

ICT Development in India

J A Chowdary

President & Managing Director, PortalPlayer Pvt. Ltd.

President of HYSEA

jac@portalplayer.com



ICT Development in India

- India Advantage
- Current ICT scenario in India
- What are the Strategies for sustained growth
- Impact of ICT dev on Digital Divide
- Case study of AP ICT implementation
- Summary



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India Advantage

- Large Economy
 - \$ 450 bn GDP: 4th largest in Purchasing Power Parity
- Stable growth and strong macro-economic parameters
 - GDP Growth rate over 6% in last 5 years
 - Declining inflation rates-under 5%
 - Stable exchange rate-5 year CAGR depreciation under 6%
 - Current account deficit averaging 1%
 - External debt / GDP under 25%; short term debt manageable



India Advantage

- **Stable politico legal system**
- Rapid approach to globalization
- Human resources
 - Large pool of intellectual capital
 - English as medium of education
 - Fast growing middle class group
 - Good educational infrastructure
- Capital Markets



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Good Educational infrastructure

- As of March, 2000 India had over 340,000 employed software professionals, which is likely to reach 2.5 million by year 2008
- India produces 122,000 Engineers per year , out of which 73,000 are in ICT area



India Advantage

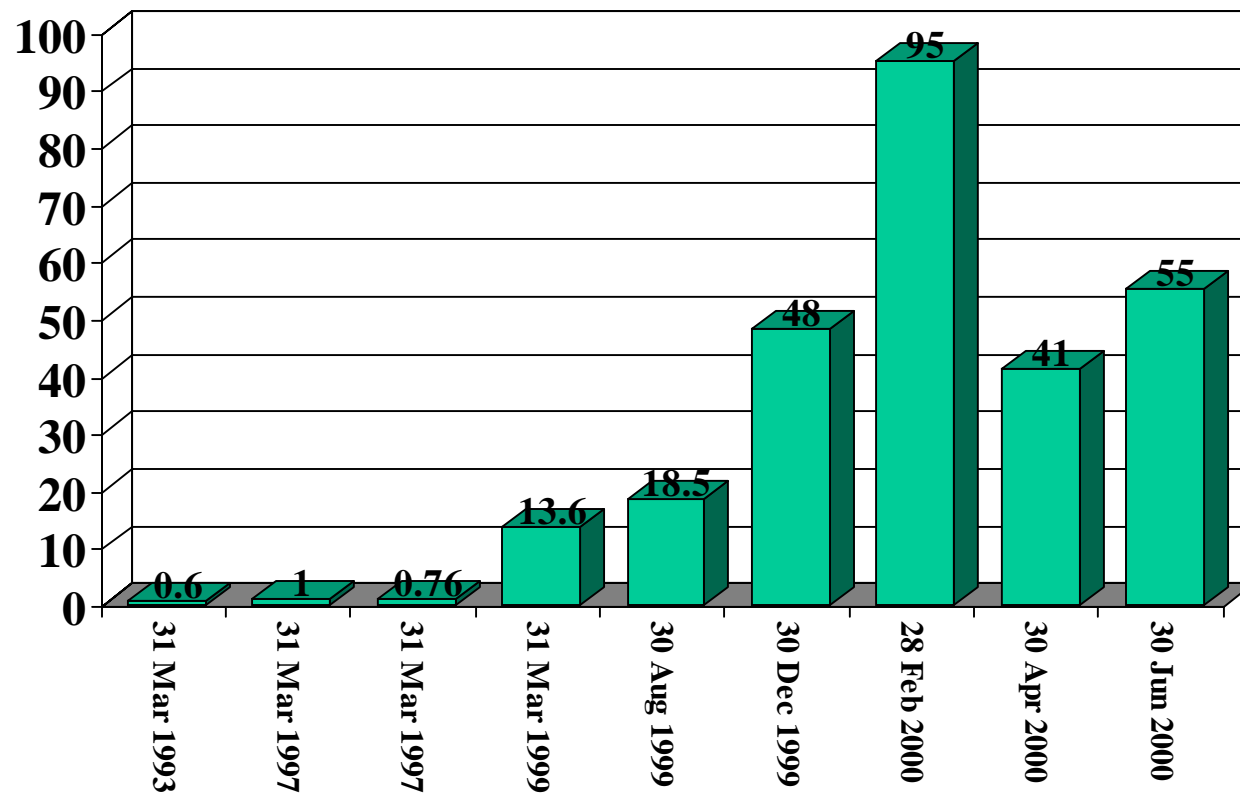
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Market Capitalization of listed Indian Infotech companies

(in US\$ Billin)

- Sharp re-rating in valuations of companies in the knowledge sectors – consistent out-performance over main indices



India Advantage

- Huge Domestic market in India
- Availability of Datacom infrastructure
- Time Zone advantage
- Lower cost of infrastructure
- Quality as the key focus for ICT development
- Government support



Domestic market in India

- The ICT domestic market in India has grown from \$10 million in 1991 to \$1.75 billion in 1999
- 19 States out of 26 States have announced new IT policies
- E-Governance, e-Banking, e-Manufacturing, e-Commerce, etc are the new mantras in India
- Major private industries participating in providing high bandwidth optical fiber network in India



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Quality, the magic mantra

- India is home to 18 out of 34 SEI CMM Level 5 companies worldwide
- Out of top 300 software companies, 170 have acquired ISO 9000 certification



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Government support

- Setting up of STPs/EHTPs/EPZs
- Setting up of IITs
- High Speed Datacom links
- Tax incentives
- Proactive State Government initiatives
- Creation of huge domestic market
- Setting up VC funds exclusively for ICT



