



International Telecommunication Union



# IPv6 From Developing Country Perspective

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Geneva, 22-23 June 2005



# Outline



- o Egypt Information Society
- o Growth in Internet and mobile services
- o CIT Industry Development
- o Why IPv6 for Egypt?
- o Egypt IPv6 Task Force

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dates





# Egyptian Information Society Initiative

## Main Objectives



- o To develop the Egyptian society by raising the utilization of ICT in Egypt



- o To establish an export oriented ICT industry in the country

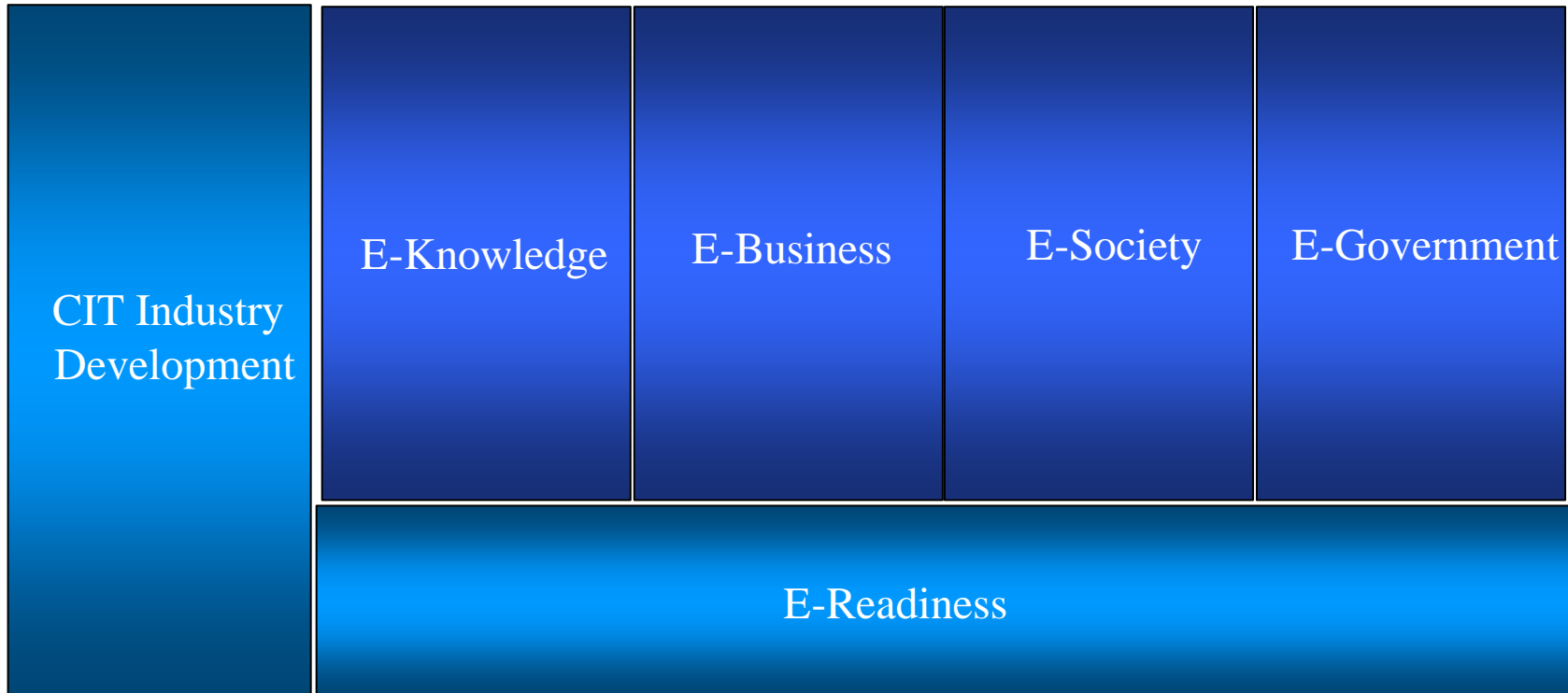
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# Egyptian Information Society Initiative

## Strategy



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# E-Readiness Initiatives



o Public – Private Partnership in which the government articulates policy and regulatory frameworks for the private sector and civil society to implement for the benefit of the Egyptian citizen

