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*National ICT Strategy for Syria:*  
**Methodology, Outcome,  
and Implementation**

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Workshop on  
**ICT Policy Making in ESCWA Member Countries**

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# Outline

1. **The Vision**
2. **The Process**
3. **Goals, Objectives, and Intended Outcome**
4. **Strategic Approach**
5. **Challenges and Obstacles**
6. **The Action Plan**
7. **Implementation and Follow-up**

# What is a National ICT Strategy

- ❑ A National ICT Strategy is a strategic document that captures the *national vision* defining the use of ICTs for social and economic development
- ❑ ICT Strategy is more related to:
  - ❑ Infrastructure development
  - ❑ HR development
  - ❑ Market and Environment development
  - ❑ The way towards the “Information Society”
- ❑ ICT Strategy should lead to a clear, timetable-based **Action Plan**
- ❑ *ICT Strategy is the basis for eStrategies*

# *Step 1: Develop the Vision*

- ❑ The Vision should be clearly linked to **national development priorities**
- ❑ It should articulates a fairly concrete set of **ICT-related objectives** that the country aims to achieve
  - ❑ *ICTs: a productive sector, or a facilitator of overall development?*
- ❑ Check the ***feasibility*** of the vision
  - ❑ **Assessment of the current situation**
  - ❑ **Deployment of necessary means and resources to implement the vision**

# ICT Vision of Syria

***Developing the ICT Sector to partake in the country's social and economic development, by elaborating policies, strategies and action plans leading to the growth of the telecommunication market, with the participation of stakeholders from both public and private sectors.***

***This should be conducted to allow for substantial income, and provide telecommunication services, such as fixed and mobile telephony, data communications, and Internet access, with high quality and affordable prices, to all citizens and institutions countrywide.***

# ICT Vision of Syria

**Promoting ICT for social and economic development by setting Government policies, strategies & action plans, with the participation of all stakeholders, in a way that:**

- ❑ Provides competitive, high quality ICT services to all individuals and organizations
- ❑ Enhances business productivity and competitiveness
- ❑ Promotes an ICT-oriented economy
- ❑ Supports social development, public participation and transparency
- ❑ Increases the GDP
- ❑ Produces & disseminates ICT-based knowledge, with a special emphasis on Arabic local content
- ❑ Creates proper legal and regulatory framework

## *Step 2: Define the Process*

- ❑ Ensure *Government commitment*
- ❑ Fit within existing national development frameworks
- ❑ Adopt an open, *participatory approach*
- ❑ Raise awareness
- ❑ Follow international standards and best practices

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# Prerequisites in Syria

- ❑ **Comprehensive economic and financial reform program:**
  - ❑ *Sustainable economic development*
  
- ❑ **Comprehensive administration reform program:**
  - ❑ *Public service culture*
  
- ❑ **Comprehensive socio-political development program:**
  - ❑ *Enhancing citizens contribution in decision making*



## *Step 3: Set Up the Objectives*

- ❑ **Set up the global principles**
- ❑ **Define the intended outcome**
  - ❑ **How to measure the outcome?**
    - ❑ *Benchmarks, Indicators, ...*
- ❑ **Determine the required investment and the expected return on investment**

# Syria: From Vision to Action...

- ❑ Achieve a *quantum leap* in infrastructure development
- ❑ Stimulate *supply & demand* in the ICT market
- ❑ Equally distribute the benefits of ICTs to all citizens and geographic areas
- ❑ Gradually promote “*multiplicity*” and *competition*
- ❑ Foster the *Information Society*
  
- ❑ Tackle obstacles and challenges
  
- **10-year Plan**

# Strategic Objectives 2013

- ❑ **Infrastructure:**
  - ❑ **Fixed telephony: 30% penetration rate**
    - ❑ 4 million new lines
  - ❑ **Mobile telephony: 30% penetration rate**
    - ❑ 6 million new lines
  - ❑ **Internet: 20 subscribers per 100 people**
    - ❑ 4 million subscribers in total
  - ❑ **PCs: 30 computers per 100 people**
    - ❑ 6 million PCs in total

# Strategic Objectives 2013

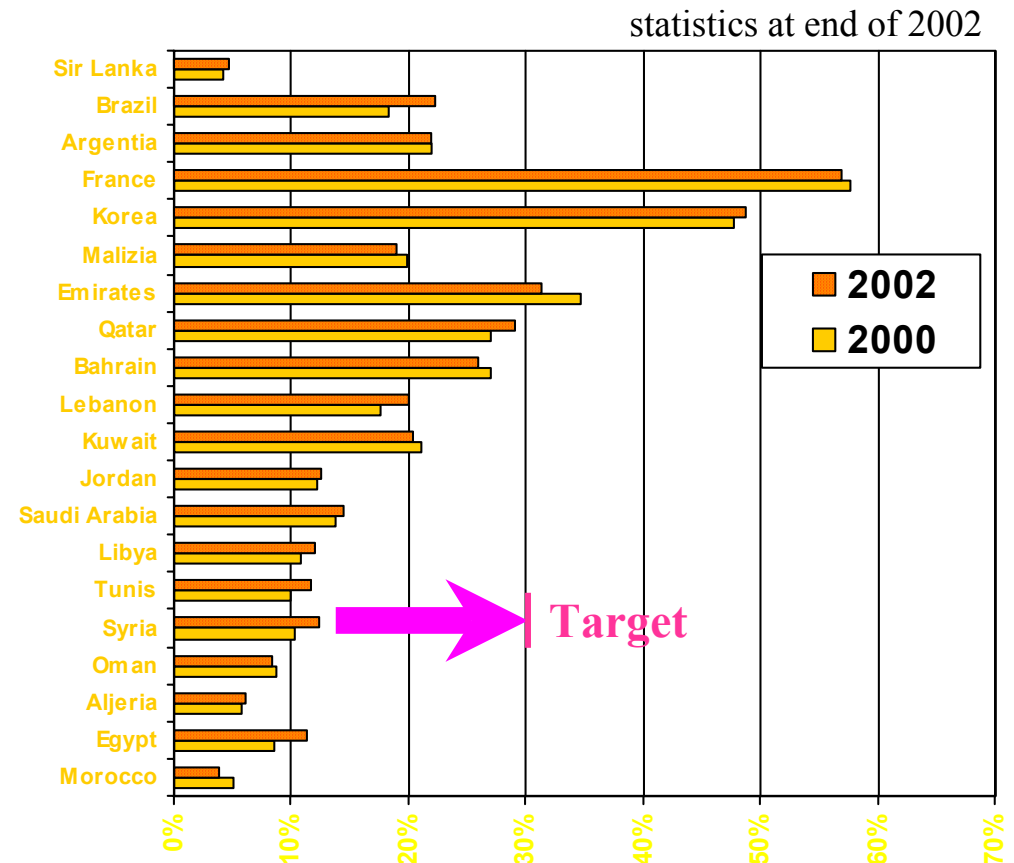
- ❑ **Enabling Environment:**
  - ❑ **Multiplicity & Competition**
    - ❑ **Syrian Telecom reform**
  - ❑ **Regulation**
  - ❑ **Legislation**
    - ❑ **New Telecom Act**
  - ❑ **Participation of the civil society**
  - ❑ **Security and Privacy**