ICT Development in India

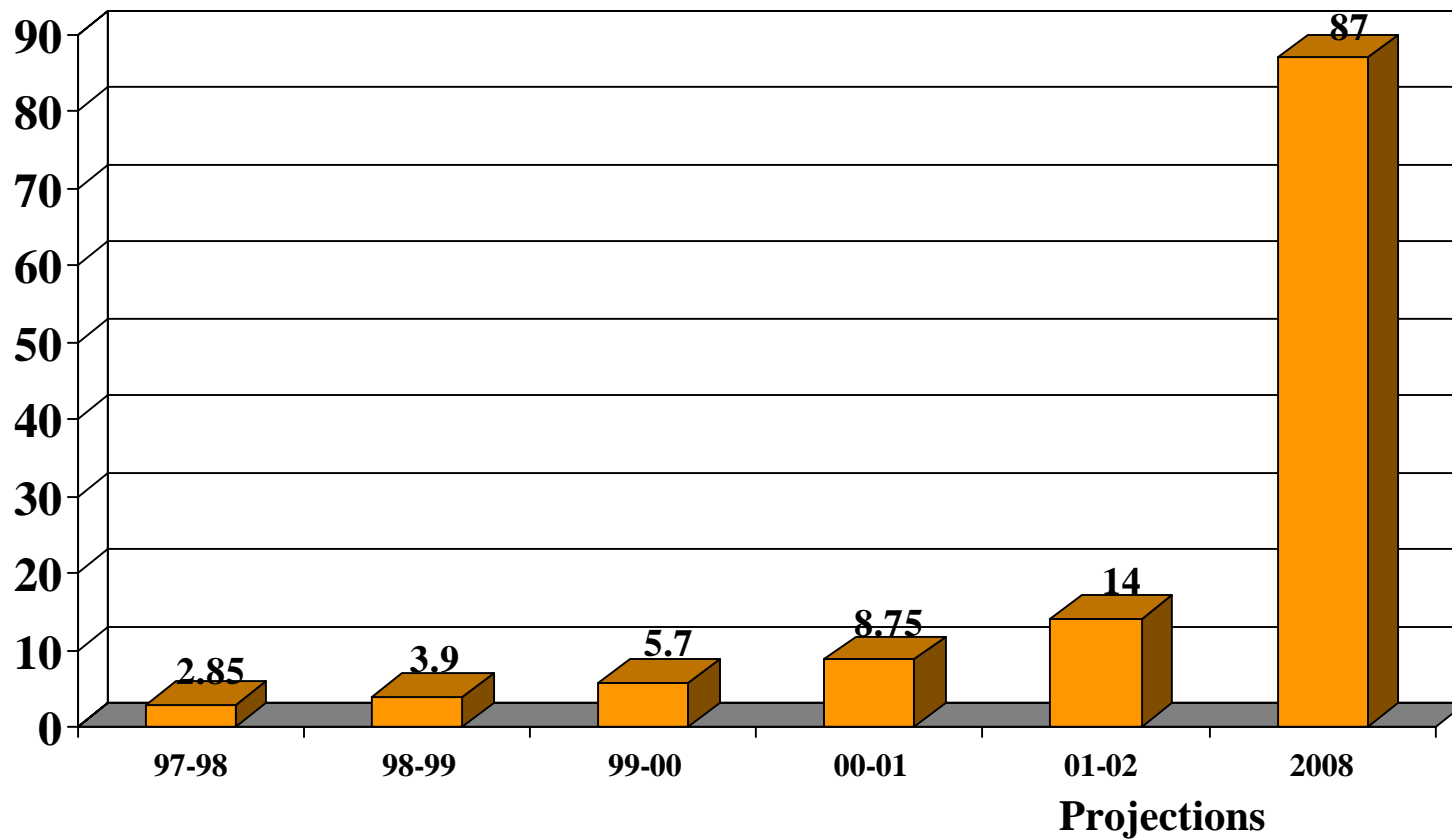
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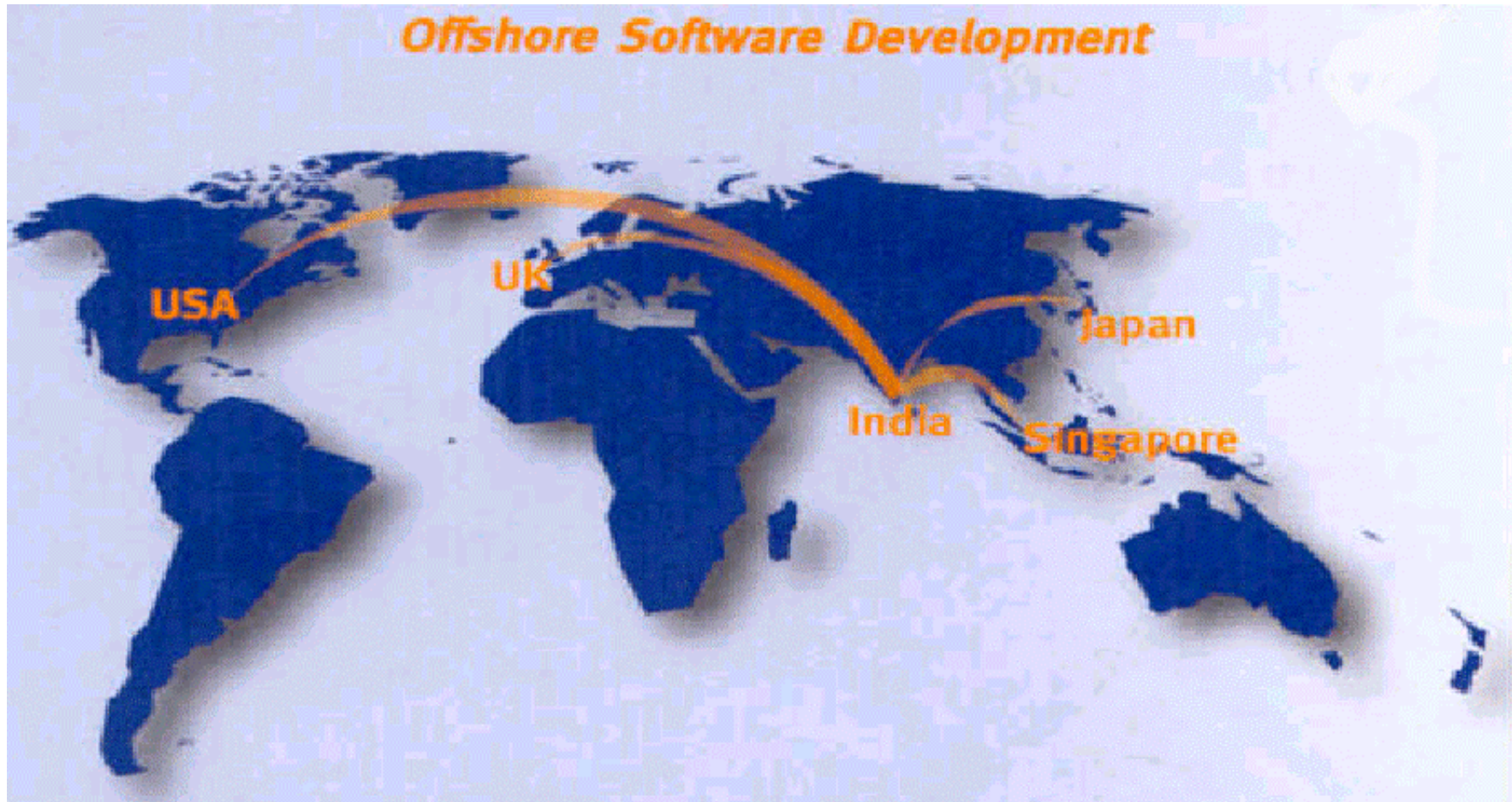
Current ICT scenario in India

Indian IT Software and Services Industry

(in US\$ Billion)