- Free Internet
- PC for Every Home & Notebook for Every Specialist
- IT Clubs
- Broadband Access
- E-Content

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# Internet Evolution in Egypt

- **October 93:** Internet birth with 2 main service providers
  - EUN serving the research and education sectors
  - IDSC serving the public and private sectors
- **March 96:** Commercialization of Internet Services
  - 12 ISP's emerged in 1996, increased to 45 in Q3 1999
- **1999 - 2000:** Licensing of Internet Services
  - Licensing framework set and provided by the telecom regulator (NTRA)
  - Class A License for Backbone Providers
  - Class B License for PDN Operators
  - Class C License for ISP's & Content Providers
  - Today there are 4 Class A providers, 4 Class B and more than 150 Class C's

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# Internet Evolution in Egypt

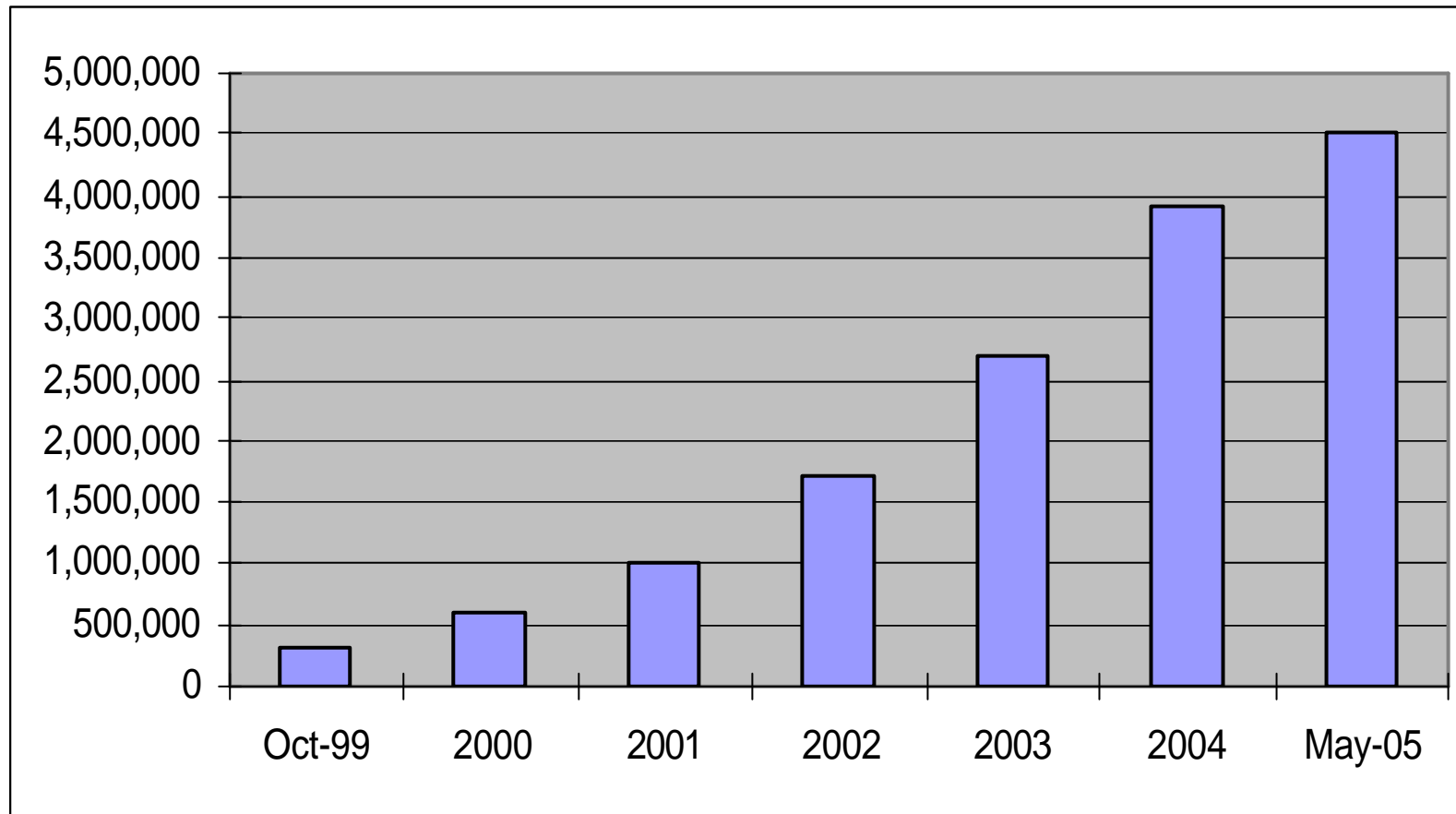
- **January 02:** Launching the Free Internet
  - Licensed operators (A & B) co-locate equipment at TE CO's to offload the PSTN
  - No Internet subscription fee - Internet calls at local phone call tariff
  - TE shares its Internet calls revenues with operators (30% : 70%)
  - 1 million households are currently using Free Internet
  - Worth annual revenues of 200m EGP
  