# Strategic Objectives 2013

- **Human Resources:**
  - **ICT in education and higher education**
  - **ICT in the workplace**
  - **ICT in R&D**
  
- **Building *strategic partnerships* with suppliers and service providers**

# Fixed Phone Penetration

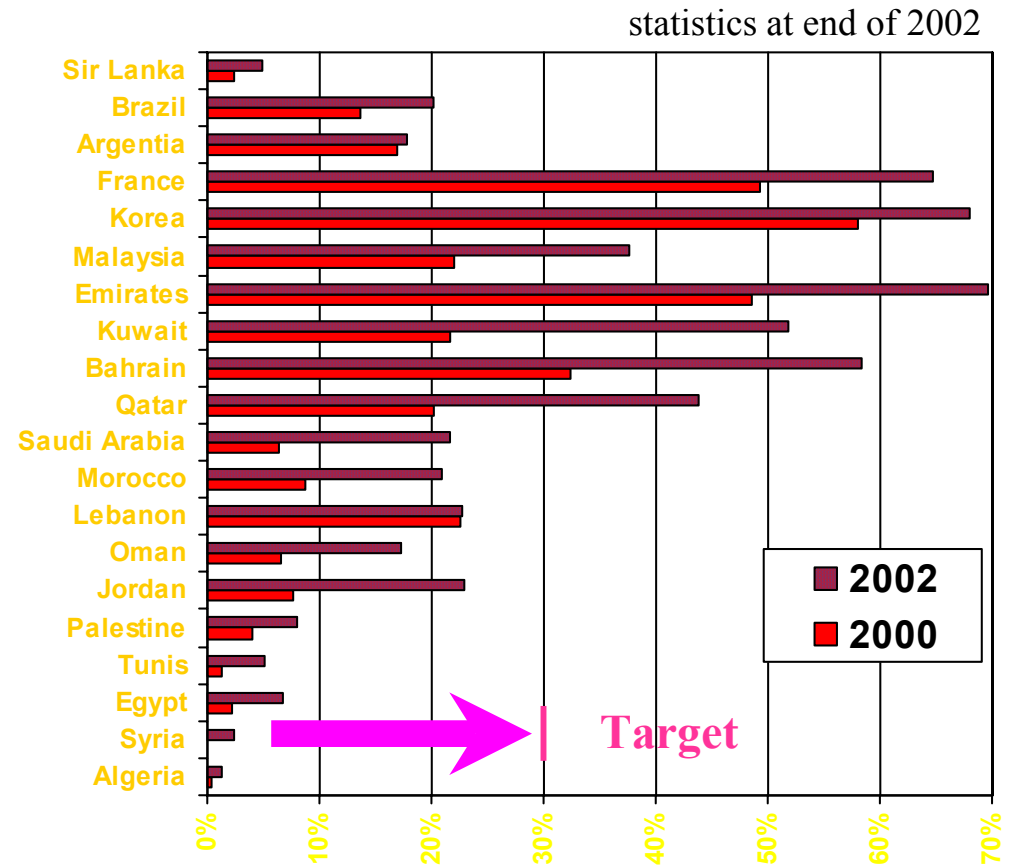
- ❑ Target: one line per family
- ❑ 4 million new lines
- ❑ +125% on current situation
- ❑ Investment: \$600 million



ITU 2003

# Mobile Phone Penetration

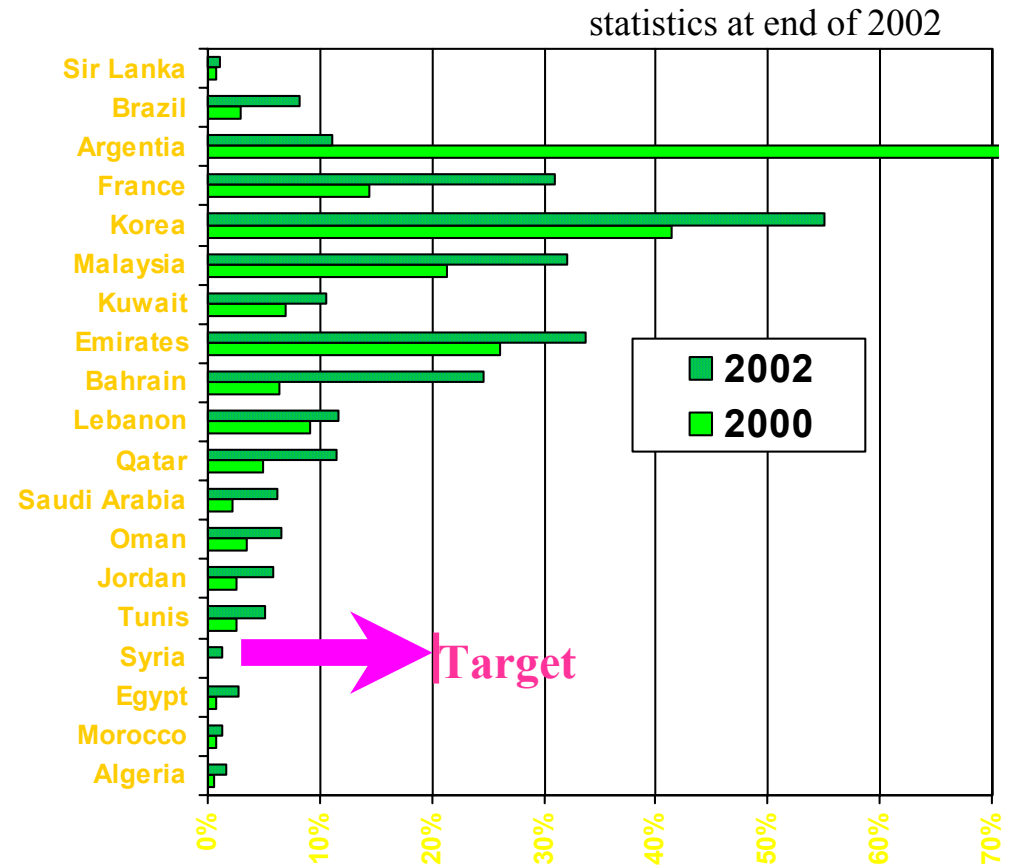
- ❑ Target: one line per 3 people
- ❑ 6 million new lines
- ❑ 6 times the current situation
- ❑ Investment: \$4 billion (equipment + cell phones)