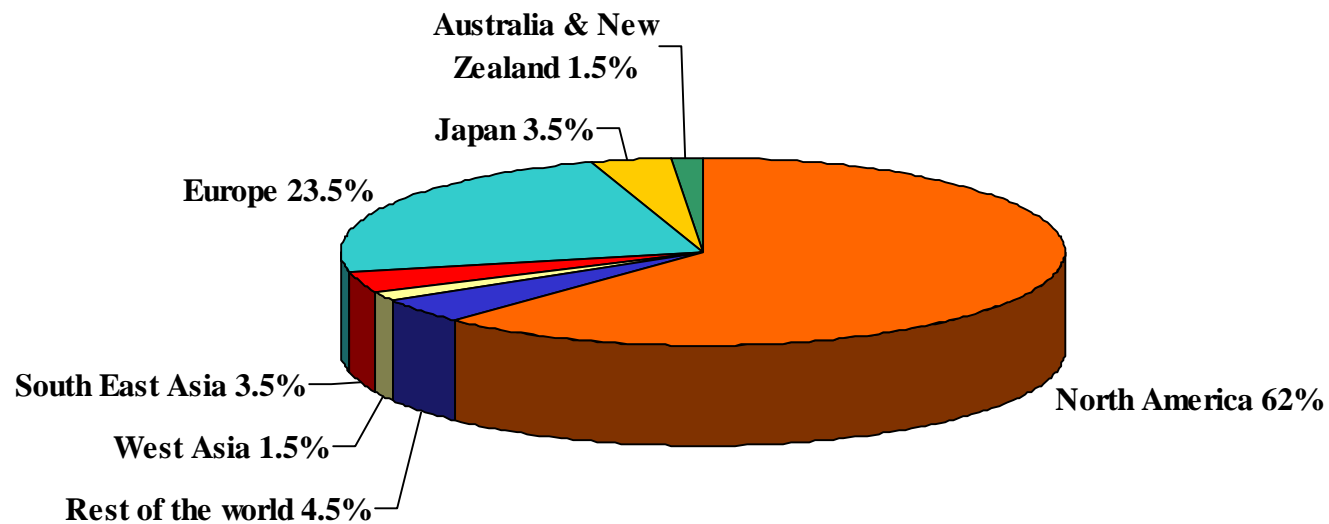
Offshore Software Development



Offshore software development using high-speed satellite and video conferencing links provided by VSNL and Software Technology Parks



Destination of Indian Software Exports



An increasing number of tech majors and emerging technology companies are using India as a development base

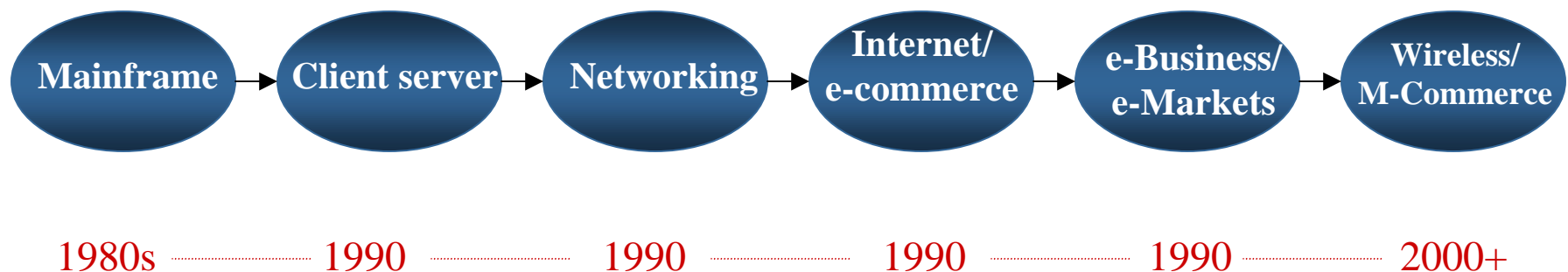
Some Multinationals doing Research & Development in India

- Sun Microsystems
- Microsoft
- Silicon Graphics
- Cisco
- Oracle
- Lucent
- Motorola
- SDRC
- IBM
- Analog Devices
- Hewlett Packard
- Intel
- Texas Instruments
- Nortel
- SAP
- Generic Electric
- Unisys
- LG
- Alcatel
- Sony
- Agilent
- Selectica
- Amber Networks
- Sharp Corp.
- Peak XV Networks
- Sitara Networks
- Netplane Systems
- Metrowerks
- ConvergeLabs



Seasoned IT Service Companies

- Leading Indian IT service companies have served Fortune 1000 companies for over a decade and matured through technology cycles



Five-Year Growth Cagrs (FY95-00) for some leading IT companies

(%)	5-Yr Rev Cagr	5-Yr EBITDA Cagr	5-Yr PAT Cagr
Infosys	74	82	85
Wipro	24	46	52
NIIT	38	45	46
Mastek	64	48	48



Source: Company Information

List of Indian IT services companies listed on US Exchanges

	Ticker	Listed on	Priced at (no of ADS per share)	Amount raised (US\$m)	CMP (3/11/00)
Infosys	INFY	Mar-99	34.0(2)	70.4	140.0
Silverline	SLT	Jun-00	25.0(0.5)	108.8	14.0
Wipro	WIT	Oct-00	41.4(1)	130.9	54.5



Select Acquisitions by Indian IT companies

Company	Acquisition	Country	Date	Amount (US\$m)
DSQ Software	San Vision Technology	US	Jul-00	30.0
Silverline Tech	TIS	UK	Aug-00	12.5
Software Solutions	AlbionOrion Company LIC	US	Sep-00	63.7
Silverline Tech	Sky Capital	HK	Oct-00	22.0
Silverline Tech	SeraNova	US	Oct-00	99.0

