

Cyber Security Initiatives in Saudi Arabia

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- **KSA Demographics and Economy**
- **ICT and Economic Development in KSA**
- **Cyber Security Legislation**
- **Saudi Arabian - CERT:**
 - **Mandate**
 - **Implementation Plan**
 - **New Licensing 2006: Fixed and Mobile**
- **Conclusions**





KSA Demographics and Economy



ICT and Economic Development in KSA



Cyber Security Legislation



Saudi Arabian - CERT:

- Mandate
- Implementation Plan
- New Licensing 2006: Fixed and Mobile

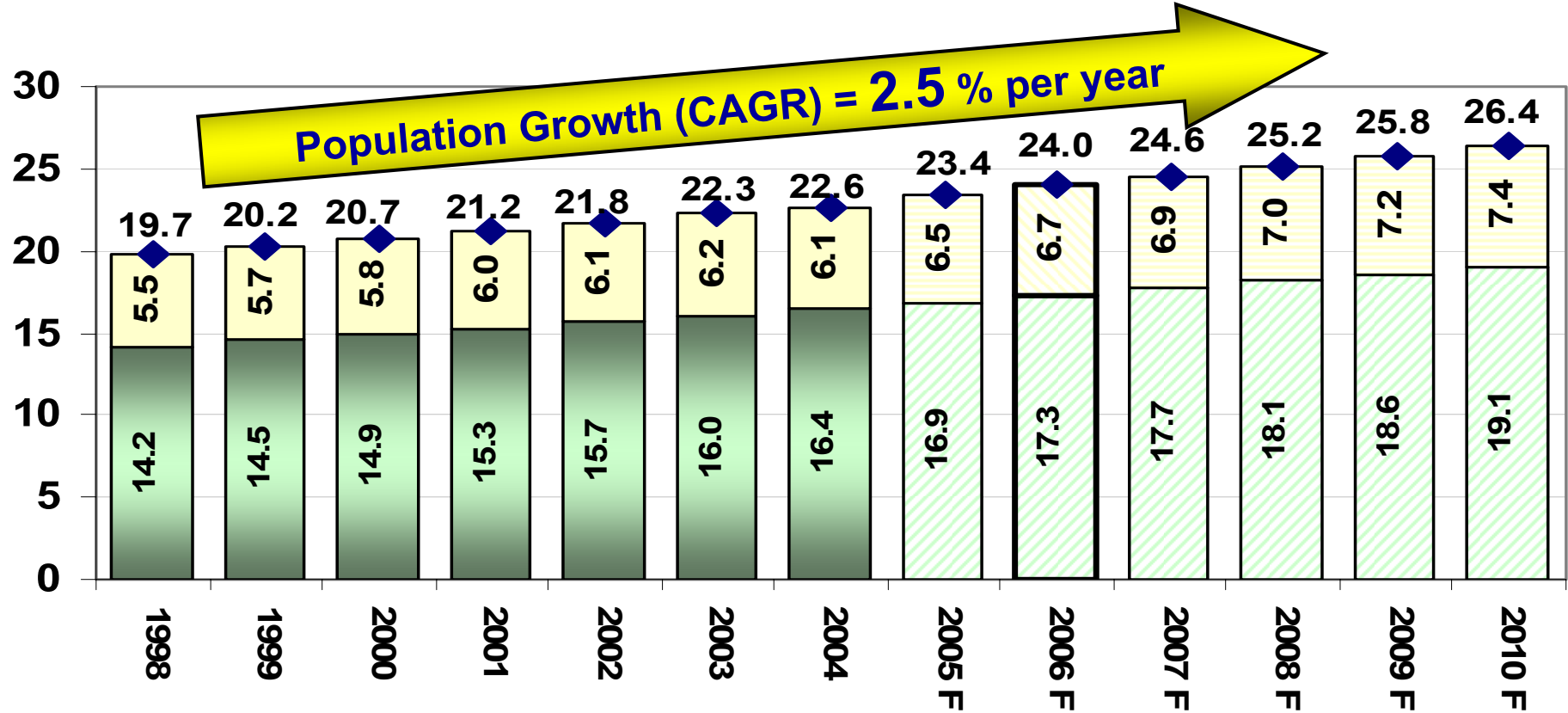


Conclusions

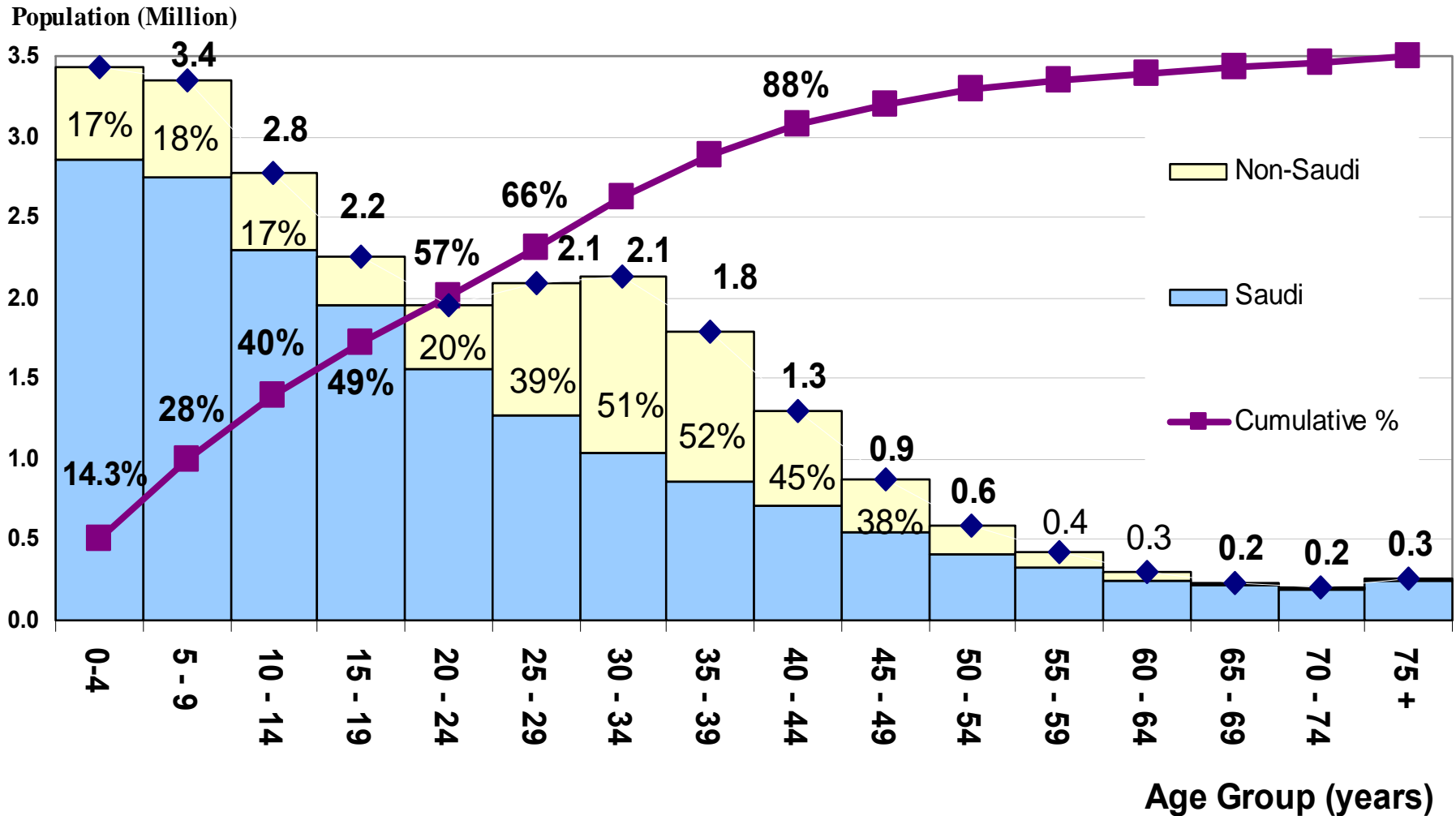


Population (Million, Mid Year, Based on 2004 Census)