ITU 2003

# Internet Penetration

- ❑ Target: 20 users per 100 people
- ❑ 4 million subscribers
- ❑ Investment: \$200 million



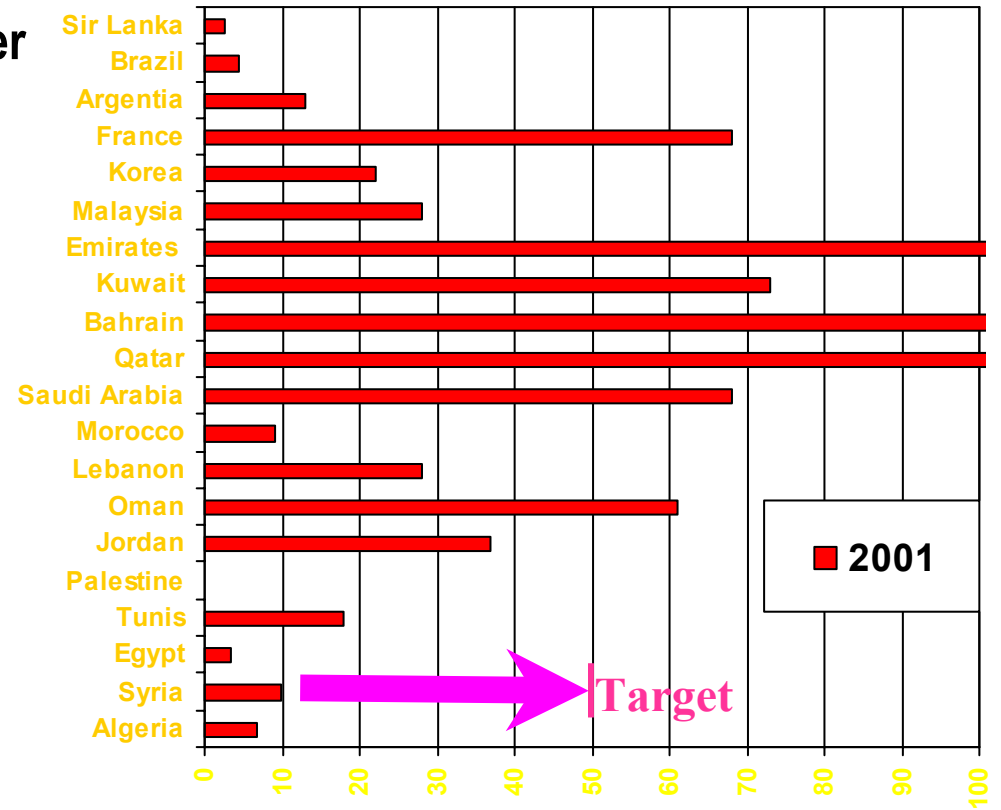
Arab Consultants 2003



# International Telephone Calls

2001 statistics

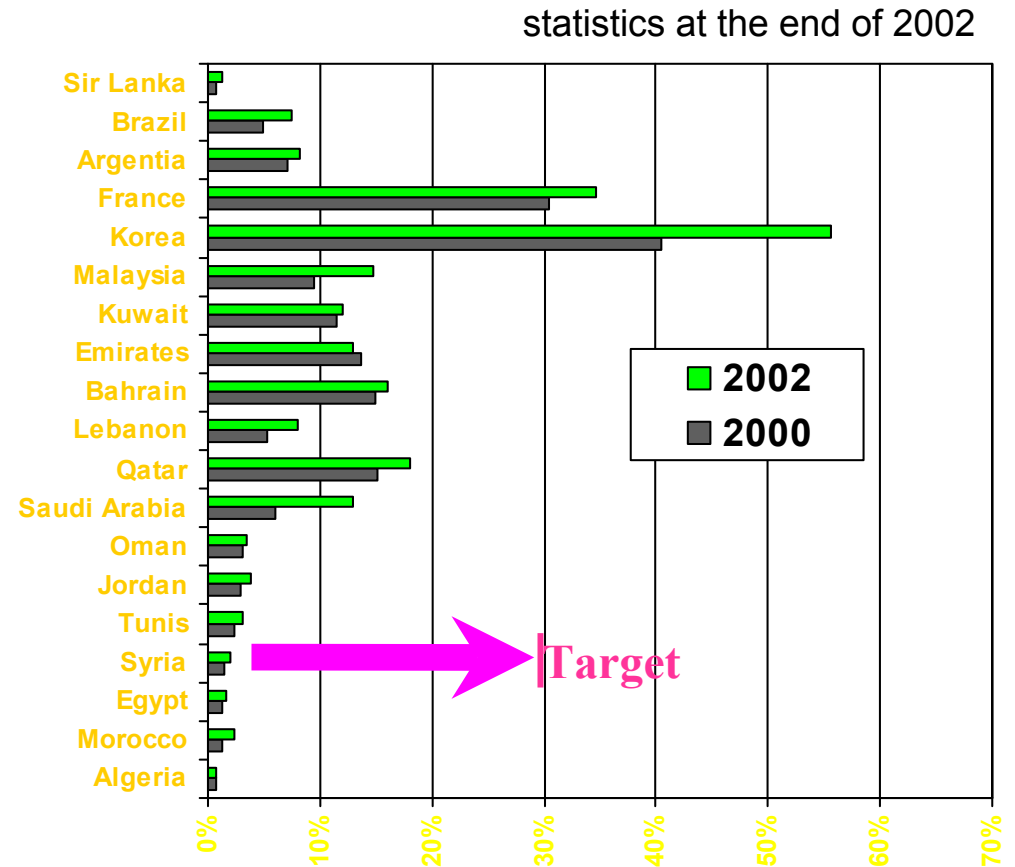
Minutes of international calls per year per capita