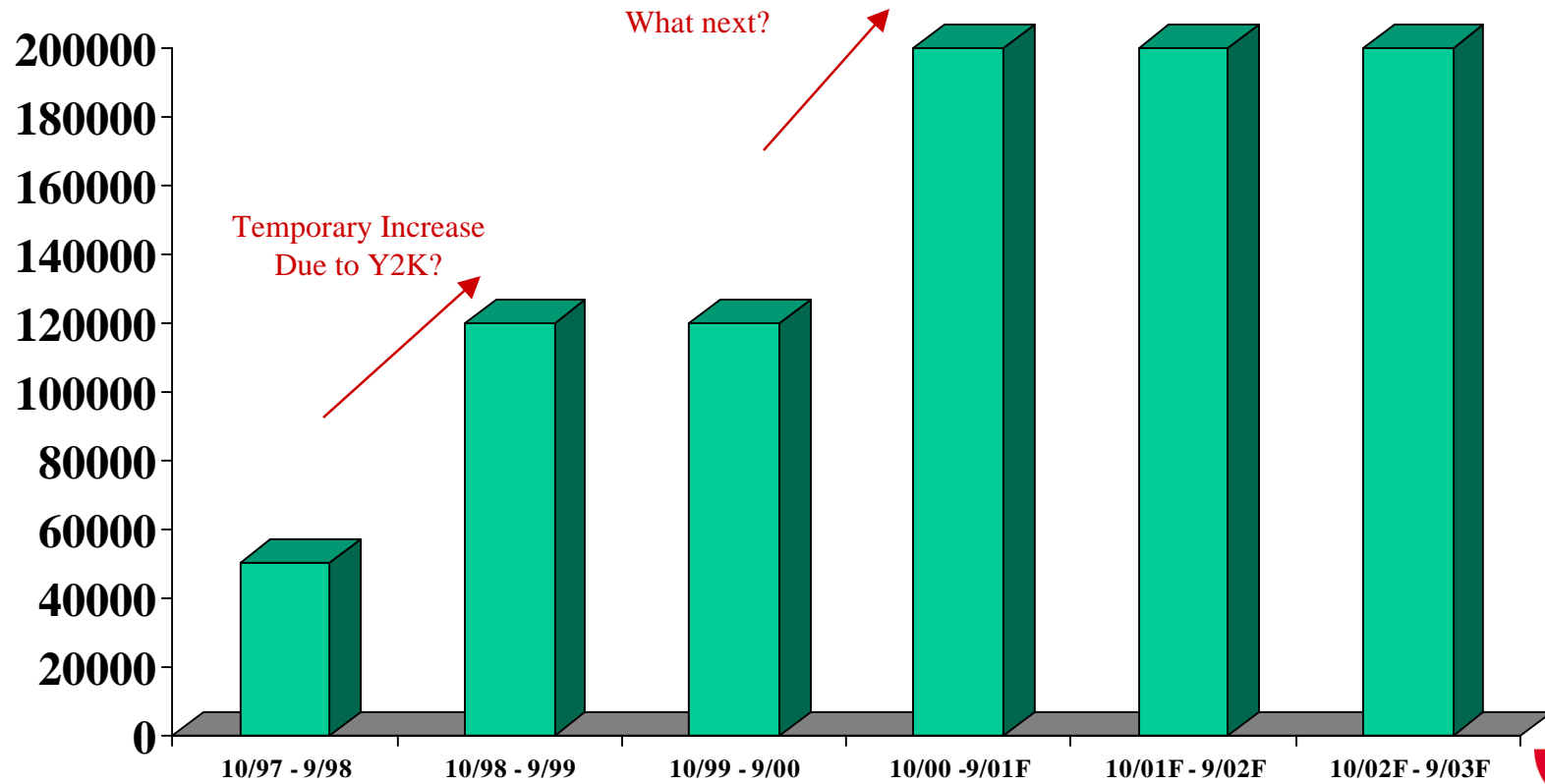


Source: Company Information

India – IT Partner of choice!

India is playing a key role in fulfilling IT service needs of an increasing number of countries

(No. of Visas allowed)



Source: Industry Data

PortalPlayer

A Strong Business Model

- Having successfully used the offshore delivery model and realised the cost benefits, companies are gaining comfort with shipping work offshore

Company	Hourly bill rate (US\$)	Company	Hourly on-site bill rate (US\$)
Sapient	200 – 240	Infosys	70 - 110
Braun	180 - 220	Wipro	70 - 120
Diamond Technology	320 – 420	HCL Tech	65 – 120
Proxicom	220 – 260	MphasiS	75 – 140
Scient	270 – 350	Polaris	55 - 100

- Demand for skills for complex back-end enterprise integration needs arising out of e-business should further benefit India IT service majors



Product and Technology companies

- The last two to three years have seen seeding and growth of many technology and product-led companies in India
- Ranking high on scalability and cost, India is becoming the destination of choice for IT-enabled services
- A large number of product and technology initiatives in India have been the brainchild of professionals with experience at leading technology companies
- Components and technology licensing represent an even bigger opportunity for India companies.



Venture Capital in India

VC	Association	Size (US\$m)	Key Investments
Baring India	Barings Pvt Eq.		BFL Software, Cybernet Software, Texworld.com
BankAm Pvt. Equity	Bank of America		DSQ Software, Sivan securities
Carlyle		250	Placements.com, itnation.com, Educomp Datamatics, Convergent s/w
CDC Advisors	Commonwealth development		BPL Telecom, Alumnus software, Aquila tech, iCode, NetKraft, Opus
Chrysalis Capital	Microsoft, Rothschild	65	Transworks, egurucool.com, productorion.com, iVega Corp, Cheecoo.com, Bazee.com
Citibank Venture	Citibank		Sasken, Convergent Software, Polaris
GE Capital	GE capital		Rediff.com, Infotech Enterprises
Intel Asia	Intel	100+	Sasken, Cyber India online, Rediff.com, Network solutions, Eastern software, Amoeba, Bharati
Global Technology ventures	Bank of America, Sivan		Mindtree, Kshema Tech, DSR solutions, Ivega Corp, Aarzoo.com
IndAsia Fund		75	Indbazaar.com, Melstar, Ziptelephone, Geometric