- **April 02:** Local Loop Unbundling
  - TE allows licensed operators (A & B) to co-locate their DSLAM's and offer ADSL services to end-users
  
- **May 04:** Broadband Initiative
  - Reducing Subscription Fees (150 EGP/month for 256kbps)
  - Number of subscribers has grown from 8,000 in May 2004 to more than 50,000 to date

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# Growth in Internet Subscribers



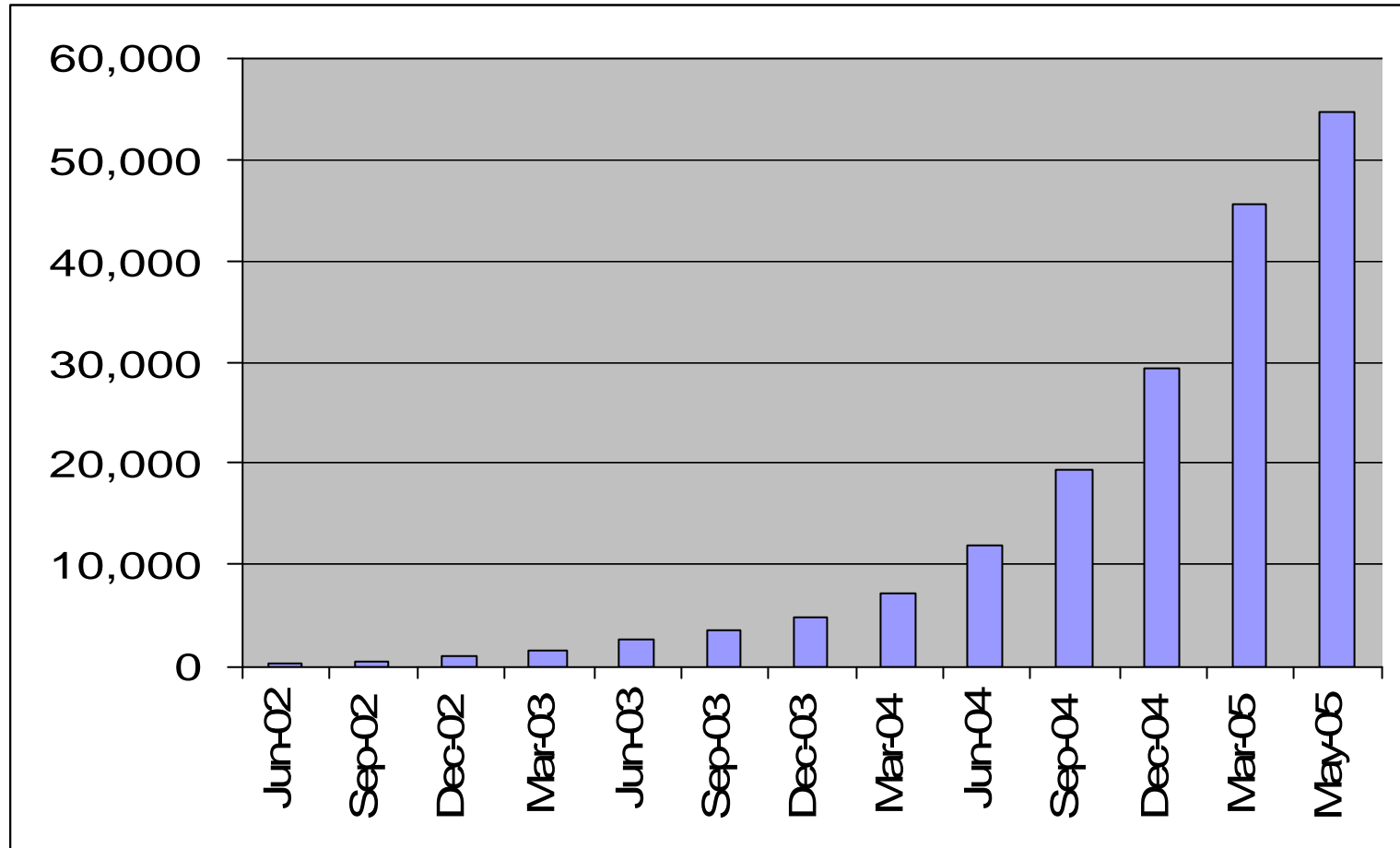
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# Growth in ADSL Subscribers

