CONVERGENT TELECOM AND IT REVOLUTION IN INDIA – ICT COMES OF AGE

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Two Global movements are sweeping all countries since beginning of new millennium

- Globalisation
- Digitalisation

As a result post industrial society has a new face i.e., information society.

Economically backward Countries may now converge their telecom and IT strength to enable them play their role in the world's economy

ICT has come to play a key role in national development strategy of developing Countries.

To remove poverty, schools, medical facilities etc., are more relevant issues than ICT ?

How can ICT help

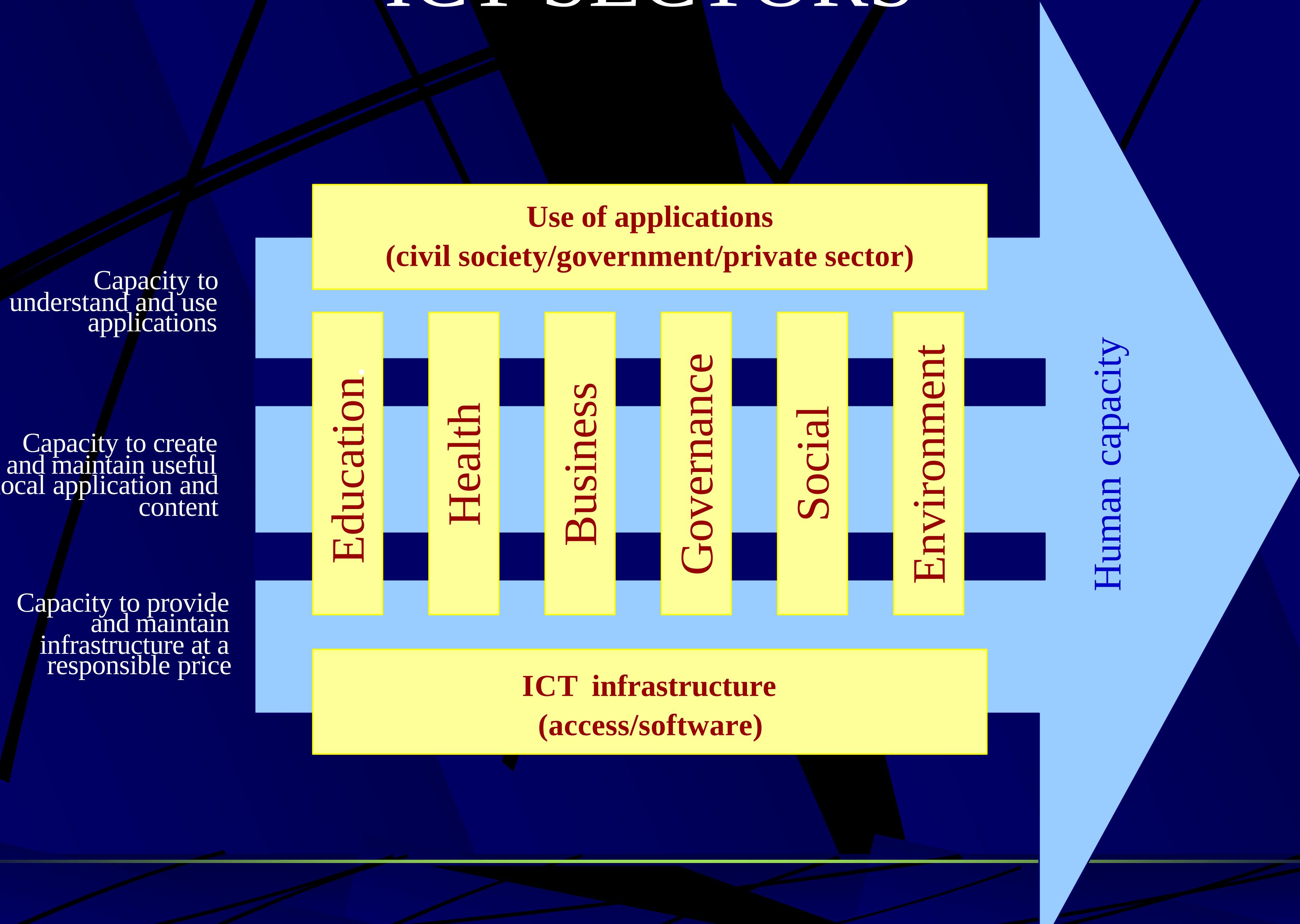
It helps in the delivery mechanisms, it helps in greater efficiency.

