Recent Developments

- ◆ **Core Indicators**

  - The ICT core list contains 4 sets of indicators:

    1. ICT infrastructure and access.

    2. Access to and use of ICT by households and individuals.

    3. Access to and use of ICT by businesses.

    4. ICT sector and trade in ICT goods.

  - The project include 5 sub surveys:

    1. ICT infrastructure.

    2. ICT usage in household.

    3. ICT usage in government.

    4. ICT usage in private sector.

    5. Public access points.

Partnership between MCIT & NSO

- In cooperation with the Central Agency for Public Mobilization and Statistics (CAPMAS) a list of core indicators is compiled through four main stages:
  - **First: Questionnaires Design:**
    - Guided by international ICT core indicators
  - **Second: Methodology:**
    - measuring the ICT usage within
      - households
      - private businesses
      - government
      - public sector enterprises
      - public access points (IT clubs and internet cafés)
    - coverage for all
      - geographic regions
      - income level categories
      - the sizes of enterprises and their capitals in case of private businesses.

Partnership between MCIT & NSO

◆ **Third: Conducting the surveys and extraction of the results:**

- Data is collected through field surveys
- Conducted twice every year, except for households, it is conducted four times a year
- Results are reviewed and revised by MCIT to ensure their consistency and accuracy
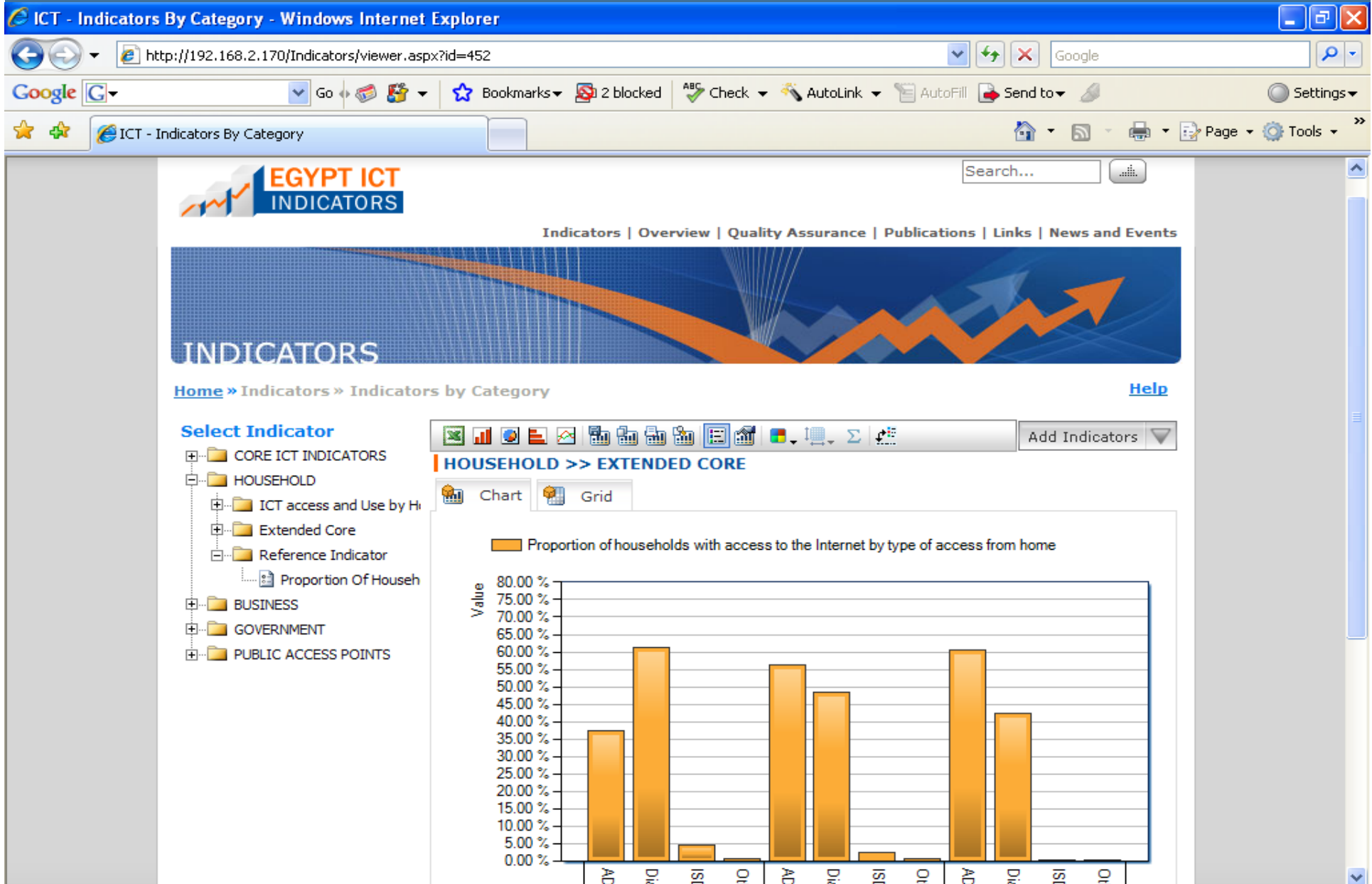
◆ **Forth: Analysis of the results:**