Source: Company Information, Industry Data

Enabling One Million jobs by 2008

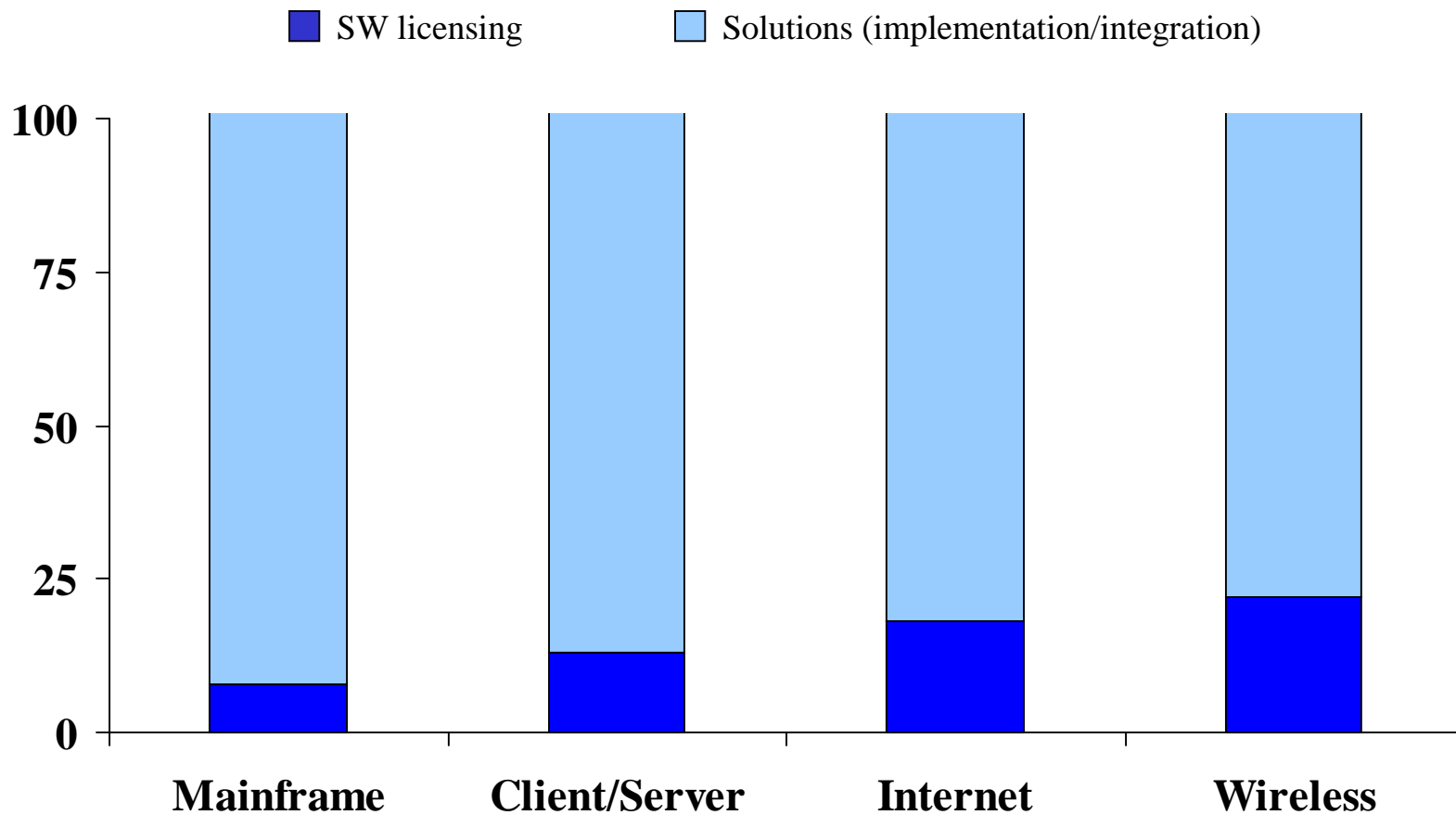
IT enabled services	Employed 1999	Employed 2008	Size (Rs bn) 1999	Size (Rs. Bn) 2008
Data entry/conversion/back office operations/revenue accounting	14,000	260,000	6.8	190
Remote maintenance and support	4,100	180,000	2.7	135
Medical Transcription / Insurance claims processing	6,100	160,000	3.0	110
Call centres	2,800	100,000	1.0	60
Database services	1,400	100,000	0.7	65
Content development	12,600	300,000	6.1	250
Total	41,000	1,100,000	20.3	810



Source:NASSCOM

PortalPlayer

Systems implementation captures bulk of solutions spend



Source: Deutsche Bank Research Estimates

Expanding Demand/supply mismatch for IT professionals

Industry estimates of unfilled IT workforce positions in the US in 1999 vary from 700,000 to 850,000 and is expected to increase to close to 1m by 2003. This would represent about 15% of the total IT workforce in the US in 2003.

Demand ('000)	1999	2000	2001	2002	Cagr (%)
Demand ('000)	4,061	4,492	4,970	5,499	10.6
Supply ('000)	3,685	4,054	4,460	4,907	10.0
Increase in Gap		62	72	82	
Cumulative shortage	722	784	857	939	9.1



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Strategies for sustained ICT growth in India

- Improving the quality of Education
- Increasing the number of Universities and colleges
- Industry Academic linkages
- Providing High bandwidth Data-com Network
- Tax incentives for R&D
- Setting-up dedicated VC funds for ICT dev
- Promotion of IP development



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Impact of ICT Development on Digital Divide

- Increasing gap between Information Haves & Have-nots
- Huge disparity in compensation with respect to non ICT industry



Strategies taken for bridging the Digital Divide

- Linking the Rural India with Urban India
- Distance Education
- Implementation of E-Governance projects
- Drive for Local /Regional Language support
- Promotion of IT enabled services industry in the rural India





REAPING TECH HARVEST



BACK TO BASICS: CELLULAR CZARS REWORK MARKETING STRATEGIES TO TAKE TO COUNTRY ROADS

Rural India rings a bell for mobile majors

Vivek Law

MUMBAI 20 DECEMBER

WHEN a village sarpanch wrote to one of India's cellular czars recently, saying how his village — which earlier had only one PCO and now has eight mobile phone PCOs — was grateful to be connected, it was just another instance of how the equations in the cellular market is being turned on its heads.

Operators across the country are seeing more than 50 per cent of all incremental growth in their cellular business coming from small towns and rural areas. And this isn't the customary mobile-totting rich farmers atop tractors. Cellphones have reached the man on the cycle, the fisherman and the village sarpanch in not-so-prosperous villages and towns in India. So much so, that some oper-

ators say they do not even need to explain in detail what a cell phone is. The villagers know it. It's just that we did not, they say.

Marketing strategies are being reworked, lower tariff plans are being drawn up and there's a new glint in the eyes of cellular industry chieftains. "It just amazes me. From Gondia to Latur, everybody wants to be impacted by technology. We receive letters from village sarpanch's on how the mobile phone is being used effectively in villages where there was a single PCO which too often never



REAPING TECH HARVEST

worked," says Rajeev Chandrasekhar, chairman and chief executive officer of BPL's Innovision group.

Some figures. Out of 5,40,000 total subscribers, BPL now has close to 2,00,000 subscribers in small markets across Maharashtra, Kerala and Tamil Nadu. Out of 204 towns outside Mumbai that it is present in, 160 are small towns and villages. Says Mr Chandrasekhar:

"The growth here is going to be far more, for unlike in the metros, the roll-out in state circles has been slower. It's only now that operators are rolling out networks

across states. You can imagine the growth potential," he adds. The country's total subscriber base is around 3 million as of now, Bharti's head of mobile operations across circles, Anil Nair has an interesting story to tell.

"Even in Delhi, we have seen carpenters and small time contractors on bicycles among our mobile users. There was this carpenter we were trying to hire and he gave us a cell number to get in touch with. More importantly, a small contractor sees value as he can call someone for more material from the site itself," he says. He has figures to show as well. In Himachal Pradesh, more than 50 per cent of the total 8,500 subscriber base is now from areas apart from the two main towns, Shimla and Kullu Manali. "It's a hit in the orchards. As it is easier to create more footprints by placing a base station on the top of a hill," he says.

■ South's in it too: Page 3



India Inc's October-December 2000 quarter IT sector gives a good start

S. Valdy Nathan
BL Research Bureau

IT is as expected. The information technology sector is proping up Corporate India, at least going by the earnings figure put out by 240 companies so far in the October-December 2000 quarter.

The sustainable earnings have grown 43 per cent compared to the corresponding quarter of 1999. A good start for India Inc.

And much of the boost to the bottomline has come from the information technology sector. For if the IT sector effect is knocked off, the earnings growth rate collapses almost by half.

The reported numbers suggest that the re-rating of the Old Economy stocks in the last quarter 2000 may have been out of tune with underlying fundamentals and driven more by the institutional investors' imperative to diversify the portfolio.