It helps in new job opportunities and many more benefits.

ICT can deliver provided following conditions are fulfilled. It cannot act in isolation

1. There should be free market competivity and a pro growth economic policy
2. Existence of infrastructure and assess.
3. Existence of ICT related human capacity – three categories.

ICT SECTORS



Use of applications
(civil society/government/private sector)
Capacity to understand and use applications
Education
Health
Business
Governance
Social
Environment
Human capacity
Capacity to create and maintain useful local application and content
Capacity to provide and maintain infrastructure at a responsible price
ICT infrastructure
(access/software)

Deregulation and privatization have created opportunities for enlarging telecommunication. If IT skill and training is added, ICT will start to deliver

Beginning 1991 India have taken strong steps to introduce dramatic improvements in both telecommunications and IT. Convergence of I & C is taking place. Our experience over the last 15 years of growth, however, has not been always smooth - but valuable.

INDIAN TELECOM REVOLUTION

Following 2 national telecom policies in 1994 and 1999, the telecom sector was gradually de-regulated.

At first mobile services

Basic services

Long distance and International services by 2002

Monopoly operator and manufacturer lost their monopolies.

Growth of telecommunication was rapid following liberalization. The growth rate for connections was over 22 per cent. Total telephone connection as on March 31 2003 was 54.62 million. Internet connectivity was given for all district head quarters

116 ISPs have been licensed.

The next chart gives all aspects of telecom infrastructure.

CELLULAR SUBSCRIBERS	20.73 million
Village PTs	0.518 million
Public call offices	1.58 million
Rural DELs	10.66 million
TAX capacity	4.84 million
Optical fiber cable deployment	416438 KM
No. of ISPs	390
No. of Internet Subscribers	3.75 million

MODERN TRENDS

- Wireless taking over from land line as the share of private operators has increased
- Mobile subscriber will exceed fixed line subscribers by 2008
- WLL mobile is providing low cost fixed as well as mobile service
- Tele-density by 2007 would be 10 %

Phenomenon growth in only 12 years time.

CONVERGENCE BILL 2000

Provide for convergence of IT and telecom into one authority.