ITU 2003

# PC Penetration

- ❑ Target: 30 PCs per 100 people
- ❑ 6 million PCs
- ❑ Investment: \$3 billion (\$600 per PC)

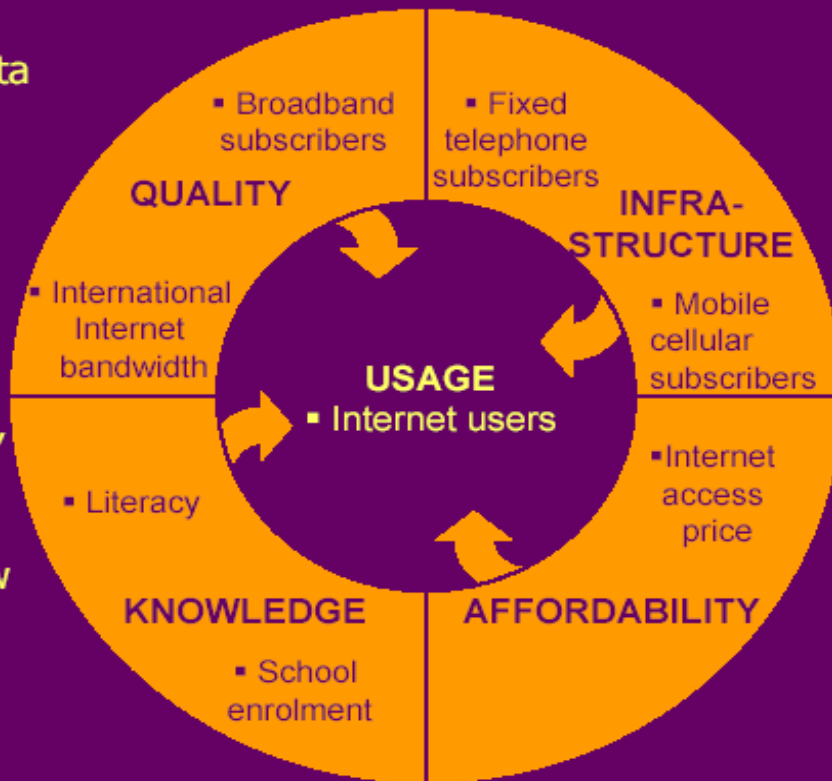


ITU 2003

# Digital Access Index

## Digital Access Index

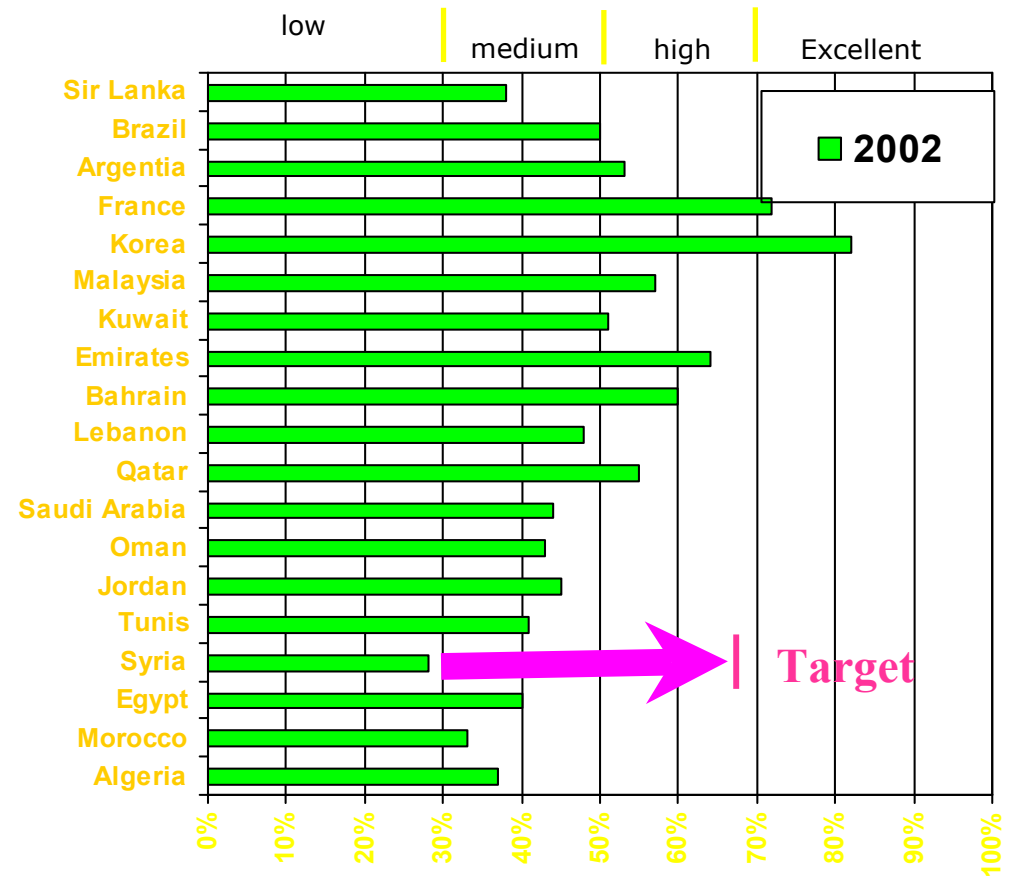
- **ITU expertise:**
  - Leading source of ICT data
  - Analysis and research strength
- **Inclusive:**
  - 178 economies, most of any other ICT index
- **Transparent:**
  - 5 categories, 8 indicators, easy to decode
- **Classifications:**
  - High, upper, medium, low
- **Flexibility:**
  - gender sub-index
  - national indices
  - index over time