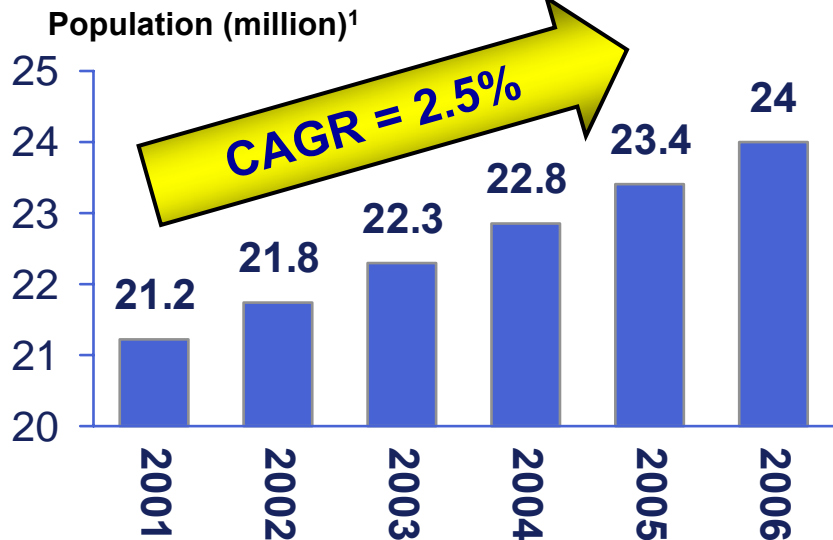
■ Saudi
 ■ Non-Saudi
 ◆ Total Population



Demographics distribution (2006)



(Source: Census 2004 + CITC Analysis)



- Fast growing population at a CAGR of 2.5% (world growth rate 1.21%³)
- 50% of population under the age of 20¹

Factsheet – 2006

Average household size ¹	5.65 persons
GDP (2006P) ²	US\$ 350 Billion
GDP per capita (2006P) ²	US\$ 14,600
GDP real growth rate (2005) ²	6.5%
Inflation rate ²	0.4%

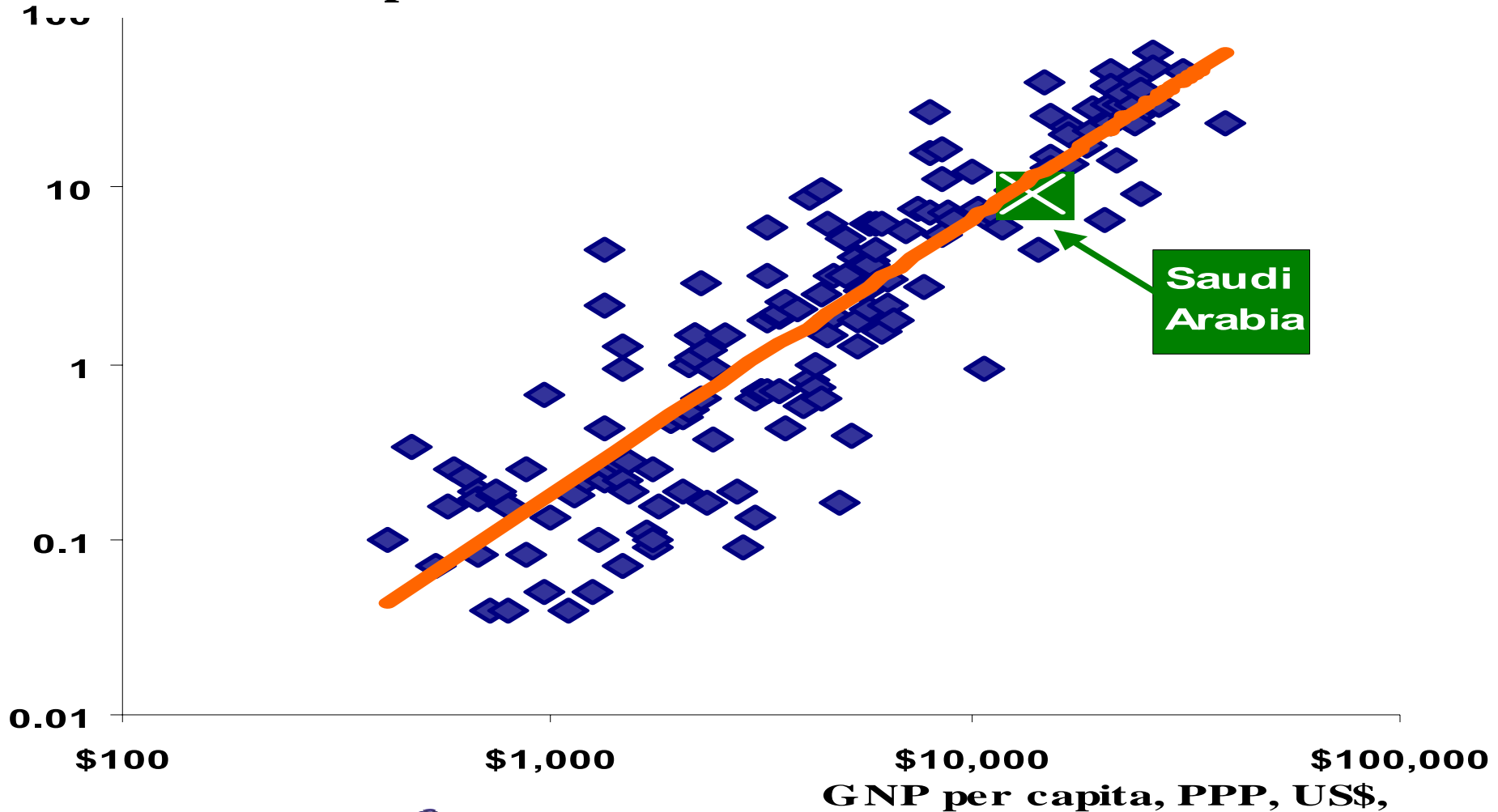
- Household size is **relatively** large.
- Economy in excellent health: strong GDP growth and insignificant domestic inflation

Source: 1 KSA Ministry of Planning 2004 Census actuals/projections & ADL analyses
 2 SAMBA Feb. 2006
 3 UN Population Division

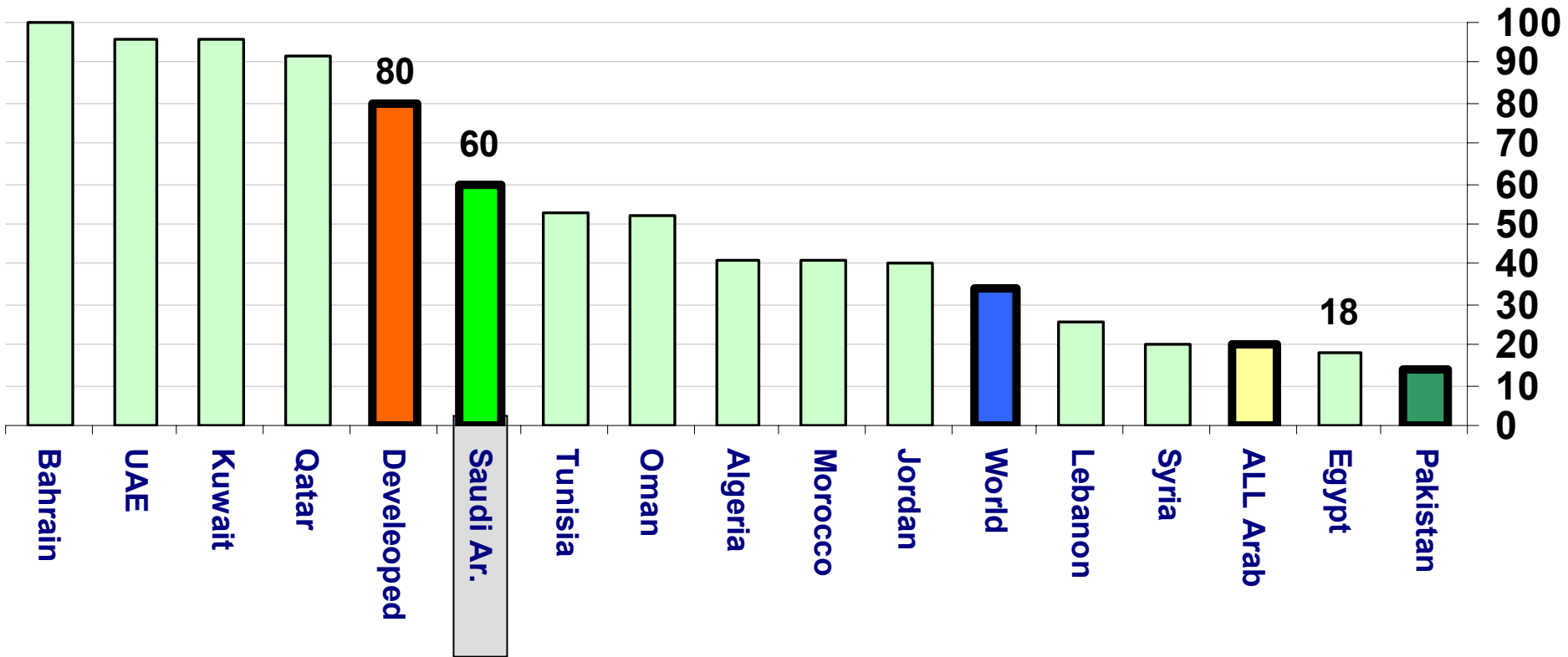
GDP and Population is growing faster than World averages



Internet Users per 100 inhabit.