The accompanying table shows the aggregate report card of the 240 companies.

The revenue growth was 20.9 per cent at Rs 21,346.80 crore while expenditure went up at a slower rate of 18.1 per cent. The

difference is mainly because of the IT sector numbers dominating the overall picture.

These are early days yet to conclude that Corporate India has managed to check expenditure growth.

Operating profits have also grown sharply, by around 36 per cent, with operating profit margin rising around two percentage points. Interest charges have been under check, rising barely 0.8 per cent. These factors no doubt helped improve the earnings growth.

The quality of earnings growth may also be somewhat better because 'other income' has actually declined around 15 per cent.

Frontline IT companies such as Infosys Technologies, Wipro, HCL Technologies reported earnings growth in excess of 100 per cent. Other, such as Satyam Computer Services, also reported good numbers.

Few companies such as Mastek and HCL Infosystems, reported indifferent earnings. The divergence within the technology sector evident in the July-September quarter appears set to continue.

As for Old Economy, the numbers reported so far point to a

good showing by the paper industry and the steel sector to a lesser extent.

Numbers from key sectors such as cement (where there is much controversy over prices), engineering, oil and automobiles are yet to come in to draw any firm conclusions of the overall status of Corporate India.

Numbers from the FMCG and pharmaceutical sectors also could alter the picture somewhat.

In the automobile sector, Hero Honda recorded good earnings growth while Bajaj Auto continues to slip.

As the effect of the 90-130 per cent growth rate of the IT sector gets reflected on a larger base as more earnings reports come in and with many key Old Economy companies yet to present their numbers, the overall picture may get somewhat worse.

This is what happened in the July-October 2000 quarter as well and an encore is on the cards.

India Inc. balance-sheet				
October-December Quarter				
	2000 Rs.Cr	1999 Rs.Cr	Change Rs.Cr	Growth (%)
Revenues	21,346.8	17,858.2	3,688.6	20.9
Expenditure	17,602.6	14,906.4	2,696.2	18.1
Operating profits	3,744.2	2,751.8	992.4	36.1
Other income	530.7	624.7	(94.0)	(15.0)
Interest charges	768.5	762.2	6.4	0.8
Gross profit	3,468.0	2,614.3	853.7	32.7
Depreciation	962.3	779.5	182.8	23.5
Earnings before tax	2,505.7	1,834.9	670.9	36.6
Tax/provisions	467.7	413.7	54.0	13.1
Earnings after tax	2,034.8	1,421.2	613.7	43.2
One-time charges	75.4	51.0	24.4	47.8
Net profit	1,959.8	1,370.1	589.7	43.0
Equity	7,210.2	5,894.0	1,316.2	22.3



REGIONAL

CM RELEASES STRATEGY PAPER

IT identified as thrust area for employment generation

By Our Special Correspondent

HYDERABAD, JAN. 24 The services sector, specially IT-enabled services, will be thrust areas of the strategy for employment generation in the State, says a strategy paper on employment generation.

The Chief Minister, Mr. N. Chandrababu Naidu, who released the paper at a press meet here on Wednesday, said key sectors would be identified and prioritised and their successful implementation ensured. The Government will play the facilitator, creating a conducive climate for private participation.

It says the State economy will have to show a 9 to 10 per cent annual growth rate for the next 25 years and the average per capita income a nine-fold upswing, most of the incomes of the poor. The present per capita of Rs 19,980 or 444 US dollars was one of the lowest for India, occupying 99th rank in the world. Population growth will have to be pegged at 0.8 per cent and at least 18 to 20 million new jobs created by 2020 in various sectors of economy.

If this has to be achieved, agriculture and industry will have to maintain annual growth rates of 6 per cent and 11 per cent respectively while the services sector will need to grow at 12 per cent.

According to current status, unemployment rate in the State is 6.67 per cent, the total number of job-seekers being 31.51 lakhs, the share of urban areas being 11.90 lakhs. The job-seekers include 18.65 lakh generally educated, 5.62 lakh skilled and 3.59 unskilled and illiterate and 50,673 professionals and PGs.

"What we need in the new millennium is a well-trained work force adaptable to new technologies and skills," Mr. Naidu said, attributing the positive turnaround in the State-owned Singareni collieries to the enlightened attitude of the labour.

Citing vast employment opportunities abroad for people knowing English, the paper suggests that a large band of unemployed graduates and post-graduates can profit by improving proficiency in English and computer education. Similarly, vocational courses will need to be redesigned to suit changing market demands. It also refers to steep increase in the number of engineering colleges and colleges offering MBA and MCA courses in recent years. In order to make the students computer literates right from the school stage, it is proposed to introduce computer education in 1,000 schools in the near future.

There is scope for employment in primary education where about 1.5 lakh qualified youth

were appointed as teachers or education volunteers.

The State will have a thriving service sector contributing 60 per cent of its GSDP and a major generator of higher value added jobs. It will focus on growth engines like information technology, knowledge-based services, tourism, logistics, healthcare and education.

It was also proposed to set up multi-purpose service centres catering to the needs of 4 or 5 cluster villages, taking up activities like fertilizer retailing, grain transportation, or semi-autonomous services like laundry, hair-styling, beauty-care, deploy multipurpose mechanics for repair of household appliances, farm implements, etc.

The Chief Minister said IT-enabled services were expected to create one million jobs in the next 5 years. It would revamp its training programmes to focus on creation of a reservoir of skilled manpower to meet the needs of the IT-enabled services industry. The State's advantage in contributing 23 per cent of India's software professionals would be leveraged to gain competitive edge in the area.

For better part, the paper is reiteration of the Government's initiatives and intends to take the State forward by creating more jobs.



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Case study of AP ICT implementation



The Vision

Andhra Pradesh will leverage IT
to attain a position of
leadership and excellence in the Information Age
and to transform itself into a
Knowledge Society



Objectives of AP's IT Policy

Economic Development

- Investments in IT
- Exports
- Employment

Quality of Life

- Education
- Healthcare
- Rural Development

Good Governance

- Anytime, anywhere
Citizen Services
- High Internal
Efficiencies

The Strategies

- Getting enablers in place
 - Decision making bodies, institutions, policies, IT Architecture
- Defining thrust areas
- Catalyzing creation of infrastructure
- Leveraging private sector initiative
- Accelerating emergence of a knowledge hub
- Generating the right social environment



Thrust Areas

- Citizen services
- Infrastructure for IT
- IT education
- IT-enabled services
- IT-enabled education



Catalyzing Infrastructure Creation



- **Hi-Tech Space**
 - HITEC City Phase I – 550,000 sft
 - HITEC City Phase II – 870,000 sft
 - 120 acres of plotted area for Hitech cos
- **IT Parks**
 - Vizag, Vijayawada, Warangal & Tirupati
 - 3 million sft of IT Parks in pvt sector in next 3 yrs
- **International Airport – at award stage**
- **International Convention Centre**
- **Hardware park**
 - Planned over 5000 acres near International airport