# Digital Access Index

## More precise index

- Quality
- Knowledge
- Tariffs
- infrastructure
- Usage



## *Step 4: Adopt the Strategic Approach*

- ❑ **What mechanisms?**
- ❑ **What *Strategic Tracks***
- ❑ **Who provides the goods & services?**
  
- ❑ **Who pays?**

# 10-year Investment

- ~ > **US\$ 8 billion (4% of the GDP over the 10 years)**
  - **State: US\$ 2 billion**
    - Infrastructure (backbone and access)
    - Government information systems and IT equipment
  - **Private business: > US\$ 2 billion**
  - **Public: US\$ 4 billion**
    - PCs, terminals, and handsets

# 10-year State Revenue

- **Key figures:**
  - **State revenue from duties and income tax:**  
~ US\$ 4.5 billion
  - **Revenue sharing from BOT mobile contracts:**  
~ US\$ 3.5 billion

# Strategic Tracks

## *Stimulating Supply & Demand...*

<p><b><i>Demand by Institutions</i></b></p> <ul style="list-style-type: none"><li>❑ Administration reform (information systems, ...)</li><li>❑ Banking reform</li><li>❑ Industry reform (competitiveness, ...)</li></ul>	<p><b><i>Supply of Software &amp; Hardware</i></b></p> <ul style="list-style-type: none"><li>❑ Hardware assembly (“Popular Computer” projects, ...)</li><li>❑ Software production (Incubators, ...)</li><li>❑ Arabic content</li></ul>
<p><b><i>Demand by Individuals</i></b></p> <ul style="list-style-type: none"><li>❑ Balancing tariffs (fixed and mobile telephony, datacom, ...)</li><li>❑ Diversifying services</li><li>❑ Promoting use of PCs and application software</li></ul>	<p><b><i>Supply of Services</i></b></p> <ul style="list-style-type: none"><li>❑ Infrastructure development</li><li>❑ Sector regulation, competition</li><li>❑ Creation of “Centers of Excellence”</li><li>❑ Consulting and provision of value-added services</li></ul>



# *Strategic Proposals:*

## **Infrastructure and Enabling Environment**

- ❑ **Leapfrogging the telecom infrastructure**
  - ❑ **Fixed, mobile, Internet, ...**
  
- ❑ **Promoting the use of PCs in universities & schools**
  
- ❑ **Popular PC Project(s)**
  
- ❑ **Corporatization of STE**
  - ❑ **Recapitalization, contracting regulations, compensation and benefits, competitiveness, ...**
  
- ❑ **New Telecom Act**
  - ❑ **Telecom sector regulation**

# *Strategic Proposals:*

## **Local Demand**

- ❑ **Administration reform program in Government bodies**
  - ❑ **Extensive use of ICTs**
  
- ❑ **National *IT Center***
  
- ❑ **Price rebalancing, Universal Service**
  - ❑ **Lower international call rates**
  
- ❑ **Market stimulation to prepare for international agreements**
  - ❑ **EU Association Agreement, GAFTA**

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# *Strategic Proposals:*

## **Local Supply**

- ❑ **Technology parks, hosting:**
  - ❑ **Business incubators**
  - ❑ **Universities and colleges**
  - ❑ **ICT Special Investment Zones**
  
- ❑ **Local Assembly of ICT equipment**
  
- ❑ **Localization of software industry, Arabic software**

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# *Strategic Proposals:*

## **Knowledge Society**

- ❑ **High-level Universities, specialized in ICT**
- ❑ **National program to upgrade the Higher Education**
- ❑ **Vocational Training**
- ❑ **National Campaign to increase public awareness on Knowledge Society**
  - ❑ **Arab Human Development Report**
- ❑ **Quantum leap in knowledge and culture**
  - ❑ **Transparency...**

## *Step 5: Identify Challenges and Obstacles*

- ❑ **Identify challenges, impediments and obstacles**
- ❑ **Actions to overcome those obstacles...**

# Syria: Challenges and Obstacles

- ❑ **Lack of human resources (brain drain)**
  - ❑ **Syrian Expatriates**
  - ❑ **Education, training (long term)**
- ❑ **Lack of hard currency**
  - ❑ **Encourage investment**
- ❑ **Suitable investment climate**
- ❑ **Technology challenges**
- ❑ **Technology embargo**
  - ❑ **Efficient economic and diplomatic efforts**
  - ❑ **Strategic partnerships**
- ❑ **Compensation and benefits**
- ❑ **Bureaucracy, and resistance to change...**

## *Step 6: Draw the Action Plan*

- ❑ **Programs, projects, and initiatives**
- ❑ **Timetable**

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# Main Stakeholders

- ❑ **Ministry of Communications and Technology (MoCT)**
- ❑ **Syrian Telecom Establishment (STE)**
- ❑ **Syrian Computer Society (SCS)**
- ❑ **Private mobile operators**
- ❑ **Private Internet service providers**
- ❑ **Private IT companies**



# Supporting Stakeholders

- ❑ **Ministries of Education and Higher Education**
  - ❑ **Human resources**
  
- ❑ **Ministries of Finance and Economy**
  - ❑ **Economic development**
  
- ❑ **Banks**
  - ❑ **Financial support**
  
- ❑ **Ministry of Industry**
  - ❑ **Production activities**
  
- ❑ **Chambers of Commerce and Industry**

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# Action Plan: Programs and Initiatives

## □ Programs

- Telecom Sector Restructuring Program
- IT Sector Building Program

## □ National Initiatives

- National Initiative for Electronic Public Administration
- National Initiative for Technology Zones
- National Initiative for Sectoral Centers of Excellence
- National Initiative for Capacity Building
- National Initiative for the Knowledge Society

# Telecom Sector Restructuring Program

*Achieve a quantum leap in telecommunication infrastructure and services*

- ❑ Telecom infrastructure development
- ❑ A new, modern Telecommunications Act
  - ❑ Relations between the sector's main stakeholders
- ❑ Sector Regulatory Body
  - ❑ Duties and responsibilities of different parties, Consumer rights, ...
- ❑ Syrian Telecom Establishment restructuring
  - ❑ Efficiency, Flexibility, Competitiveness, ...