Mobile Penetration (subs. / 100 inhabitants) - 2005

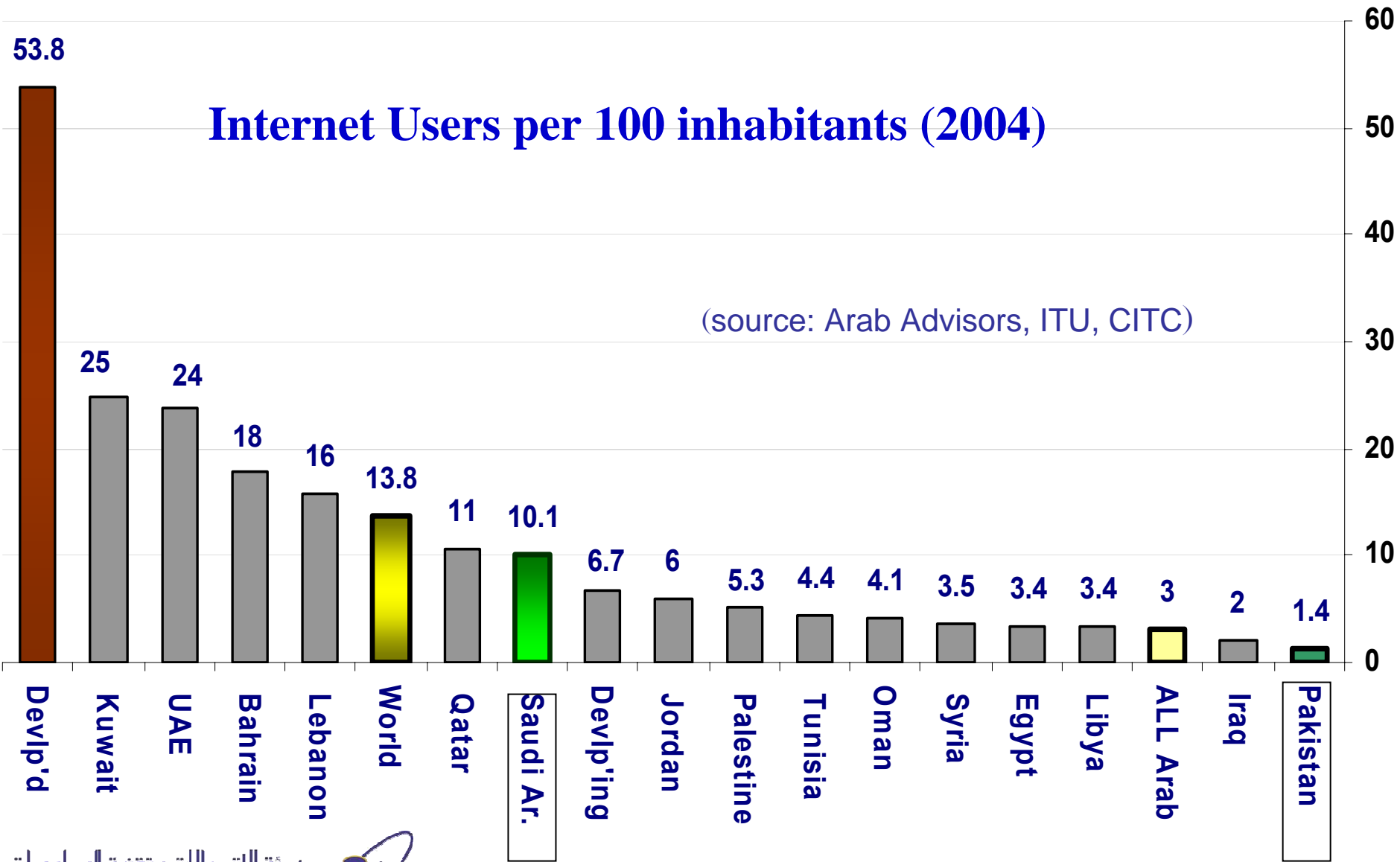


(source: Arab Advisors, CITC)

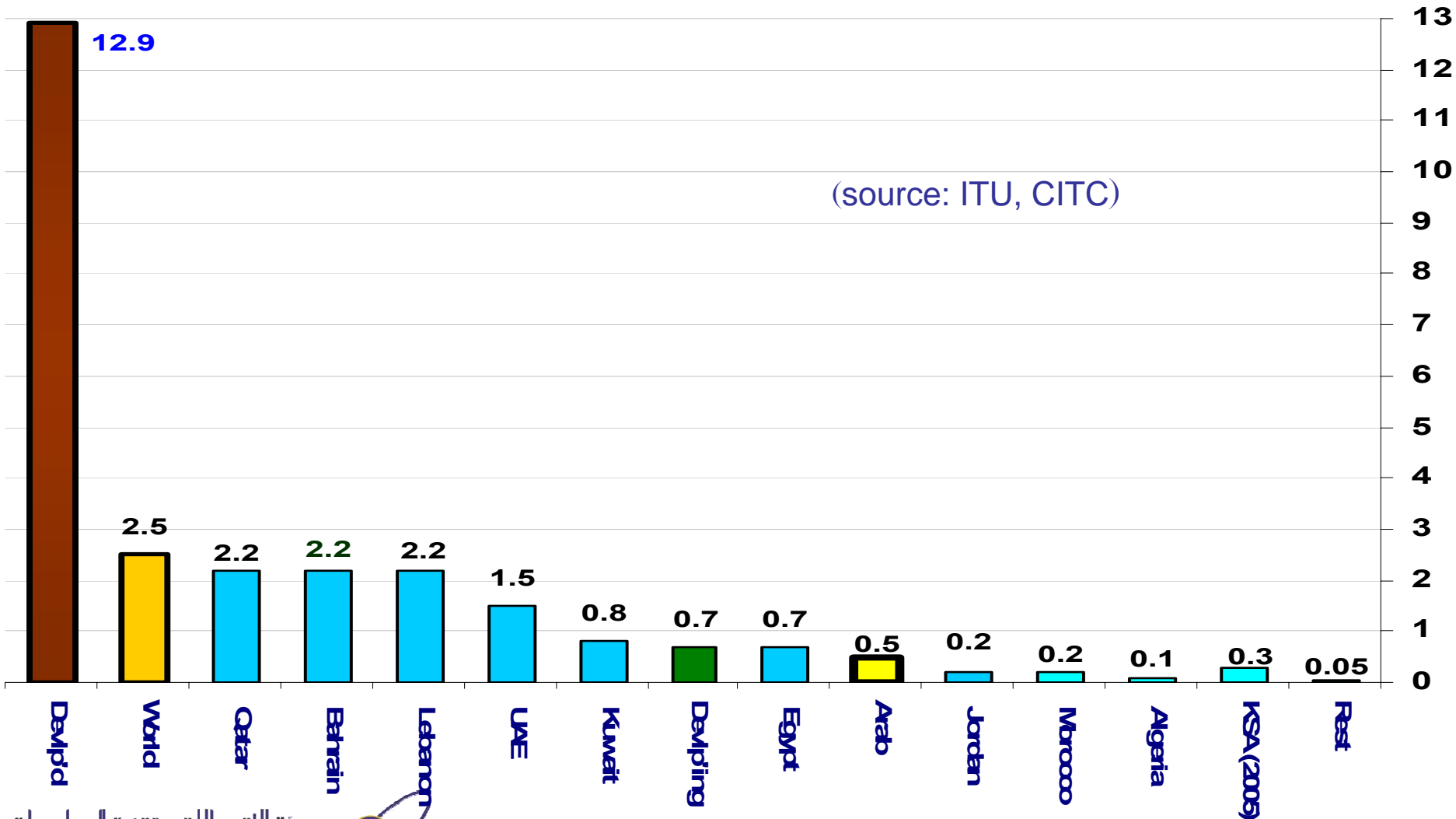


Internet Users per 100 inhabitants (2004)