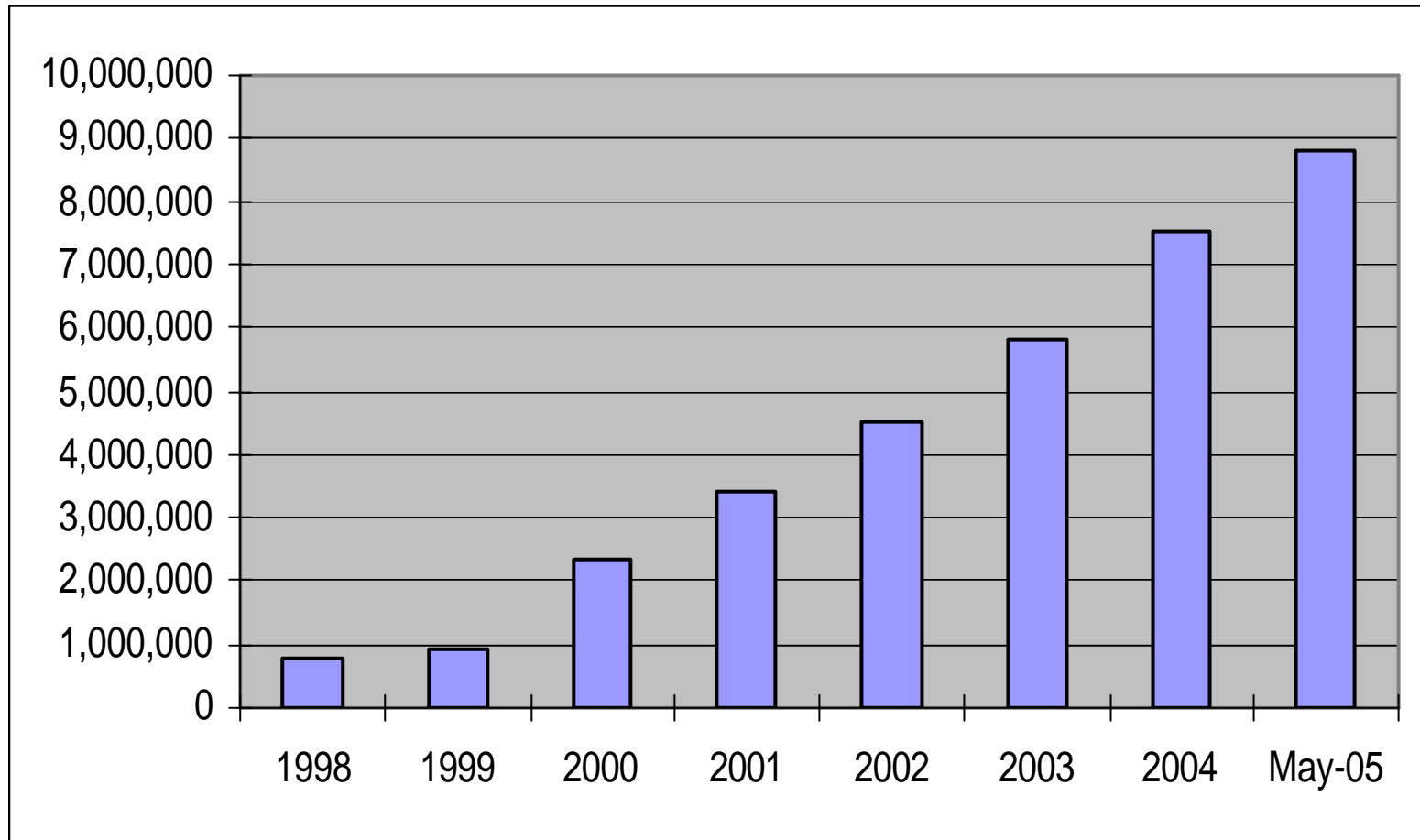


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# Growth in Mobile Subscribers



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# CIT Industry Development

## R&D Centers of Excellence

### Consortiums between Universities, Research Centers and Industry



- o 4 Clusters have been identified
  - Data Mining and Computer Modeling
  - Electronic Design
  - Wireless Technologies
  - Mobile Services and Applications
- o Government Support
  - Incentives for companies involved in R&D
  - Yearly award for best research
  - Patent filling and IP protection

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# How the Egyptian Government Perceive IPv6?

## Minister of CIT Quotes on IPv6:



o "IPv6 is of particular importance to Internet users in developing countries as it offers great opportunities and opens a new era for the global Internet community"



o "As demand continues to grow aggressively, more countries and especially late-comers to the Internet and to IPv4, feel now, more than ever, the importance of supporting IPv6 deployments and being among its early adopters worldwide"

o "The Egyptian government looks seriously at IPv6 as a potential enabling environment for our ICT industry to further develop and prosper"

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# Why IPv6?



- o IPv6 is not a future thought exercise, it is coming, so we have to get ready for it
- o For all technical, business and strategic benefits (i.e. address space, mobility, security, P2P applications, boom in broadband wireless services, innovative applications, etc...)

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# Why IPv6 for Egypt?

IPv6 is an opportunity more than a challenge



- o An emerging country with:
  - 265,000 annual university graduates
  - 6,000 annual professional trainees in IT and telecoms
  - 1,484 companies in IT and telecoms
  - 37,372 professionals in IT and telecoms
  - Annual growth in the IT and telecom sector is around 13%
  - Annual IT and telecom services exports worth \$100m
- o Government commitment to building Egypt Information Society (i.e. E-Readiness initiatives, E-Government, E-Business, etc...)
- o IPv6 is an attractive candidate within the framework of the CIT industry development initiative (wireless technologies and mobile applications)

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# Egypt IPv6 Task Force (E-IPv6)



- A non-profit-activity created by a group of volunteers representing the government, industry as well as universities and research institutes
- Launched in September 2004
- Started with 23 members and has been expanded to more than 50 members representing 25 organizations

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# Vision

As the transition to IPv6 is inevitable, and its impacts on the various technical, economical and social facets of life are most likely to be significant, E-IPv6 is an essential step towards overcoming this challenge and generating interest in IPv6 for the national good.