# IT Sector Building Program

*Upgrade IT infrastructure to the appropriate level*

- ❑ **Promotion of Internet usage in Syria through the National Public Data Network (PDN)**
- ❑ **e-Legislations, Information privacy, ...**
  - ❑ **duties and rights...**
- ❑ **IT profession regulation**
- ❑ **Popular PC Project(s)**

# National Initiative for Electronic Public Administration

*Promote computerization of Government institutions in the context of a comprehensive Administration Reform program*

- ❑ **National Task Force to coordinate the initiative**
  - ❑ Work plans, Government work procedures, Government services, new contracting regulations, ...
- ❑ **National IT Center**
  - ❑ Provide Public institutions with expertise, business process reengineering
- ❑ **Decision Support Center**
- ❑ **e-Government projects**
  - ❑ Government-citizens interaction

# National Initiative for Technology Zones

*Establish Technology Zones to host universities, incubators and software houses*

- ❑ *National Task Force to coordinate the initiative*
  
- ❑ **Two Technology Zones**
  - ❑ **In the South and North of Syria**

# National Initiative for Sectoral Centers of Excellence

*Promote ICT to improve sectors' productivity*

- ❑ **Center of Excellence for Banking reform**
  - ❑ **Central Bank of Syria, other public and private banks**
  - ❑ **Provide banks with expertise, business process reengineering, computerization, IT solutions, ...**
  
- ❑ **Center of Excellence for Finance and Accounting**
  - ❑ **Ministry of Finance, the banking sector, Chambers of Commerce and Industry**
  - ❑ **Provide expertise in finance and accounting, consulting, IT solutions, ...**

# National Initiative for Capacity Building

*Improve ICT technical capacities of Syrian graduates*

- ❑ ***National Task Force to coordinate the initiative***
  - ❑ **Ministry of Higher Education, Ministry of Communications and Technology, Ministry of Industry, Syrian Computer Society, ...**
- ❑ **Specialized ICT Universities and Colleges**
- ❑ **Link between applied research and business activities**
- ❑ **ICT capacity building programs to improve productivity in industry, agriculture and the service sector**



# National Initiative for Knowledge Society

*Disseminate ICTs in urban and rural areas*

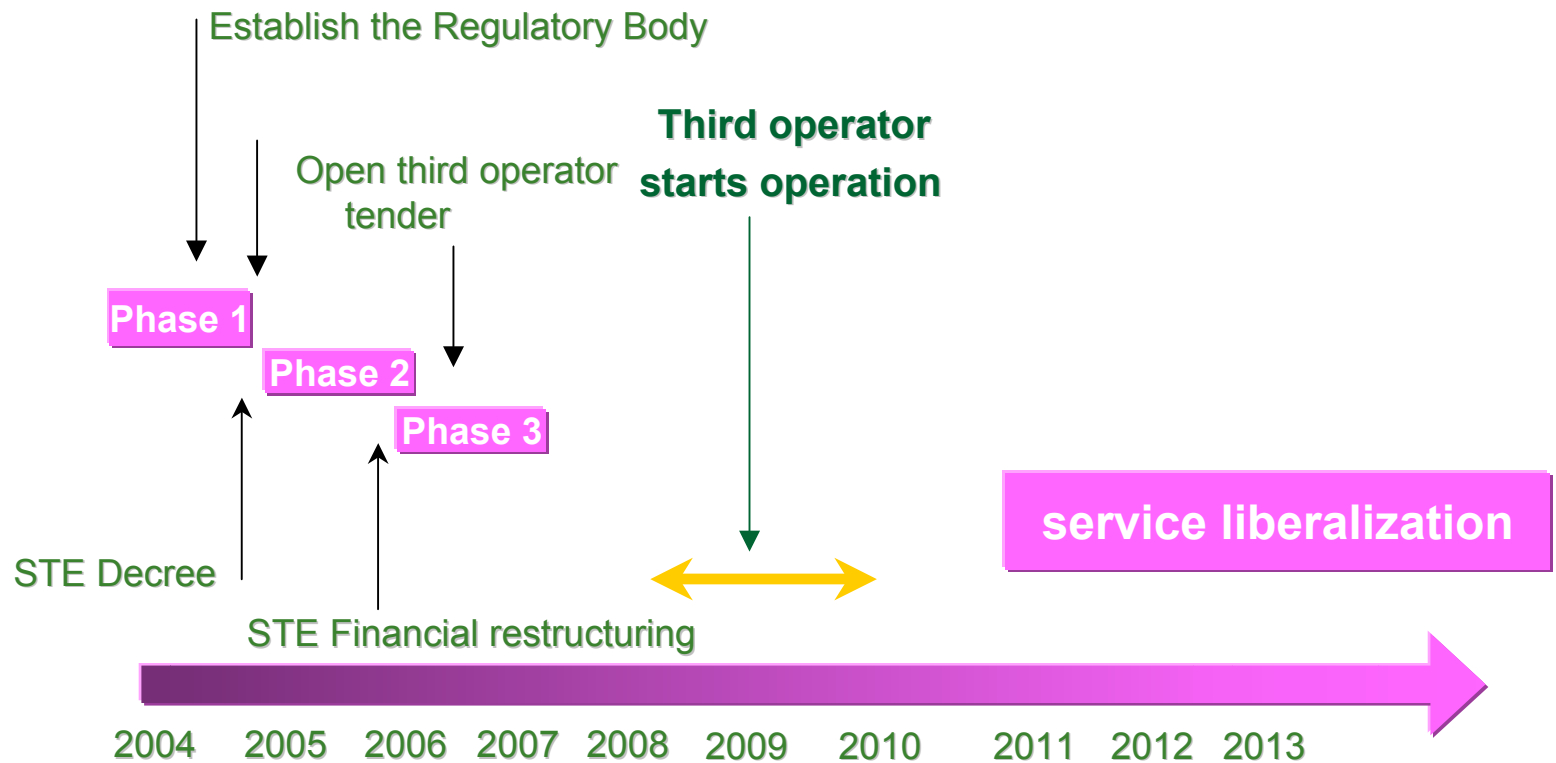
- ❑ **Adopt WSIS outcome**
- ❑ **Promote Internet cafés, and establish community centers in rural and remote areas**
- ❑ **Encourage Arabic content creation**