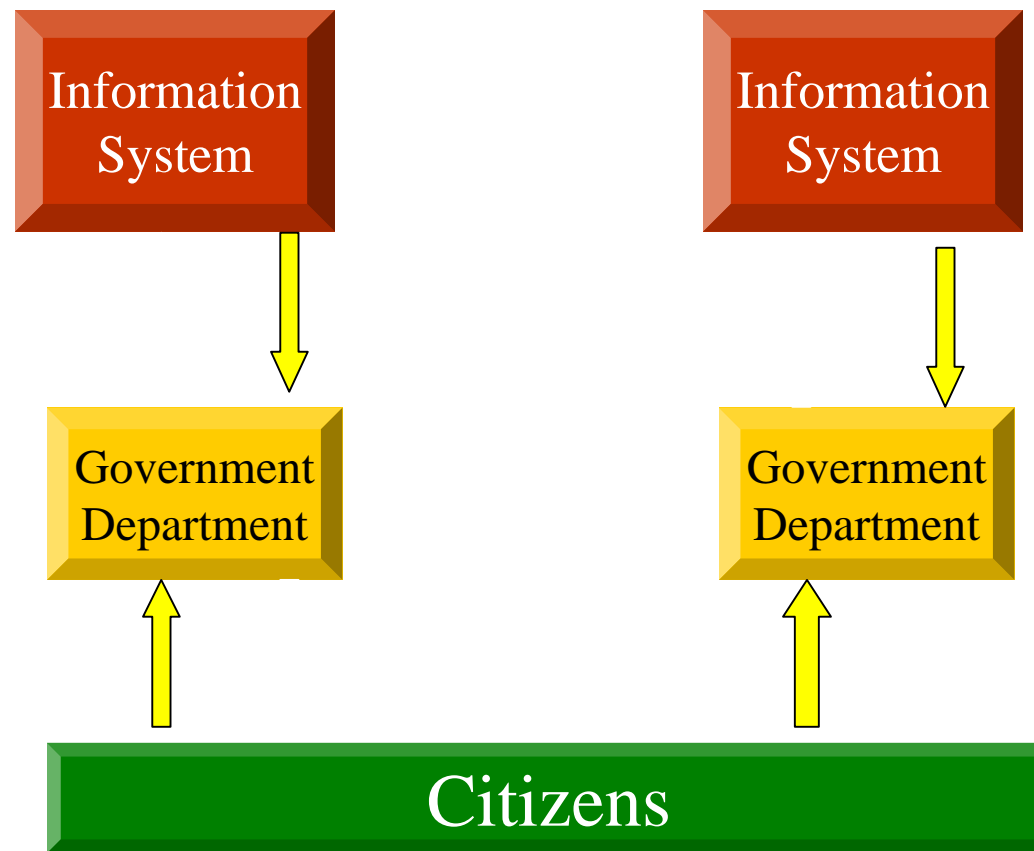


Bandwidth – a determinant of competitiveness

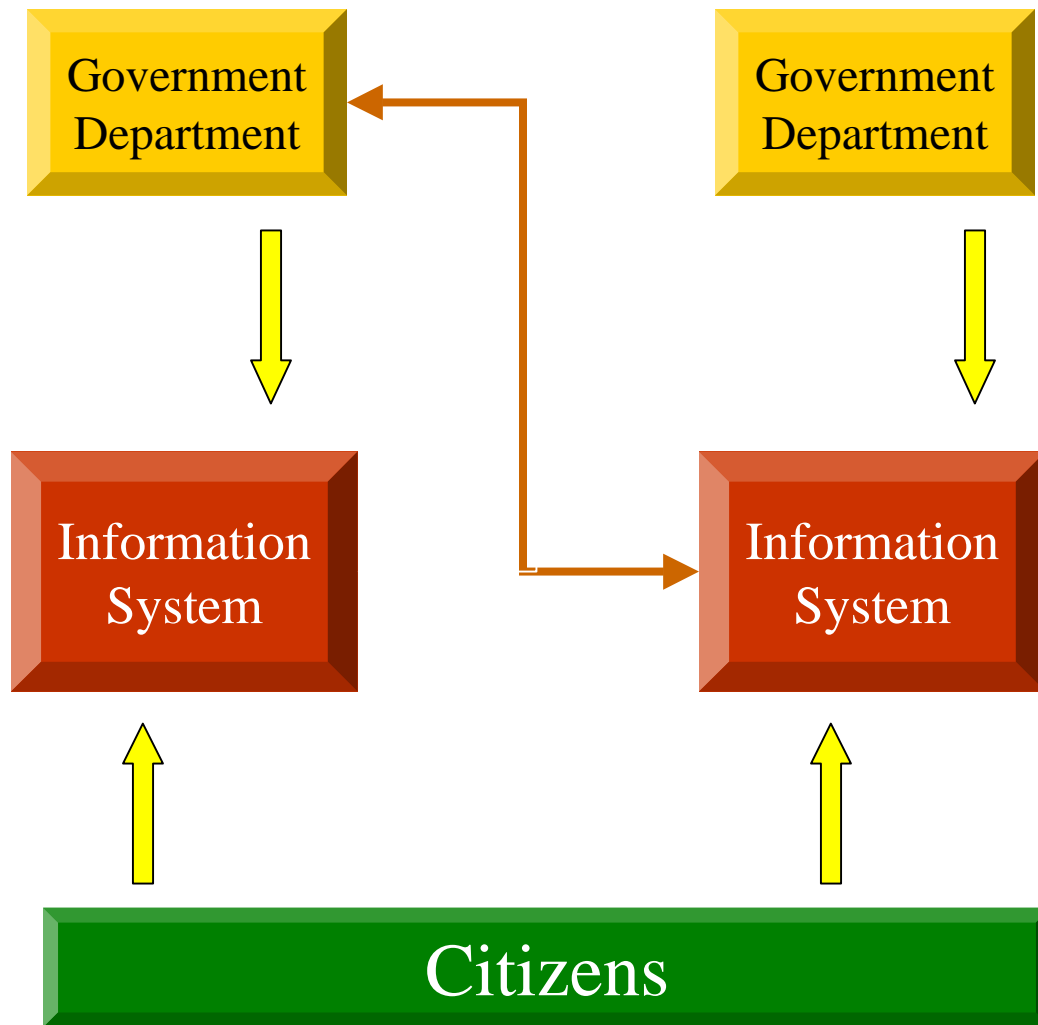
- Optical fibre backbone
 - 20,000 route kms of BSNL
 - Promoting competition from private sector
 - Policy of free right of way
 - Reliance , Bharti OFC projects in progress
- Landing point for sub-marine OFC at Vizag
 - Connectivity to Singapore – West Coast of USA
- Satellite communications
 - INSAT 3B
 - MEASAT



Traditional Government Citizen Interface



Government Citizen Interface in the future



PortalPlayer



Infrastructure for e-Governance

- APSWAN (AP State Wide Area Network)
 - Connects Hyderabad to 25 cities & towns in AP
 - Provides connectivity for data, voice and video
 - Video-conferencing – enables close monitoring
 - Implemented with private sector funding - BOO model
- AP Secretariat Campus Area Network – 2000 nodes
- Citizens database with 76.7 million records
- Land records database with 12 million records
- Datawarehouse (on PARAM super-computer)
- AP Development Monitoring System on GIS
- IT Architecture, Security Policy & Public Key Infrastructure
- Extensive training infrastructure
 - CIOs programme, Project related training, computer literacy



Major E-Governance Projects in AP

Convenient Citizen Services

- MPHS .. IT services at the grassroots (1125)
- CARD .. Registration of deeds in 1 hour (214)
- TWINS .. Redefining citizen services (1+18)
- FAST.. RTA services through IT (3+34)
- (AP Portal) Convergence of services, forms, info.