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# Mission



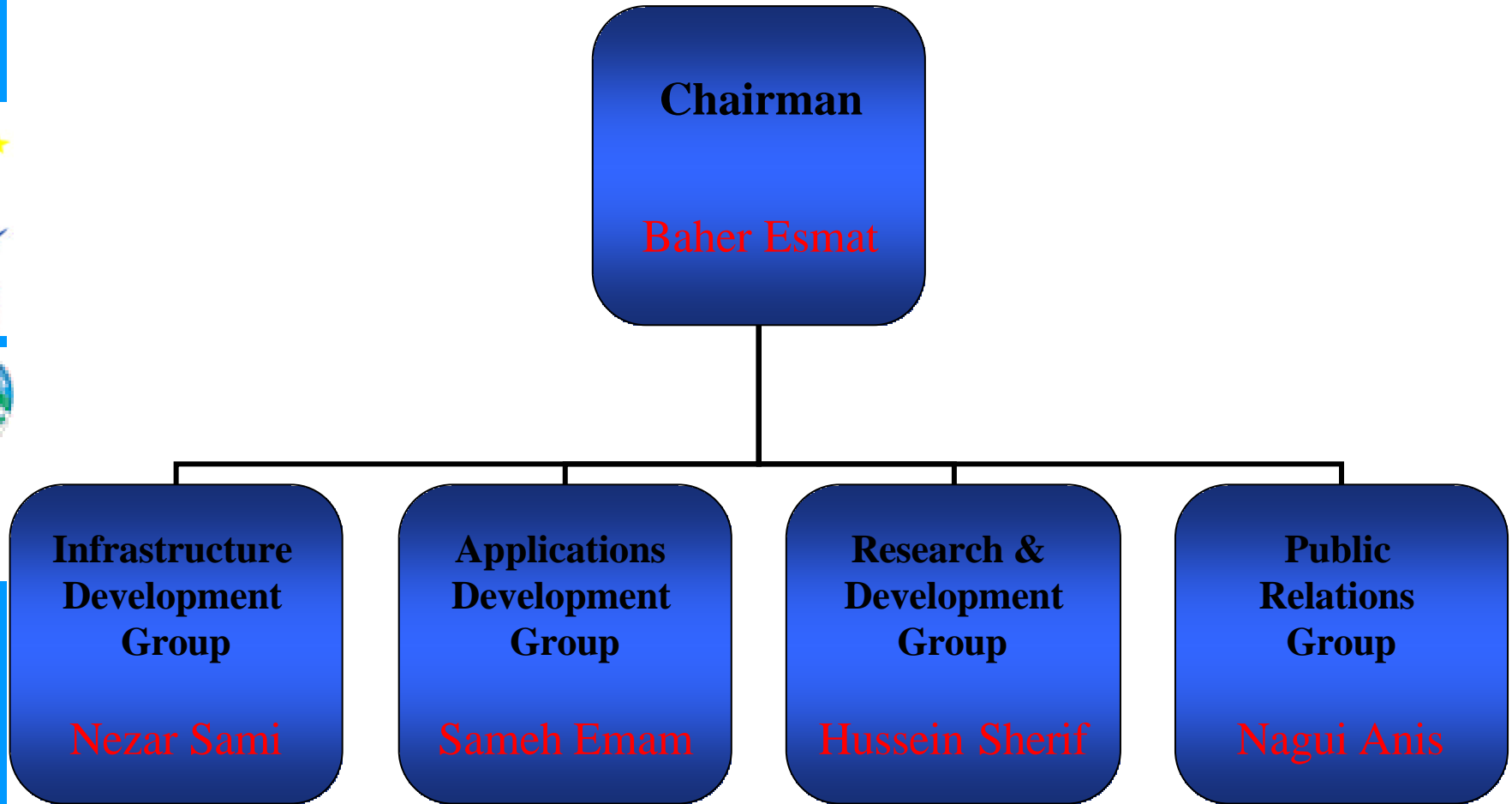
- Raise awareness on the impacts of IPv6
- Increase industry co-ordination to begin the initial phases of IPv6 readiness
- Promote the launching of IPv6 test beds to come across its technical problems and solutions
- Encourage R&D co-ordination and promote the creation of an IPv6 center of excellence in Egypt
- Identify suitable transition scenarios
- Serve as reference on IPv6 on a national and regional levels