- Descriptive
- Comparative analysis techniques

Dissemination process

◆ **Publishing the Results:** Results of the project will be published through

- International organizations such as UNCTAD, ITU, WB, ESCWA,OECD and ECA are utilizing some of the results of this project in their publications.

- **"Portal of ICT indicators"**

  ◆ developed by the Ministry of Communications and Information Technology to disseminate information about ICT usage in the Egyptian society.

- Statistical Profile

- An Annual book "ICT usage in Egypt"

Portal of ICT Indicators

Portal of ICT Indicators

Work Flow

Developing surveys' questionnaires based on "ICT core indicators"

Designing the appropriate methodologies

Conducting the surveys by the CAPMAS

Extraction of the results

Analyzing the results

Publishing the results

ICT usage in Egypt .. (Annual book).

International organizations reports

ICT indicator portal

Egypt: A leading role model Regionally

◆ During different meetings held by International organizations in which Egypt – among other Arab countries- was present, Egypt was viewed as a pioneer in the area of ICT measurement:

- Integrating ICT measurement in ICT policy

- Cooperation between NSO & MCIT as in most Arab countries the project is executed by the NSO only

- Wide scope of coverage (Infrastructure, Household, Businesses, Internet café, IT clubs, University & School Education, Government)

- Questionnaire designing - A model undertaken by some Arab countries

- Sampling Design & Selection

- Results has already been generated

- Dissemination mechanism

Egypt: A leading role model Regionally

- Egypt took the lead in adopting the Arab Project for "Information Society Indicators and building Capacities to measure them" as well as 2 other projects among the projects that were submitted in the WSIS (2003, Geneva- 2005, Tunis) under the umbrella of the Arab League. This project is supported by the ESCWA as well as the Regional office of ITU.
- The project aims at:
  - Developing the Indicators for measuring the Information Society
  - Capacity Building
  - Developing a regional portal for the Information Society Indicators
  - Improving mechanisms of data collection
- Egypt was the first Arab country to measure PIACs
- Egypt's success in this area emerges from standardizing the indicators by aligning the methodology and definition with international standards (WSIS)
- At the same time we are aware of the Egyptian economy's characteristics and have adapted the surveys and samples to fit our economy and give meaningful results
  - 70% of the companies consist of Micro-sized companies

Initiatives / Projects

Applied Examples of using Indicators to asses & monitor policies

Measuring our Initiatives' progress

◆ The projects and programs undertaken by MCIT in cooperation with other ministries and NGOs collectively reflect the MCIT vision to use information and its underlying technologies to *further sustainable human development in Egypt* and *to build an information society capable of absorbing and capitalizing upon the emerging knowledge revolution.*

◆ ICT for Learning

- Egyptian Education Initiative

  ◆ Pre-university Education

  ◆ Higher Education

  ◆ Life Long Learning

  ◆ e-Learning Industry Development

- Illiteracy Eradication Initiative

- e-Learning Competence Center (eLCC)

ICT for Learning Indicators

Support Indicators	Percentage of IT teachers (%)	3.7
	ICT allocated budget in education (%)	5.8
	Percentage of schools connected to the Internet (%)	47
Inputs Indicators	Number of students per computer	29
	Number of teachers per computer	10
Utilization Indicators	Percentage of schools using multimedia materials for teaching	99.6
Output Indicators	Percentage of teachers having ICT certificates (%)	49.9
	Percentage of teachers having an email address (%)	25.1
	Percentage of students who had ICT training (%)	92.4
	Percentage of students having an email address (%)	21.7