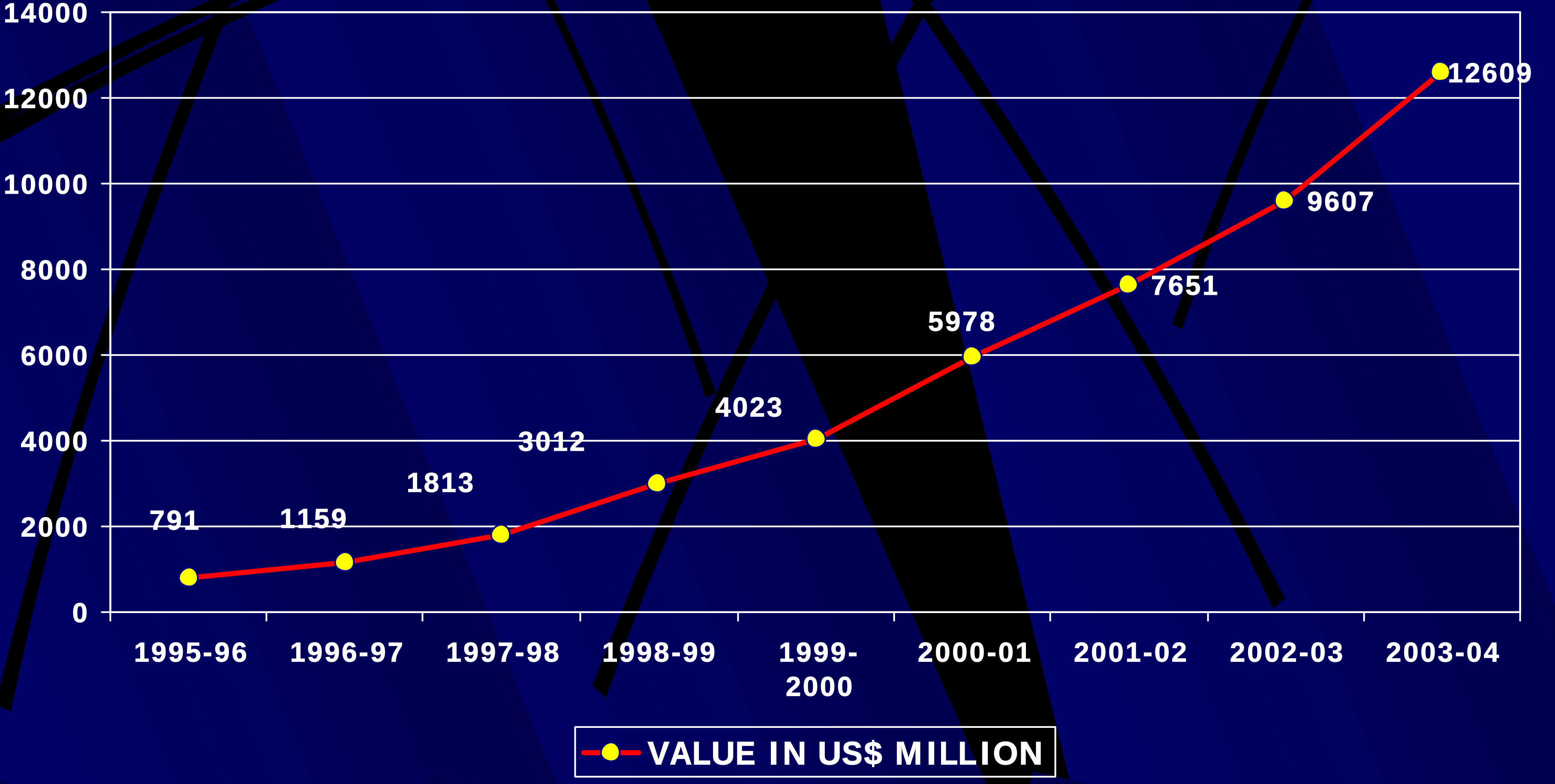
IT REVOLUTION

Beginning 1991 the first initiatives were taken by few technocrats writing software and supplying to US and UK. From export level of US$ 139 million the growth has been phenomenon: Total production of IT industries for both export and domestic use and has increased from US$ 319 million to US$ 15 billion .

The software industry is export driven. Subsequent years saw the emergence of broad band high speed digital links between India and foreign destinations and this helped exports. Promoters of IT industry introduced new business culture and productivity standards.

COMPUTER SOFTWARE AND SERVICES

GROWTH IN EXPORTS



INDIAN IT INDUSTRY - STRENGTHS

The reasons why India enjoys a comfortable position in world exports are :

INFRASTRUCTURE FACILITIES

- INDIA HAS MORE THAN 500 HIGH SPEED DATACOM LINKS OF 32-256 Kbps, CONNECTING INDIAN COMPANIES WITH THEIR CLIENTS ABROAD .
- MORE THAN 21 SOFTWARE TECHNOLOGY PARKS SET UP BY GOVERNMENT OF INDIA IN VARIOUS STATES PROVIDING HIGH SPEED DATA COMMUNICATION LINKS, INFRASTRUCTURE, POWER ETC.
- LEADERS HAVE THEIR WORLD CLASS INFRASTRUCTURE ALONG WITH DEDICATED TELECOM LINKS.

WIDE GAMUT OF SERVICES

- OFFERS A WIDE RANGE OF SERVICES FROM CLERICAL SUPPORT / DATA PROCESSING TO SOPHISTICATED SOFTWARE SYSTEMS.
- LOW COST AND EASY AVAILABILITY OF MANPOWER AT ALL LEVELS ENABLES TO OFFER LABOUR INTENSIVE SUPPORT SERVICES, WHILE QUALIFIED AND SKILLED PERSONNEL OFFER QUALITY SOLUTIONS INVOLVING SOPHISTICATED SOFTWARE SYSTEMS.