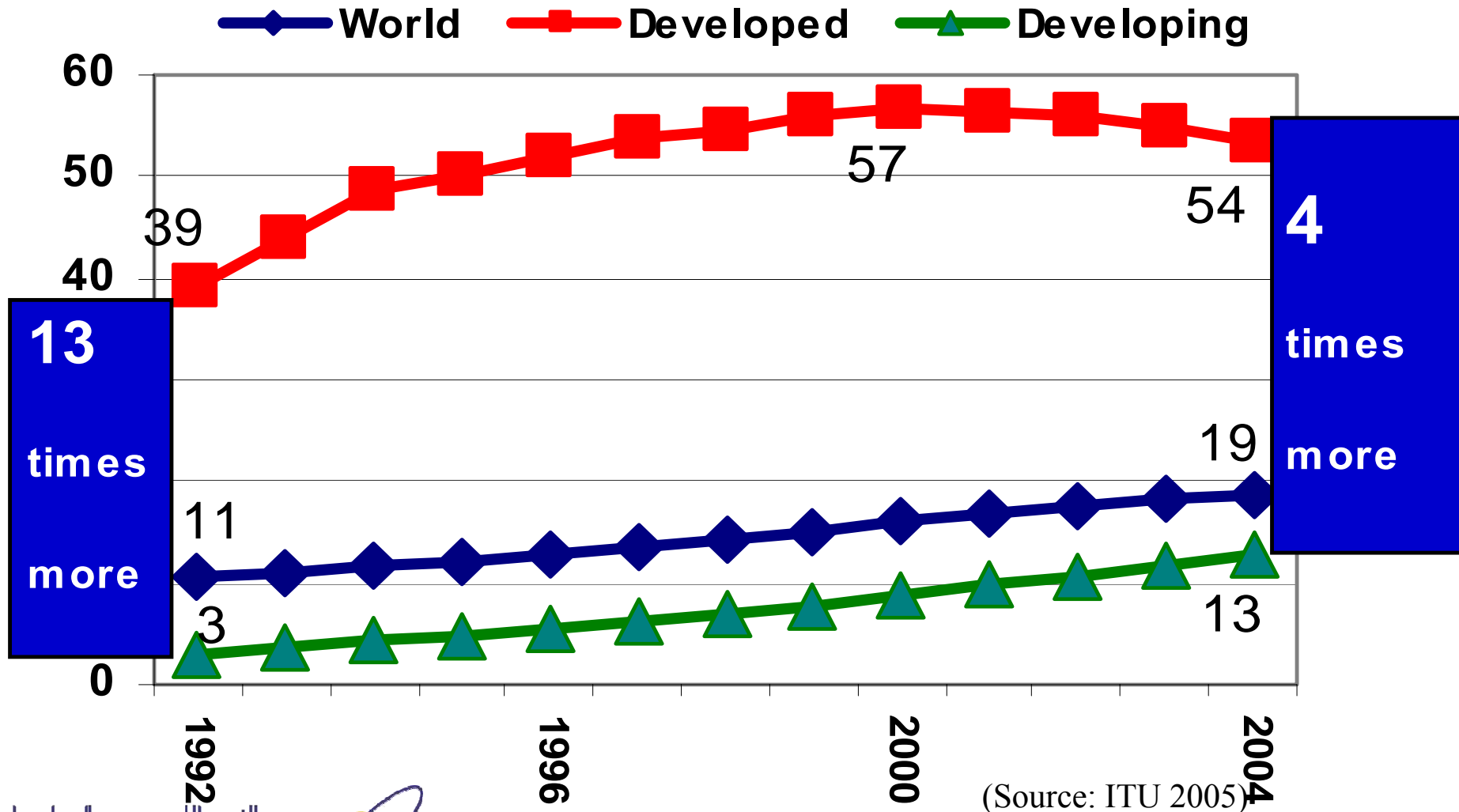
(source: Arab Advisors, ITU, CITC)



Broadband Subscribers per 100 inhabitants (2004)



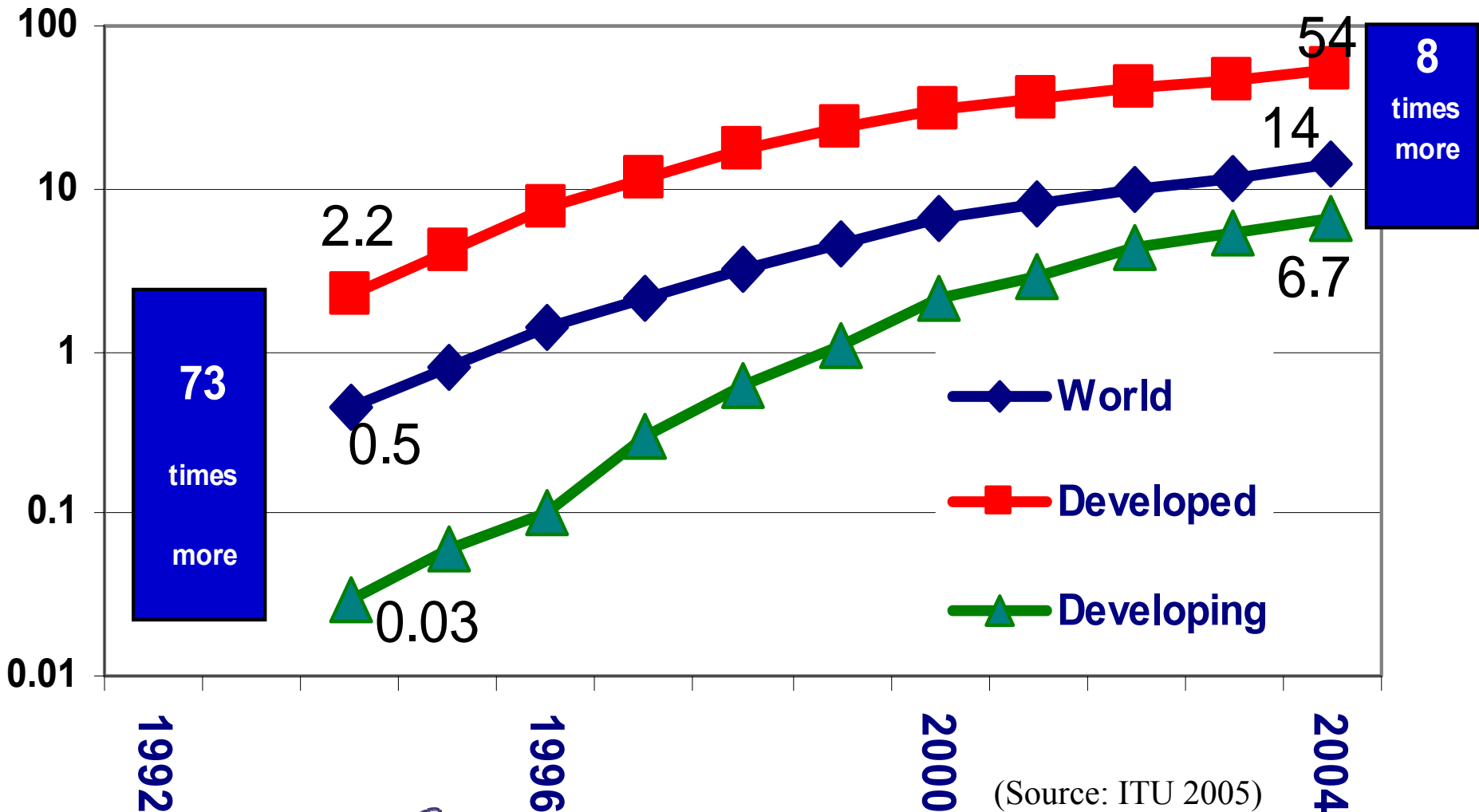
Fixed Telephone Lines 100 inhabitants (1982-2004)