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# Structure

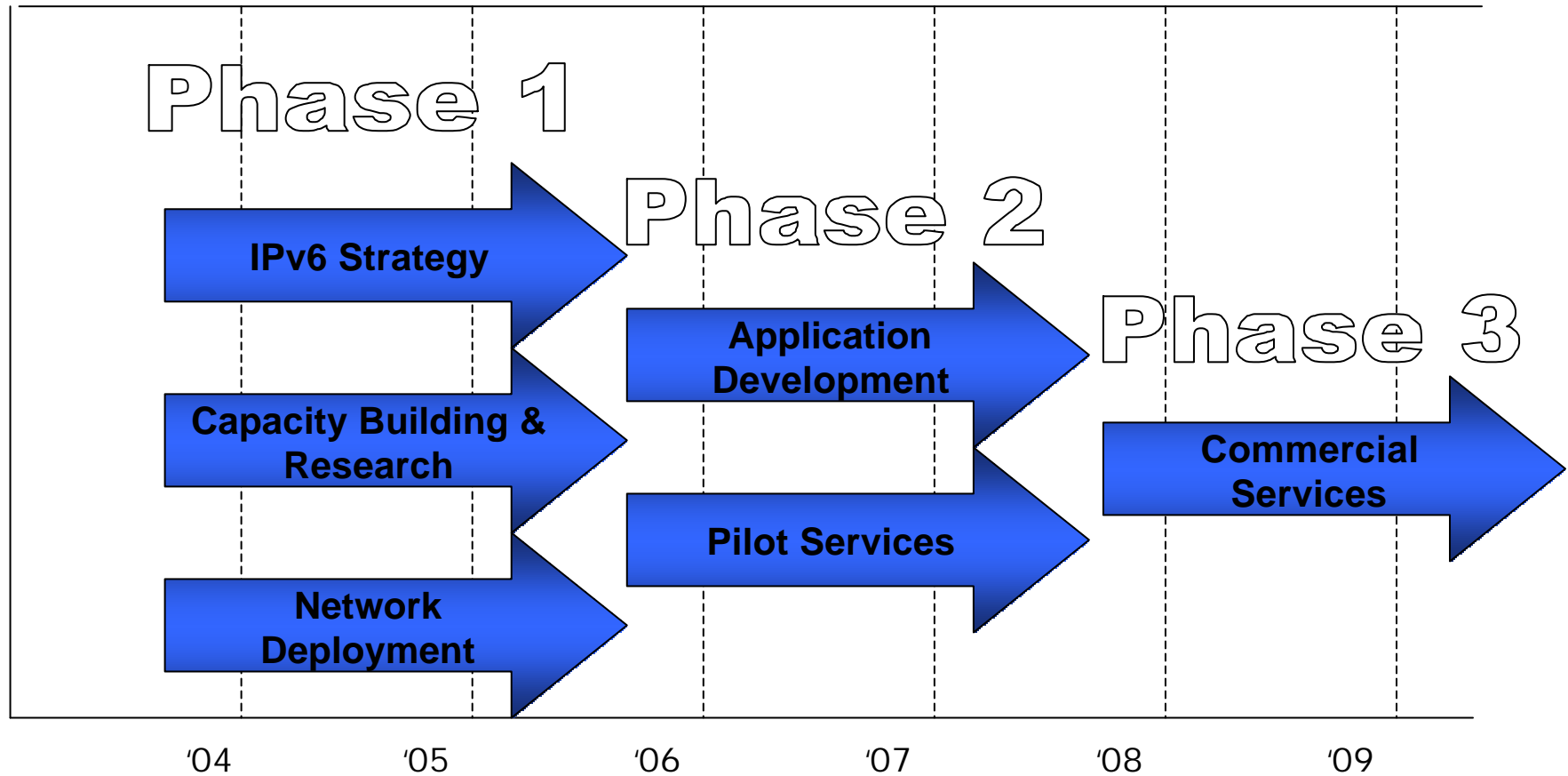


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# Work Plan



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# Phase I (Q4'04 – Q4'06)



- Develop a Strategy for the IPv6 Transition
  - Collaboration between the various industry stakeholders
  - Vision on how Internet and Mobile would develop over the next decade
  - Explore niche areas to have an edge
- Capacity Building and Research
  - Professional training for graduates focusing on IPv6
  - Knowledge transfer to system engineers and application developers
  - Promote research activities in IPv6
- IPv6 Deployment
  - IPv6 test beds
  - Connectivity to Geant & Internet 2
  - Upgrade the research and education networks to IPv6

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# Achievements



## ○ Awareness

- Regional and international events (Cairo ICT 2005, Gulf IPv6 Summit, Cairo IPv6 Summit)
- Articles in local press about IPv6

## ○ Capacity Building

- Three IPv6 professional training courses attended by 15 trainees took place over the past 5 months

## ○ Network Deployment

- IPv6 test lab at Smart Village has been up and running since March 05 connecting MCIT together with 5 local NSP's as well as Sprint in the US

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Today, we have believers in  
IPv6 in Egypt.

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Thank You...

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