# *Step 7: Monitor the Implementation*

- ❑ **Project-management approach**
  
- ❑ **Define responsibilities**
  - ❑ **Inter-ministerial Body, Council, etc.**
  - ❑ **Lead Ministry(ies)**
  
- ❑ **Track the defined indicators**

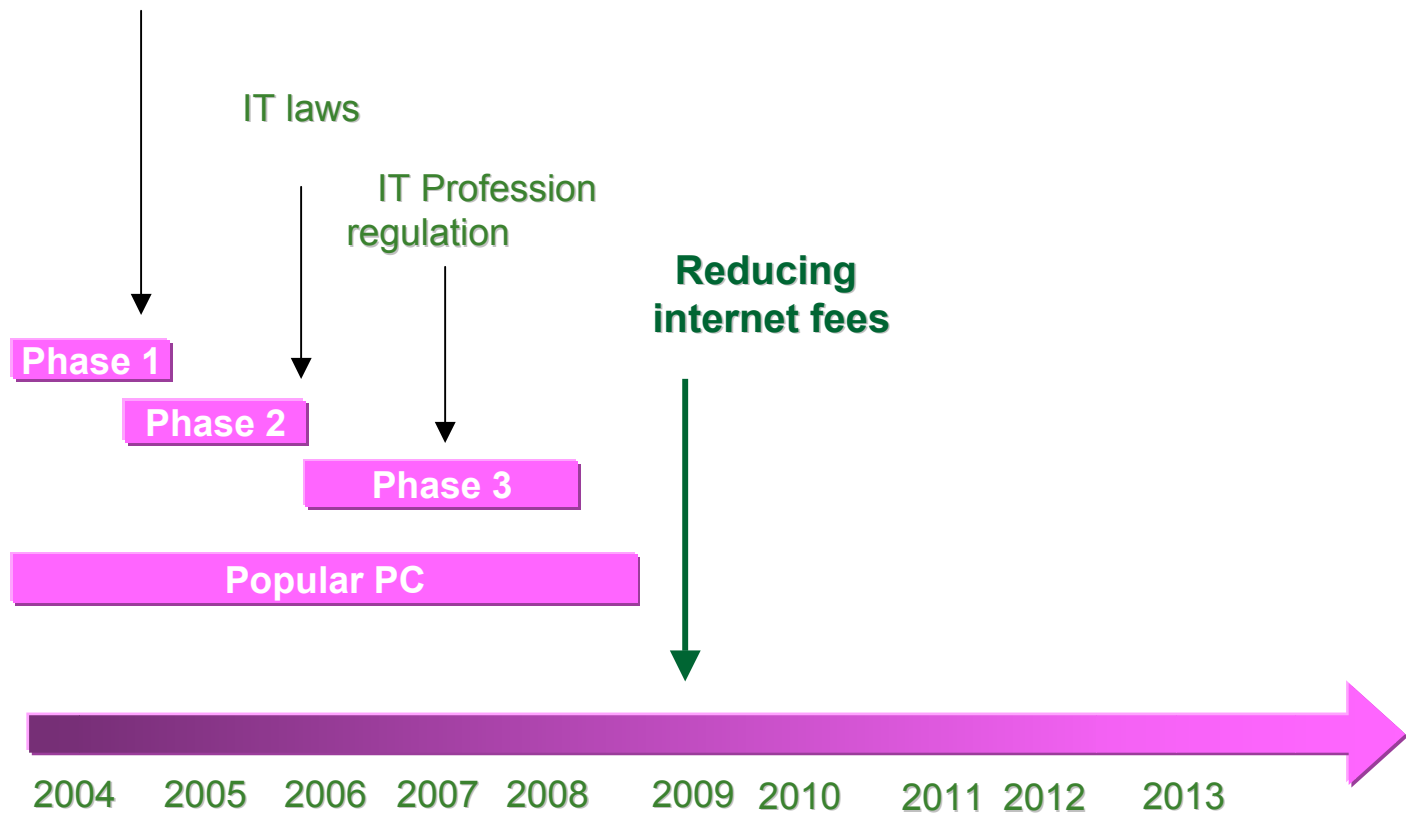
# Telecom sector Restructuring Program: Timetable