ICT for Learning Indicators

Usage of Internet by Students according to Type of Activity

Activity	Percentage
Never use Internet	47%
To seach for general information	37%
Join chat rooms	20%
Follow up news	20%
Search for information related to school subjects	18%
Email	15%
Prepare school projects and homeworks	7%
Exchange informaion	6%
Prepare presentations	5%
Other usages	2%
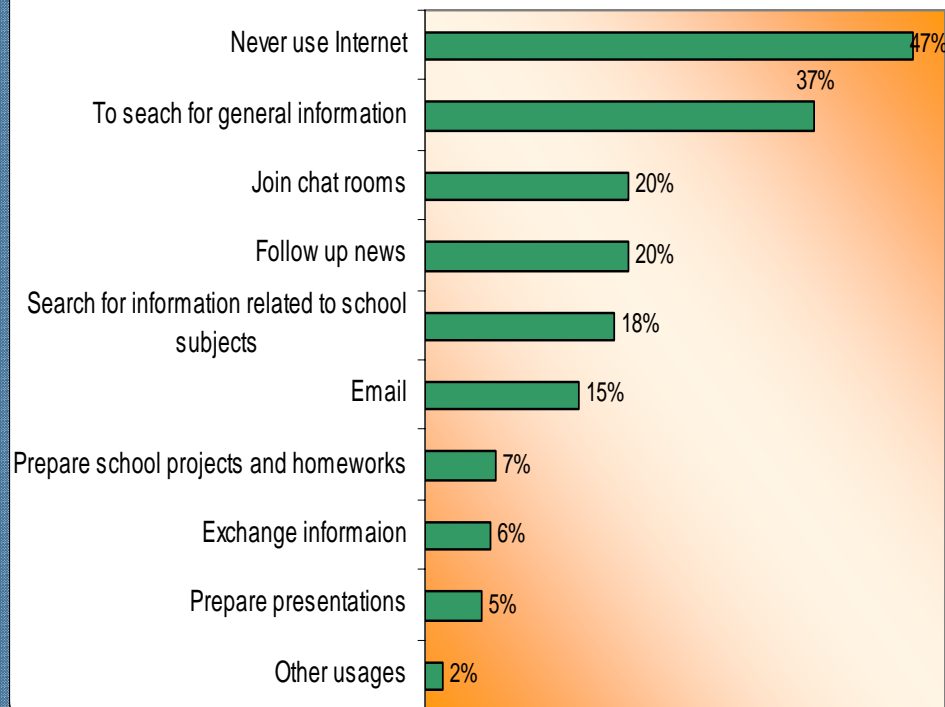
Frequency of Internet Usage by Students

- All the time: 3%
- Most of the time: 13%
- Sometimes: 38%
- Never: 45%
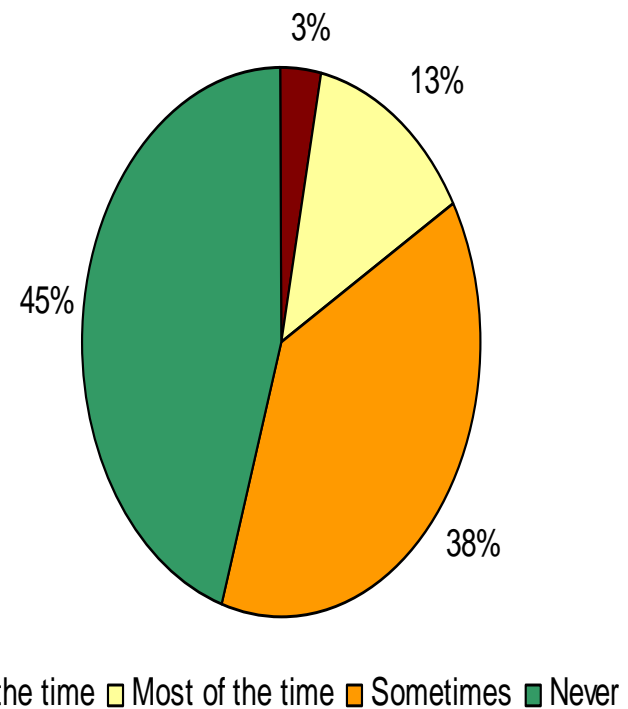
ICT for Health