(Source: ITU 2005)



Internet Users per 100 inhabitants (1982-2004)



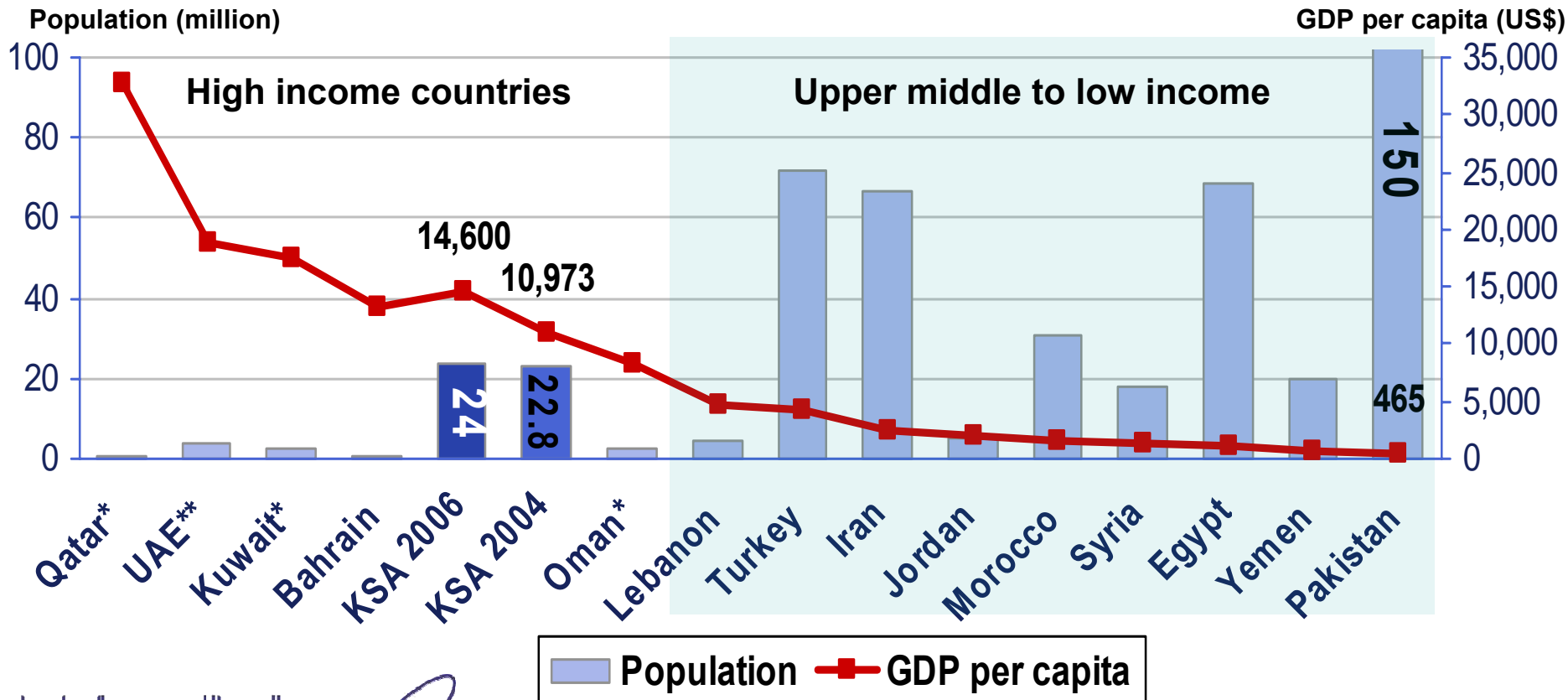
(Source: ITU 2005)



- ☞ ICT and Economic Development
- ☞ Digital Divide
- ☞ **Pakistan - Telecom Indicators**
- ☞ Saudi Arabia - Telecom Sector Liberalization:
 - Demographics and Economy
 - Regulatory Framework
 - New Licensing 2006: Fixed and Mobile
- ☞ Conclusions

Besides being one of the most populous MENA countries, KSA is also a 'high income economy according to World Bank classification

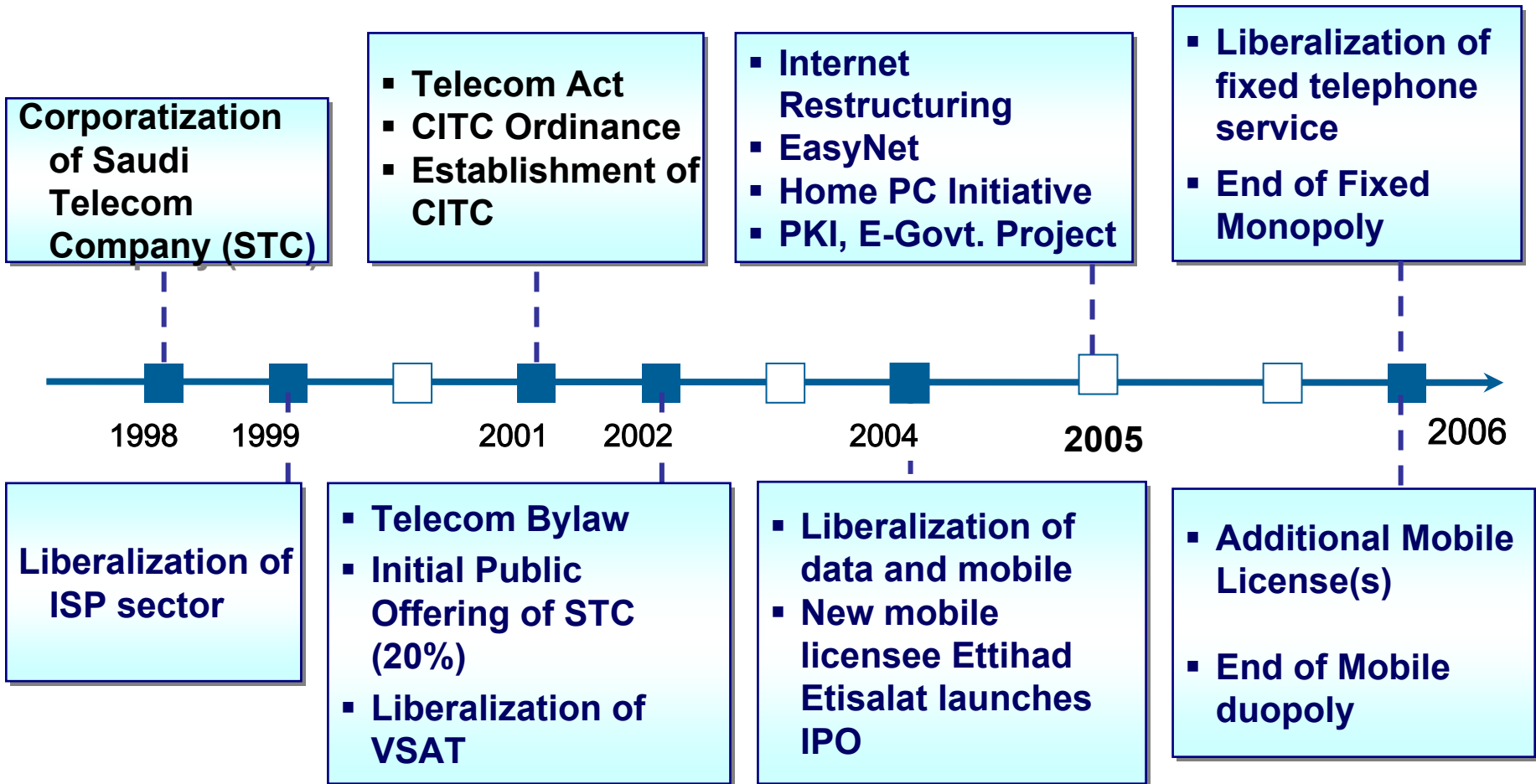
MENA Population & GDP Per Capita² (2004)



- ☞ ICT and Economic Development
- ☞ Digital Divide
- ☞ Country Pakistan - Telecom Indicators
- ☞ **Saudi Arabia:**
 - Demographics and Economy
 - **Telecom Regulatory Framework**
 - New Licensing 2006: Fixed and Mobile
- ☞ Conclusions



Telecom Sector Reform Timeline



The CITC is committed to ensuring fair competition in a transparent regulatory environment to best serve the ICT consumers.