MANPOWER AT LOW COST

- SECOND LARGEST POOL OF TECHNICALLY QUALIFIED ENGLISH SPEAKING MANPOWER
- ENORMOUS SUPPLY OF SKILLED PERSONNEL COMPARED TO DEVELOPED COUNTRIES RESULTING INTO NEARLY MANPOWER COST ONE TENTH OF THOSE IN DEVELOPED NATIONS, THUS GIVING INDIA A COMPARATIVE ADVANTAGE

High Quality

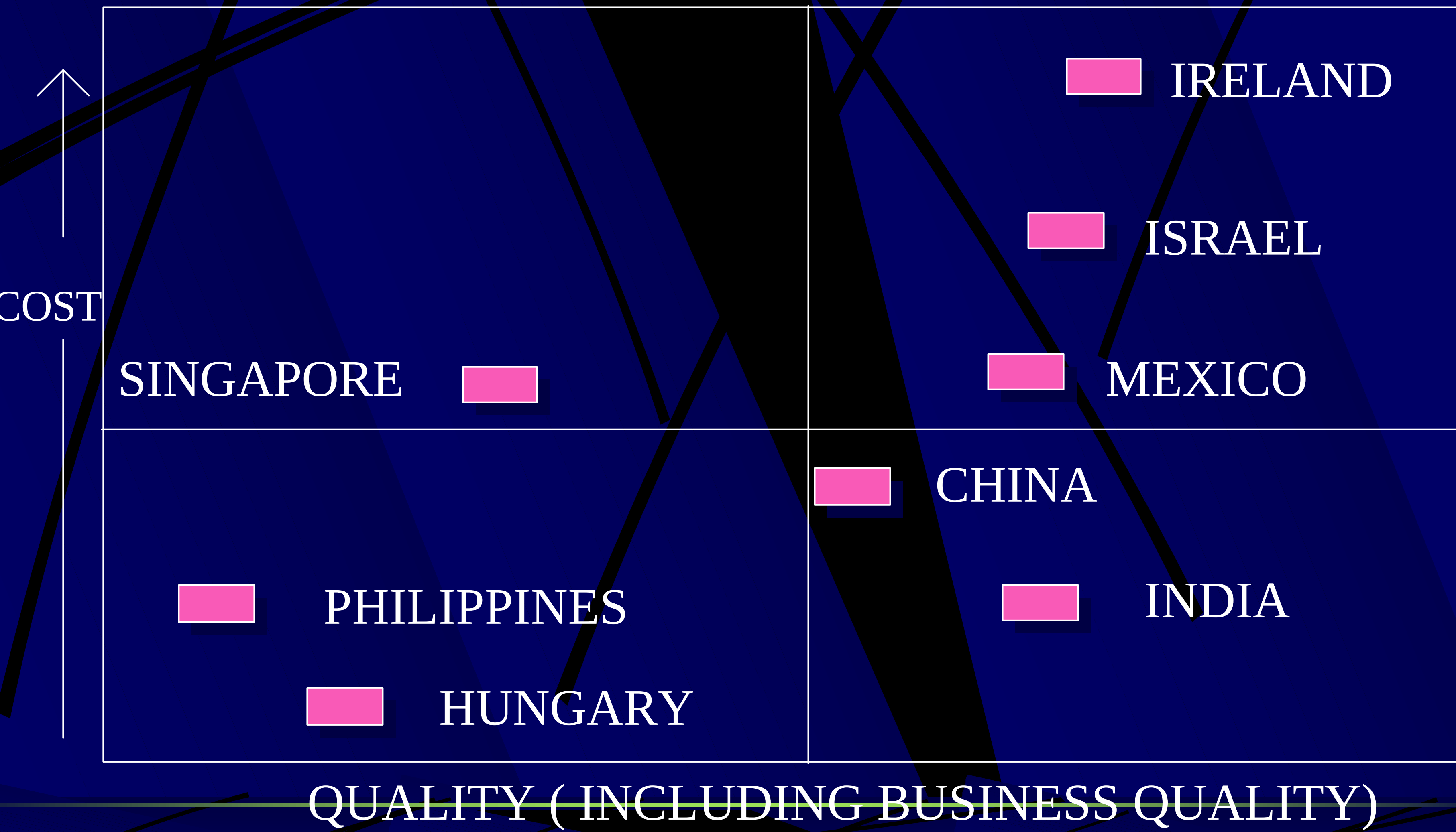
Quality Certification	***No. of Companies***
SEI-CMM Level 5 Certification (68 % of the worldwide certified companies are in India)	**80** (Total : 117)
Already acquired ISO 9000 or SEI Level 2 or equivalent certification	**300**

COMPARATIVE RATING OF THE INDIAN SOFTWARE INDUSTRY WITH:

* IRELAND * MEXICO * HUNGARY
* ISRAEL * SINGAPORE * CHINA
* PHILIPPINES

PROFESSIONAL SERVICES	1
ON-SITE DEVELOPMENT	1
OFF-SHORE DEVELOPMENT	1
VALUE FOR MONEY (COST AND QUALITY)	1

THE STRATEGIC MATRIX



LOCATIONAL ADVANTAGE

- ❖ 12 HOUR GEOGRAPHICAL DIFFERENCE WITH THE WORLD'S LARGEST SOFTWARE AND IT MARKET – THE USA

- ❖ ENABLES ROUND THE CLOCK SOFTWARE FACTORIES IF SUBCONTRACTED TO INDIAN COMPANIES

NO BAGGAGE OF OUTDATED TECHNOLOGY

INDIAN SOFTWARE COMPANIES STARTED INVESTING IN IT SIGNIFICANTLY ONLY SINCE MID EIGHTIES, COINCIDING WITH THE ADVENT OF PC IN THE WEST. SINCE THEN PC SEGMENT (INCLUDING SOFTWARE FOR PCs) HAS BEEN THE FASTEST GROWING SEGMENT, ENABLING INDIA TO RIDE THE GROWTH WAVE.

Large world market by 2010 of 24 trillion $

Enough scope for developing countries to export

INDIAN SOFTWARE COMPANIES TODAY ARE VERY INTERESTED TO ACQUIRE / SET UP JOINT-VENTURES WITH IT COMMITTED AFRICAN NATIONS / EUROPE

India’s target by 2008

By 2008 exports from software will contribute 35% of India’s total export.

IMPACT OF ICT ON DEVELOPMENT

It is necessary for developing countries, vigorously pursuing the ICT route to put in place strategies which can maximise the insights of the results quickly.

E-commerce, telemedicine. distance learning, new job opportunities, skill development etc., are all already contributing in large numbers.