- The principle objectives for the ICT for Health initiative are as follows:
  - **Extend** better medical diagnostic services to rural areas.
  - **Provide** a training facility for the medical community.
  - **Acquire** international consultations for special cases
  - **Reduce** the cost of health care by better patient management.
  - **Optimize utilization** of expertise and resources.
  - **Provide** an advanced medical service in emergencies
  - **Provide** consultations for Arab and African countries
  - **Create** an electronic databases for medical records
  - **Allow** for medical knowledge dissemination to the public.
  - **Provide** an advanced medical service in emergencies
- Proposed Indicators
  - Percentage of hospitals/health centers with Internet access
  - Percentage of hospitals/health centers with a Web site
  - Percentage of Internet users using it for health purposes
- This is still an area of multiple challenges concerning the methodology of data collection and calculation

ICT for Government

◆ The main drive of the e-Government initiative is *to modernize the citizen's experience of public services and to improve the functionality of the Egyptian government...*

◆ Aside from the benefits of e-government for citizens and investors, the e-Government initiative is *encouraging local markets* and *boosting demand for ICT* through the large volume of goods and services purchased in order to implement all its projects

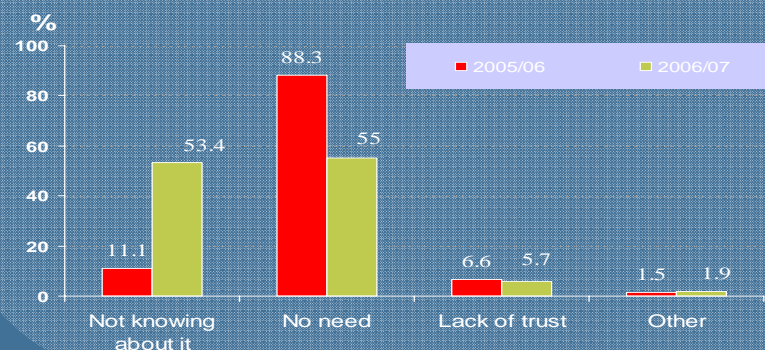# Core indicators on access to and use of ICT by households
E-Government

Households Dealing with E-Government

Households		2005/06	2006/07	% change
Using Internet		1,416	2,449	73
Dealing with	No.	202	178	-11.9
E-government	(%)	(14.3)	(7.3)	-7
Not Dealing	No.	1,214	2,271	87.1
With E-government	(%)	(85.7)	(92.7)	7

Purpose of Dealing with E-Government

Households	2005/06	2006/07
using the Internet	1,416	2,449
Dealing with *e-Government*	202	178
Purpose of dealing with *e-Government* (% from households using the internet)		
Phone bill	71.3	84.3
Information	54.5	59
University allocation office (Maktab Al Tanseeq)	23.8	24.7
National ID*	8.9	25.8
Car license*	7.9	25.3
Driving license*	6.9	25.8
Birth certificate	6.4	30.3
Other	6.4	3.4

Reasons for not Dealing with E-Government*
(% from Households Using Internet)

Bar chart (%):
- Not knowing about it: 2005/06 = 11.1, 2006/07 = 53.4
- No need: 2005/06 = 88.3, 2006/07 = 55
- Lack of trust: 2005/06 = 6.6, 2006/07 = 5.7
- Other: 2005/06 = 1.5, 2006/07 = 1.9

* Multiple answers are allowed.

* Renewal not issuance.

** Multiple answers are allowed.

E-Content

- ◆ Goals
  - preserving Arabic e-Content that forms the basis of intellectual and cultural inspiration for future generations.
  - to provide an opportunity to increase export possibilities in content material and
  - provide opportunities for content producing businesses to develop in Egypt.
- ◆ Proposed Indicators
  - Top Egyptian websites visited
  - Egyptian websites by type (e-gov, entertainment, educational, news..etc.)
  - Number of Internet hosts per 1000 inhabitants
  - Number of ISPs per 1000,000 inhabitants
  - Intensity of usage
  - Proportion of documents that are transferred to an electronic version by type, e.g. heritage, culture, e-books, governmental documents...