Vision

" Universally available, high quality and affordable communications and information technology services "



Mission

- Provide a fair, clear and transparent regulatory environment to promote competition, and safeguard public interest & stakeholder rights
- Enable universal availability of advanced ICT services at affordable prices and optimize utilization of scarce resources
- Increase ICT awareness and usage to enhance national efficiency and productivity
- Build and maintain a professional and motivated CITC team





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Saudi Arabian - CERT:

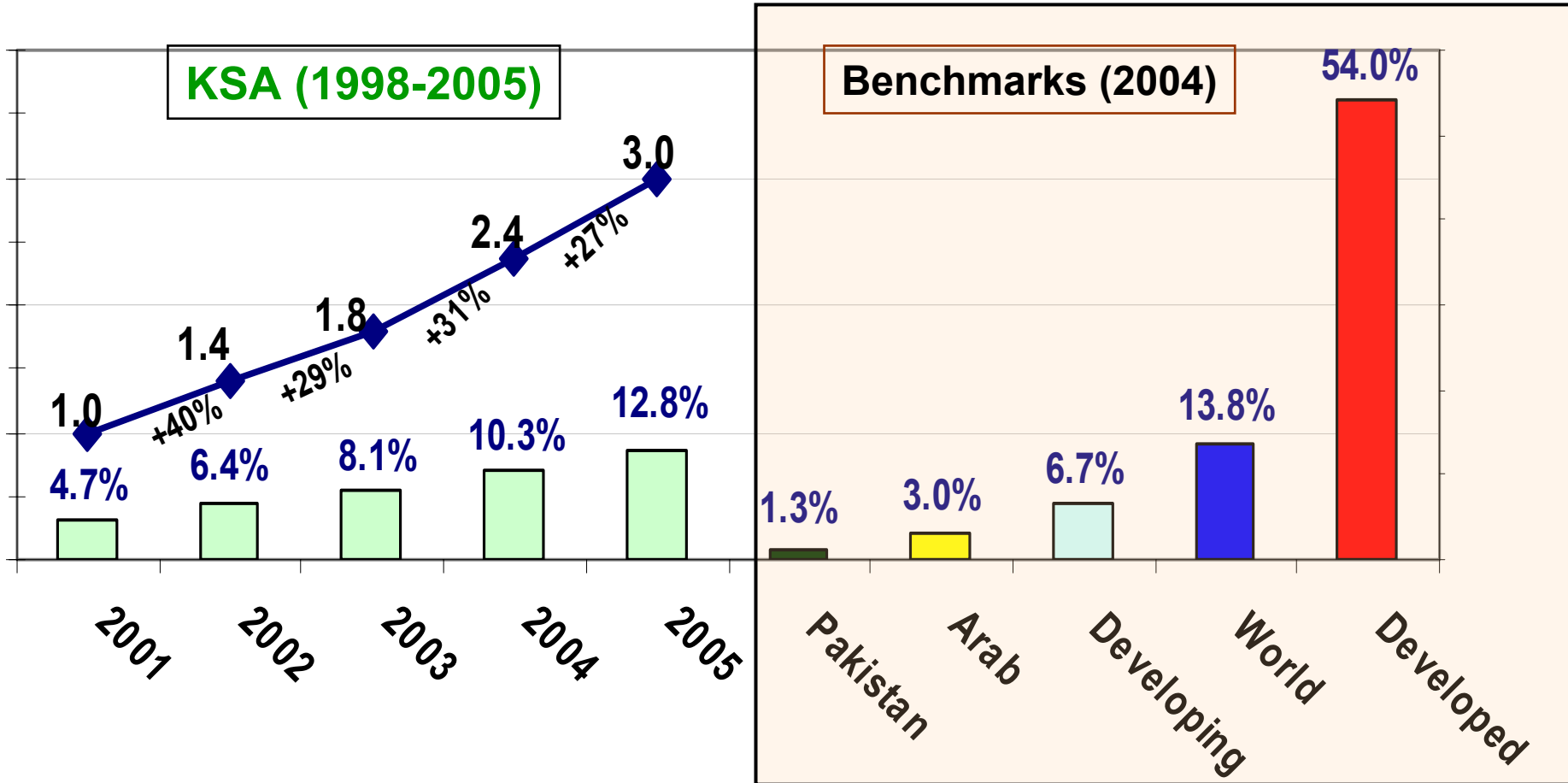
- Mandate
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Conclusions



Penetration (%) Internet Users (Million)

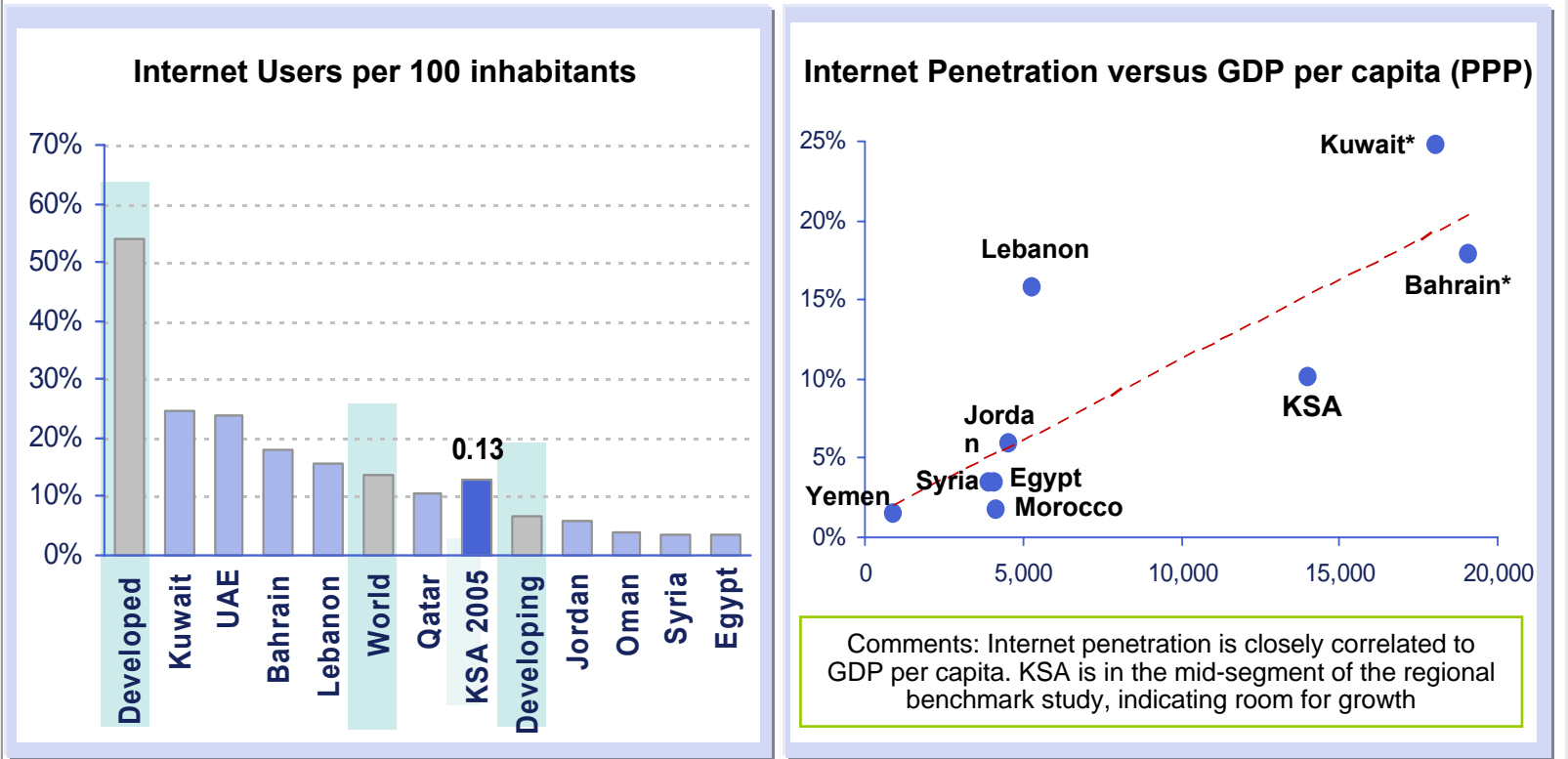


(Source: CITC)



A regional comparison reveals internet penetration rate in the KSA has substantial **room for improvement**.