Issue the Telecommunications Act



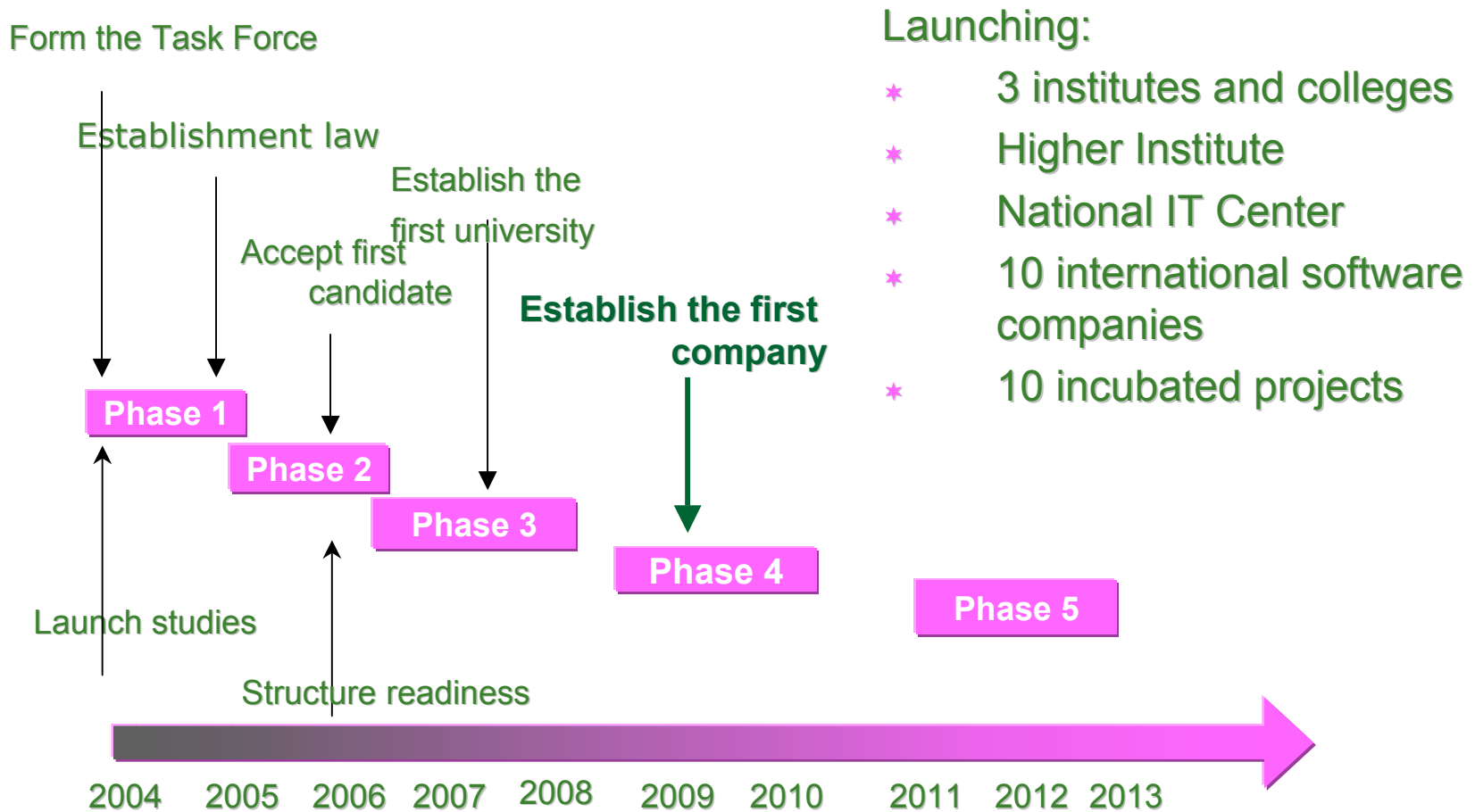
# IT Sector Building program: Timetable

National public data network, PDN



# National Initiative for technology zones: Timetable

Form the Task Force



Launching:

- \* 3 institutes and colleges
- \* Higher Institute
- \* National IT Center
- \* 10 international software companies
- \* 10 incubated projects

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## *Example of Follow up:*

# Telecom Sector Restructuring Program

- ❑ **Implementation of one of the Action Plan's Programs**
- ❑ **Action lines and outcome**

# Action Lines (1)

- ❑ **Develop telecom infrastructure**
- ❑ **Track ICT indicators**
- ❑ **Launch a national dialogue on telecom sector development**
- ❑ **Corporatize Syrian Telecom**
  - ❑ **Agility, flexibility, and market competitiveness**

# Action Lines (2)

- ❑ **Draft a comprehensive new Telecom Act**
  - ❑ **Separate policy making, regulation, and operation**
  - ❑ **Define the sector liberalization process**
  - ❑ **Regulate the relations among the sector's main stakeholders**
  
- ❑ **Establish a national telecom Regulatory Body**
  - ❑ **Grant authorizations and licenses**
  - ❑ **Regulate competition**
  - ❑ **Regulate network interconnection**
  - ❑ **Ensure universal service**
  - ❑ **Protect consumers**
  - ❑ **Guarantee privacy and data protection**



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# Telecommunication Infrastructure

- **Development of the Telecom infrastructure in Syria**
  - *Separate Presentation*

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# ICT Indicators

- **Information Society Indicators in Syria**
  - *Separate Presentation*

# Syrian Telecom Corp.

- **2005**            **New top-level organizational structure approved**  
**Job description initiated**
- **2005**            **Creation decree drafted**  
**Bylaws drafted**
- **2006**            **Organizational structure implemented**  
**Job description finalized**
- **2006**            **Creation decree *hopefully* adopted**
- **2006-08**        **Financial restructuring**

# The Telecommunication Act

- **2005**            **Telecom Law drafted**
  
- **Q1 2006**        **Reviewing and benchmarking against international legislations (the EU Regulatory Framework)**
  - *The NATP-2 Project*
  
- **Q2 2006**        **Enforcement expected**

# The Regulatory Body

- **2005**                    **Establishment included in the draft Telecom Law**
  
- **2005**                    **Functional Design drafted**  
                                 **Job description initiated**  
                                 ➤ *The ISMF Project*
  
- **2006**                    **Structure approved**  
                                 **Job description finalized**
  
- **2006-07**                **Capacity Building**  
                                 ➤ *The NATP-2 Project*

# Market Liberalization

- ❑ **Waiting for the Telecom Law enforcement...**
  
- ❑ **2001-            Mobile operators under BOT contracts**
- ❑ **Q1 2008        Entry of the 3<sup>rd</sup> mobile operator**
  
- ❑ **2005            New ISPs enter the market**
- ❑ **2005            New VASPs enter the market**
  - *The Intelligent Network Platform*
  
- ❑ **2006            Drafting the “Commitment Schedule”  
for market liberalization**

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# Conclusion

- ❑ **Clear-cut Government policies needed**
- ❑ **Integration in the Global Economy**
- ❑ **Market liberalizing, ICT sector restructuring and regulation**
- ❑ **Allocation of required investments**
- ❑ **Public-Private Partnership**
- ❑ **Focusing on social and economic development**

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Thank you