Comments of N Hanna, World Bank

Business Process Outsourcing

BPO is key opportunity for developing countries

WHAT IS BPO

CORE VS NON-CORE FUNCTIONS

Non-core and Non - critical

Outsource Likelihood : High

lon-core yet critical

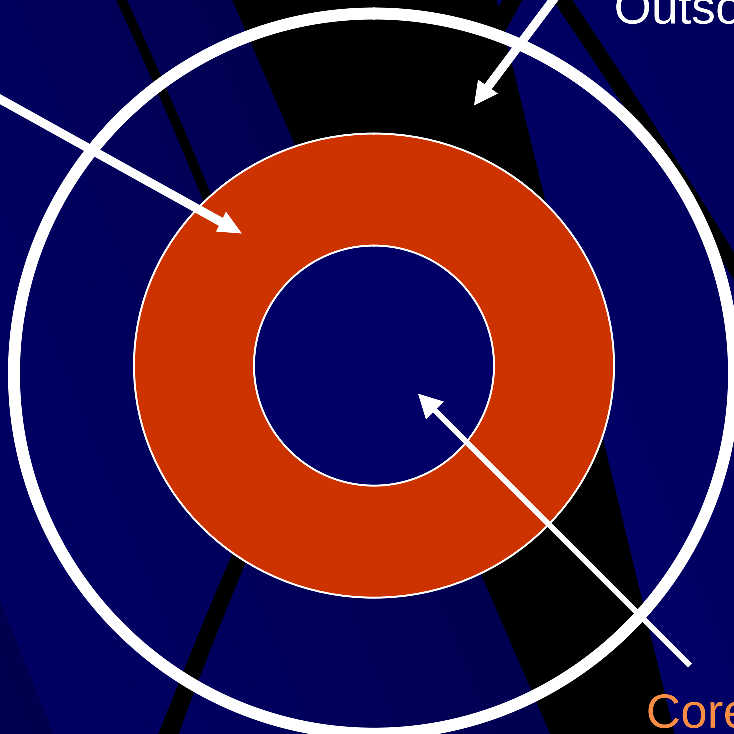
Accounting

Supply chain management

HR Administration

Claims Administration

utsource Likelihood : low but will be High soon



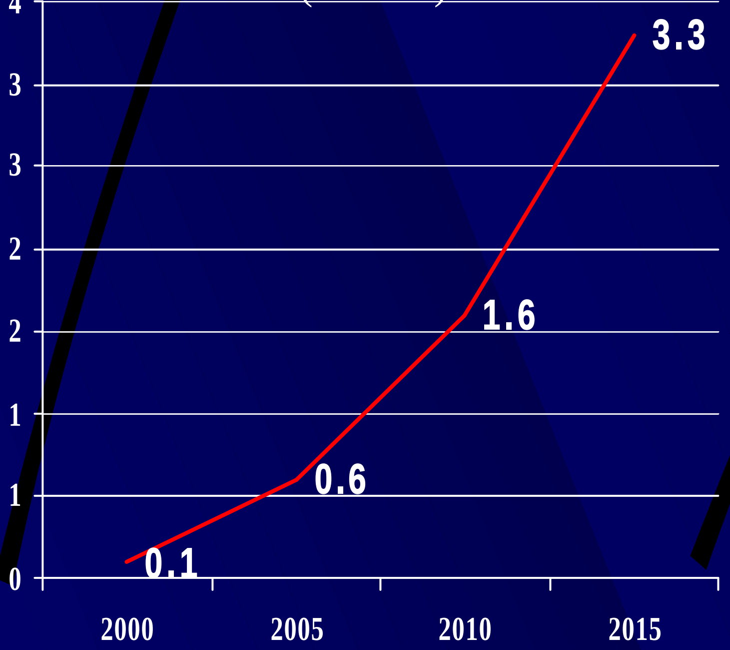
Core Business

Outsource Likelihood : Not Hi

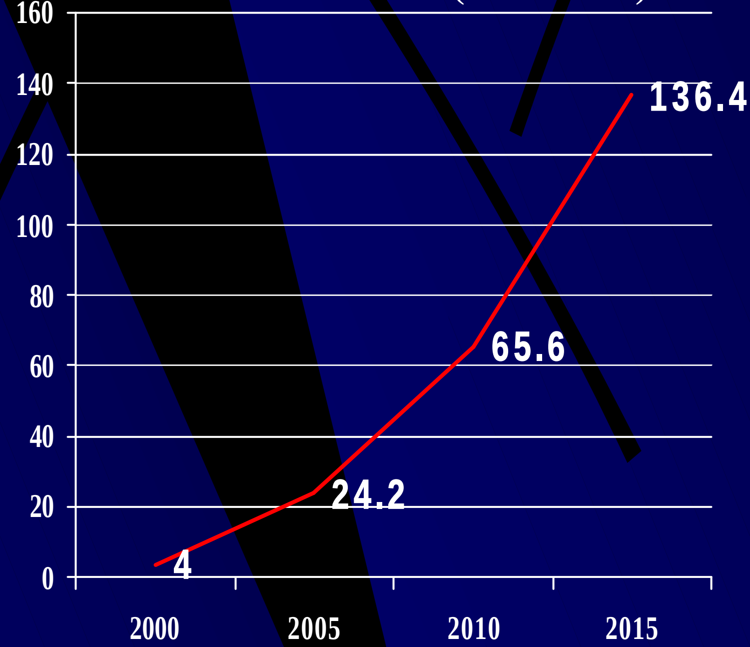
CLEAR FUTURE TREND OF BPO

Value addition through BPO operation will improve. The study below shows the total number o US jobs which may move out through BPO operations. The second graph gives the total wage that will move out to BPO operations. The ratio of wage per job which increases over the year substantially that more and more sophisticated core operation will move out giving excellen value addition to the outsourced operation.

TOTAL NO. OF US JOBS MOVING OFFSHORE (millions)



TOTALWAGES ASSOCIATED WITH US JOBS MOVING OFFSHORE (US$ billion)



Source : US Department of labor and Forrester Research

CONTRIBUTION OF INDIAN SOFTWARE IN THE US ECONOMY

Projected Software Services exports to US in 2003-04	8.5 billion
Savings to US economy by off-shoring to India	10-11 billion
Hi-tech imports from US to India	3 billion
Contribution by US professional to US social security	0.5 billion
Income tax paid by Indian IT professionals in US	1.8 billion
Total Benefits to US economy	**16.8 billion**

LESSONS FROM THE INDIAN EXAMPLE

1. Mindset problems
2. Licensing and high license fees
3. Spectrum allotment
4. Restrictions on privatization
5. Lack of a consultation machinery

Tunisia is poised for convergent IT and Telecom revolution and I wish all success to Tunisia.

If you need any advise regarding application of ICT in Tunisia ESC would always be willing to provide all assistance including support from the Indian IT industry.

THANK YOU