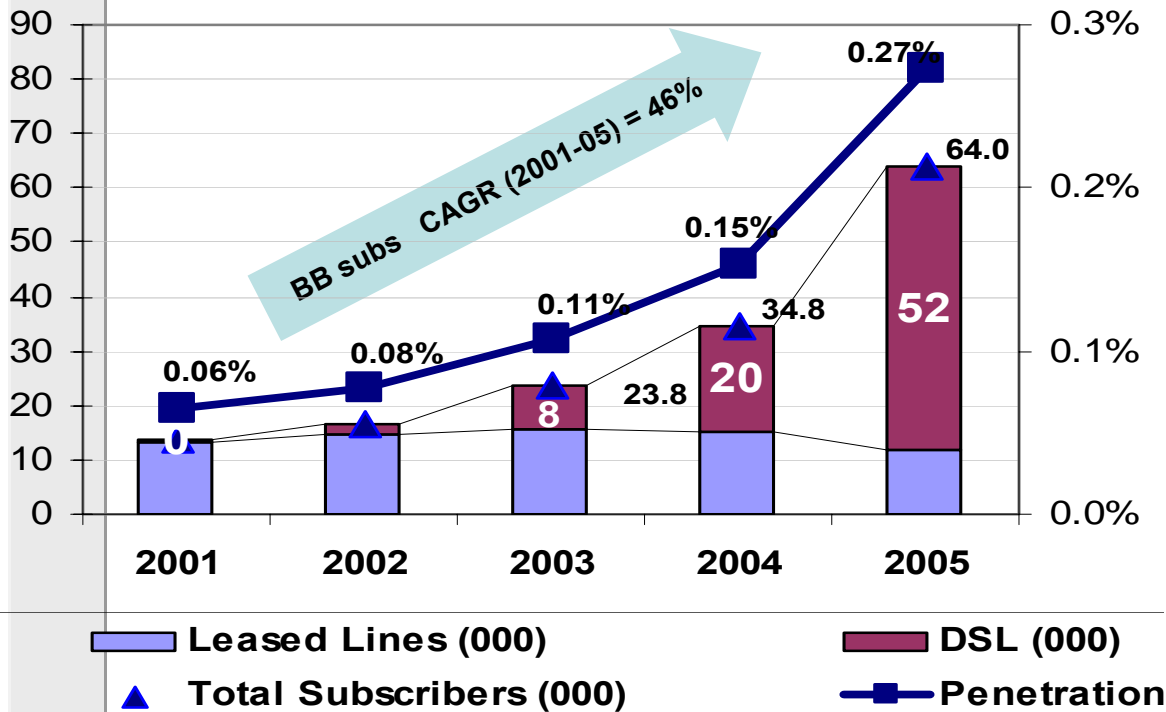
Internet Usage (2004)



Source: CITC, GDP from World Bank, ADL analysis; *2003 GDP per capita

The demand for ADSL has been rapidly increasing, however subscriber growth is hampered by supply-side constraints.

ADSL Subscribers & Penetration



(Source: CCIT)

- ADSL available since Nov. 2001
- With the market becoming more internet savvy and customers seeking high speed access, the ADSL market is experiencing a mini-boom
- However, over 50% of ADSL applications are rejected due to applicants' premises being located more than 5km from the STC exchanges and low population density also limits expansion plans
- Growth dependent on investments in remote digital subscriber line access multiplexer systems (DSLAM)

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Fixed Telephony

Currently only the Incumbent

1

Licenses offered starting – Process under way

Q3/Q4 2006

Mobile Providers

Currently Licensed

2

Submission of Applications

Q3/Q4 2006

Data Service Providers

Currently Licensed

3

Internet Service Providers

Currently Licensed – Fully liberalized

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e – Transaction law is currently under final stages of review

Objectives

- Regulates e-transactions and give confidence to its usage as well as clarify the governing rules for its use
- Gives e-trans. same treatment once confidence conditions met
- Defines and regulates e-transactions
- Covers both commercial and government transactions

E signatures

- Defines requirements of issuing and treating e-signatures
- Gives e-signatures the same effect as regular signatures once trust conditions are met and requires reasonable protection measure to be devoted to its safe keeping
- Addresses violations related to forging/tampering..with e-signatures

PKI

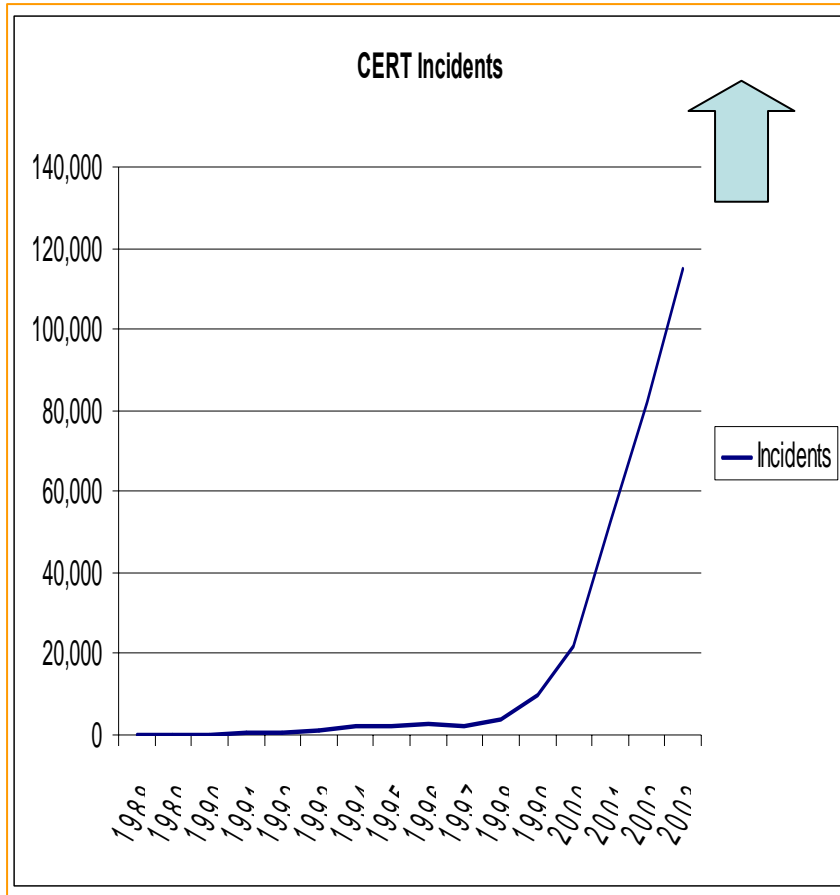
- Establishes an national PKI root center and certification bodies
- Defines requirements of confidentiality of customer information and licensing of certificate authorities