Access for All

- MCIT seeks
  - to guarantee universal, easy, affordable and rapid access for all Egyptian citizens to ICT,
  - and stimulating awareness of the potential uses and benefits of ICT
- In this respect, MCIT has implemented a number of programs with the chief aim of providing benefits to users, promoting computer literacy, and encouraging increased use of ICT by the public.
- In order to monitor progress MCIT has financed NGOs to conduct private business surveys to measure the impact of the awareness program

Case Study of Egypt Information Economy Report 2007/08

◆ Based on coordination with ICT Division in UNCTAD to provide expertise in surveying and analyzing the ICT industry in Egypt to achieve the followings:

- Classifying ICT industry according to International standards

- Defining the ICT workforce characteristics

- Assessing the ICT co awareness about Government Support Programs

◆ UNCTAD assisted in the followings processes:

- Drafting of the questionnaire to be sent to the companies

- Identification process of the companies to be surveyed based on the appropriate classification of the ICT sector and ICT professions

- Data analysis process (based on the data received from ITIDA) and in the drafting of the results

- Disseminating part of the results via its Information Economy Report 2007 (in agreement with ITIDA)

Case Study of Egypt
Information Economy Report
2007/08

- ◆ **MCIT/ITIDA assisted in the followings processes:**
  - • **send out the questionnaire to the companies by email**
  - • **collect the responses and verify the data with the companies (i.e. follow-up to questionnaire)**
  - • **enter the data into a database**
  - • **make the clean data available**
  - • **contribute to the drafting of the results**

Box 2.1

Joint UNCTAD – Government of Egypt project on the ICT sector

The Ministry of Communication and Information Technology (MCIT) of Egypt and its Information Technology Industry Development Agency (ITIDA) have formulated an ICT strategy aimed at transforming their economy into a regional hub of ICT production and service provision. The policies put in place have been successful in attracting foreign investment and outsourcing contracts in the Egyptian ICT sector. A large part of the existing ICT enterprises are concentrated in technology parks and incubators. There is strong government support for providing the necessary ICT infrastructure at accessible prices.

The ICT and E-Business Branch of UNCTAD and MCIT worked together to conduct a survey on Egypt's ICT sector with the objective of obtaining detailed firm-level information. UNCTAD assisted ITIDA in the design of a questionnaire. The main aim of the questionnaire was to identify the product portfolio of the Egyptian ICT sector, its imports and exports as well as key trading partners, the workforce, key financial indicators, participation in public support programmes and remaining obstacles to growth. The data were collected, verified and entered into a database by ITIDA, in cooperation with a local counterpart. The subsequent data analysis was carried out by both UNCTAD and MCIT.

The survey was sent to a sample of 250 ICT companies in Egypt, 151 of which responded. The results presented in this chapter are based on those companies' responses and are thus not representative of the entire ICT sector in Egypt.

The results of the survey will be used to fine-tune ICT policymaking in Egypt. In the first stage, the data will help to benchmark the performance of the ICT sector against policy targets. In the second stage, research will aim at revealing some of the factors responsible for success or failure in meeting certain policy targets.

ICT Policy Review of Egypt

- ◆ A project to be launched in June 2008 in a co-operation between MCIT & UNCTAD
- ◆ Aims to carry out a review of the Egyptian ICT Plan for Information and Telecommunications Development launched in 1999
- ◆ The Government of Egypt has already assessed some policy measures of the National Plan for Information and Telecommunications Development
  - removal of restrictions on computer-related services
  - the deregulation of the telecommunication sector
  - the privatization of the telecommunications
- ◆ The review model framework focuses on three main components:
  - A **review of the general economic environment and ICT diffusion** to assess the extent to which ICTs are available and used in the country;
  - An **assessment of the key policy components** of the national ICT master plan and their implementation
  - An **assessment of the institutional framework**, implementation mechanisms and the roles of each stakeholder.

Impact assessment

◆ The Ministry is currently engaged in an "Impact Assessment Project" in collaboration with international consultants as well as local part-time consultants.

◆ This project aims at measuring the impact of ICT uptake on the Egyptian economy, mainly focusing on

- Growth

- Investment

- Exports

- employment.

Challenges Ahead

◆ New indicators appear everyday, especially in areas such as health, environment, media convergence, & security which necessitates:

- Capacity Building

- Definitions

- Methodologies

◆ ICT is a very dynamic sector, hence indicators published internationally need to be up-to-date. Countries with older data should be the exception, for e.g. reports of 2008 has to publish data of 2007.

◆ Countries should be involved in the methodologies' formulation since some drawbacks have appeared for certain country groups:

- Low penetrations Vs. High growth rates

- Population Vs. Household penetrations

THANK YOU

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