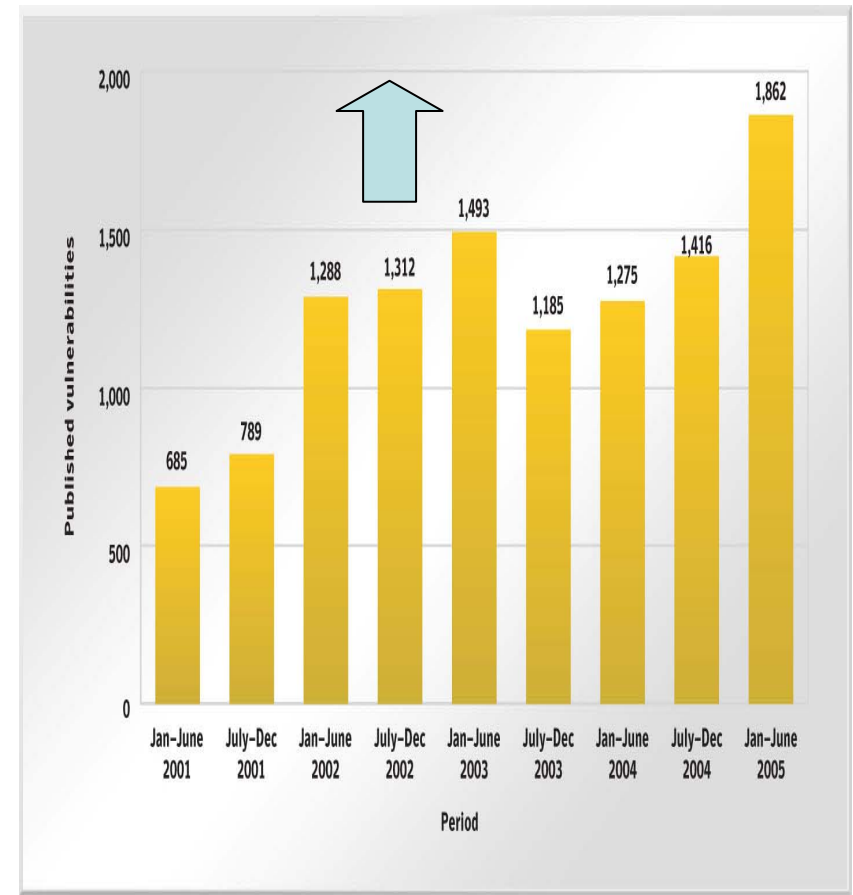
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THREATS



المصدر : www.cert.org



Source : Sematic Security Report 2005

m1

CITC is mandated to establish a national CERT (المركز الوطني الإرشادي لأمن المعلومات)

Part of the Approved Urgent National Mandate under the National IT and Telecom Plan



m1

Reference the actual mandate

moqeely; 13.08.2005

- In response to its mandate, CITC has
 - Researched and investigated other international CERT initiatives
 - Held information gathering sessions with relevant individuals/organizations
 - Sought input from several reputable organizations
 - Built up consensus regarding the best approach
 - (gradual growth, phased approach, non-intrusive)

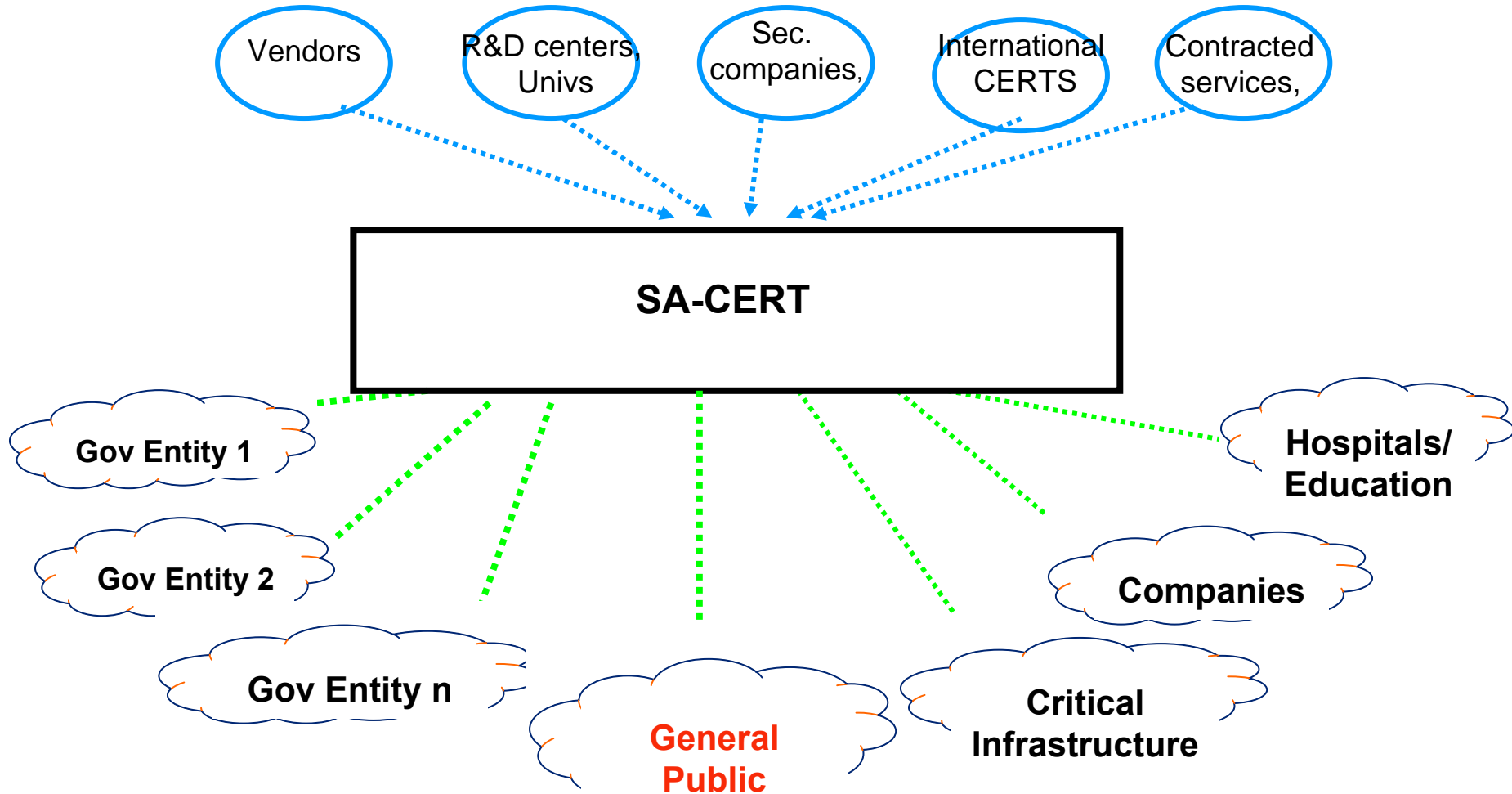


Non-Profit body but some services could be based on paid subscriptions for cost recovery – To be decided as per CITC Policy.

Constituency:

- Saudi Civil Cyber Community (Banks, Telecom Providers, Critical Infrastructure, private sector, government, educational, etc.)





- Establish the SA-CERT and man it with the best security experts
- Investigate reported security incidents / threats and put in place prevention plans – Not real time
- Conduct information security studies in cooperation with known research centers in the field (both academic and commercial)
- Provide advise to stakeholders in the area of information security
- Work with stakeholders to establish Security Standards and Best Practices
- Coordinate with all stakeholders
- Promote IT security awareness
 - Organize IT security events
 - Disseminate information
- Monitor threats and vulnerabilities and alert stakeholders real time on a generic network (high level) basis not on each network. Mostly targeting outbreak of worms, viruses and major security breaches.

Phase 1: Initial Setup

- Conclude Consultations/Implementation Frame work (**DONE**)
- Establish CERT Prototype (**in progress**)
- Build internal human capabilities and resources (**Completed**) - **Continuous**
- Create a critical contact list of stake holders (**in progress**)
- Establish vulnerability and incidence reporting mechanisms (**in progress**)
- Establish links with international CERT agencies

Phase 2: “Awareness-centric” CERT

- Organize Awareness event (**4th June**)
- Use specialized IT security resources (**in progress**)
- Encourage reporting of incidents

Phase 3: CERT fully functional supporting critical national infrastructures

An initial definition of SA-CERT

A prototype web site offering services with multiple communication channels

Few subscribers

Minimal resources, few employees, Low profile

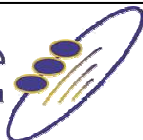
Validate the investment through a proof of concept

Identify features to put in CERT that are **unique to Saudi Arabia** in addition to standard info

Develop and publish a dedicated CERT SA site to serve all stake holders (Gov., individuals, Corp.)

Offer feedback and learning opportunities

Provide better concept and operational development



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Conclusions



- **A well developed Telecom infrastructure and ICT services contribute positively to GDP growth**
- **Digital Divide is multi-dimensional: between countries and within countries (Rural vs. Urban, Poor / Rich etc.)**
- **Saudi Arabia telecom sector Reform and Liberalization**
- **Strong and Effective Regulator**
- **New Licensing are being launched for fixed and Mobile Services**
- **Attractive Investment Opportunities in the ICT sector**



THANK YOU 😊
for your attention

... and QUESTIONS????