Improved Internal Efficiency

- Treasuries Computerized accounting (330)
- APDMS.. Geographical info. for development planning
- C2K.. IT at pivotal level of Collectorates
- (SKIMS).. Knowledge-led governance



MPHS Project

(Multi-Purpose Household Survey Project)

- Uses MPHS citizens database & land database
- Implemented in 1125 mandals
- Application packages implemented so far:
 - Issue of certificates
 - Land records certificates
 - Land records management
 - Petition Monitoring
 - Payroll



CARD

(Computer-aided Administration of Registration Department)

- An end-to-end IT solution for registration of deeds
- Transparency in valuation of properties
- Customized document management system
 - Documents are scanned & archived to CD
- Project running for 24 months at 214 sites
- Over 15,00,000 documents registered under CARD
- Registration in 1 hour
 - All other services – Encumbrance Certificates, Valuation of property to estimate stamp duty, etc. – in 15 minutes
- Inhouse implementation - Facilities management through private sector – HCL and ECIL



TWINS

Redefining Service

- Pilot project in Banjara Hills operational since December 1999
- 19 citizen services offered across the same counter
- Open from 9 am to 8 pm
- Electronic queuing system
- Fully air-conditioned
- 3-tier architecture
- Replication in 18 addl. locations by May 2001 on BOO basis



Services available now

- **Utility Bill / Tax Payments**
 - Water, Electricity, Property Tax
- **Licenses**
 - Learner's License, Driving License
 - Registration of new vehicles
 - Change of address / owner of vehicle
 - Trade license
- **Certificates**
 - Birth, Death certificates
 - Encumbrance Certificates
 - Valuation Certificates



Services planned

- Telephone bills
- Filing of applications for passports
- Booking of bus, train tickets
- Reservation of services at TTD
- Filing of various forms, applications
- Private (B2C) services
 - Insurance & financial services
 - Education & healthcare
 - Share transactions
 - Cellular phone bill payments..



IT for SMART Governance

- IT for high quality citizen services
 - CARD, MPHS, TWINS, FAST, AP Portal
- IT for high internal efficiencies
 - SKIMS, APDMS, C2K, Treasuries, CMIS
- IT for better enforcement of law
 - COMPACT, Police, Excise, Courts
- IT for human resource development
 - MSIT, Ku Band
 - Computer Literacy in Schools
 - PHC project
- IT for Promotion
 - Industries, IT, Welfare, Agricultural Extension



The 6-C model for e-Governance

- Content
- Competencies
- Connectivity
- Cyber-laws
- Citizen interface
- Capital



Human Resource Development



Human Resources Development in AP

- 104 engineering colleges
 - 24,135 seats – 7500 in IT
 - Another 61 colleges to be established
- 158 MCA colleges
 - > 5,000 seats
- 99 MBA colleges
 - 4,280 seats
- 414 BCA colleges
 - 16,520 seats
- 103 Polytechnics
 - 17,100 seats



Institutions of Excellence



- **Indian Institute of Information Technology**
 - Centre of Excellence in IT Education & Research
 - Joint endeavour of IT industry and Government
 - IBM, Oracle, PSI-Net, Satyam & Motorola Schools
- **MSIT Program**
 - Consortium of Universities including Carnegie Mellon University
- **Indian School of Business**
 - Wharton & Kellogg Schools
- **Centre for Good Governance**
 - DFID
 - Kennedy School of Government



Emerging Knowledge Corridor

- Indian Institute of Information Technology
- Indian School of Business
- University of Hyderabad
- Dr. B R Ambedkar Open University & KU Band Earth Stn.
- Army Institute of Information Technology
- MCR Institute of HRD & Centre for Good Governance
- CMC's National R&D Centre
- RBI's Institute for Development & Research in Banking Technology (IDRBT) ...



Emerging Knowledge Corridor

- HiTec City
- Proposed HySEA technology park
- Infosys campus
- Wipro campus
- Engineering Staff College of India
- Environment Protection, Training & Research Institute (EPTRI)
- Jawaharlal Nehru Institute of Development



IT Promotion



Incentives Policy

- Software industry exempted from zoning regulations
- Self – certification under 7 Acts
- Rebate on Cost of land @ Rs 20,000 per job created
- Exemption from Pollution Control Act
- 70 % rebate on stamp duty & registration charges
- Software exempted from Sales Tax



Incentives Policy (contd)

- Investment subsidy of 20 % (cap Rs 2 mil)
- Software exempted from Sales Tax
- Special packages for Mega projects(> US\$ 24 mil)

- Policy Frameworks in the offing
 - Special Hardware Policy
 - Public Private Partnership in e-Governance



A World of Opportunity

- Software Development Centres
- Creation of IT infrastructure
- Data Centres
- Implementation of E-Governance projects
 - On BOO & BOOT basis
- Call Centres
- Back Office
- Community Internet Infrastructure
- Hardware Manufacturing Facilities



Catalyzing Essential Infrastructure

- Hitec city for IT companies
- Biotechnology park
- Hardware park
- International airport
- International convention centre
- IT parks in regional hubs



Power

- ◆ Highest PLF in the country 92%
- ◆ Power sector reforms taken up
 - Electricity Regulatory Commission
 - Separation of generation from transmission/distribution
 - Privatisation of distribution
- ◆ Adding 3000 MW over the next three years



Roads

- ◆ 10,300 kilometres of high density traffic corridors identified for improvement
- ◆ Significant improvements over last five years
 - 8500 kms of new roads
 - 1250 kms improved
 - US \$ 0.78 billion spent
 - US \$ 1.05 billion to be spent over the next four years



Airports

- ◆ **Hyderabad**
 - ◆ Existing runway extension
 - ◆ New international airport at Shamshabad
- ◆ **Improved airports in**
 - ◆ Visakhapatnam
 - ◆ Vijayawada
 - ◆ Tirupati
 - ◆ Puttaparthi

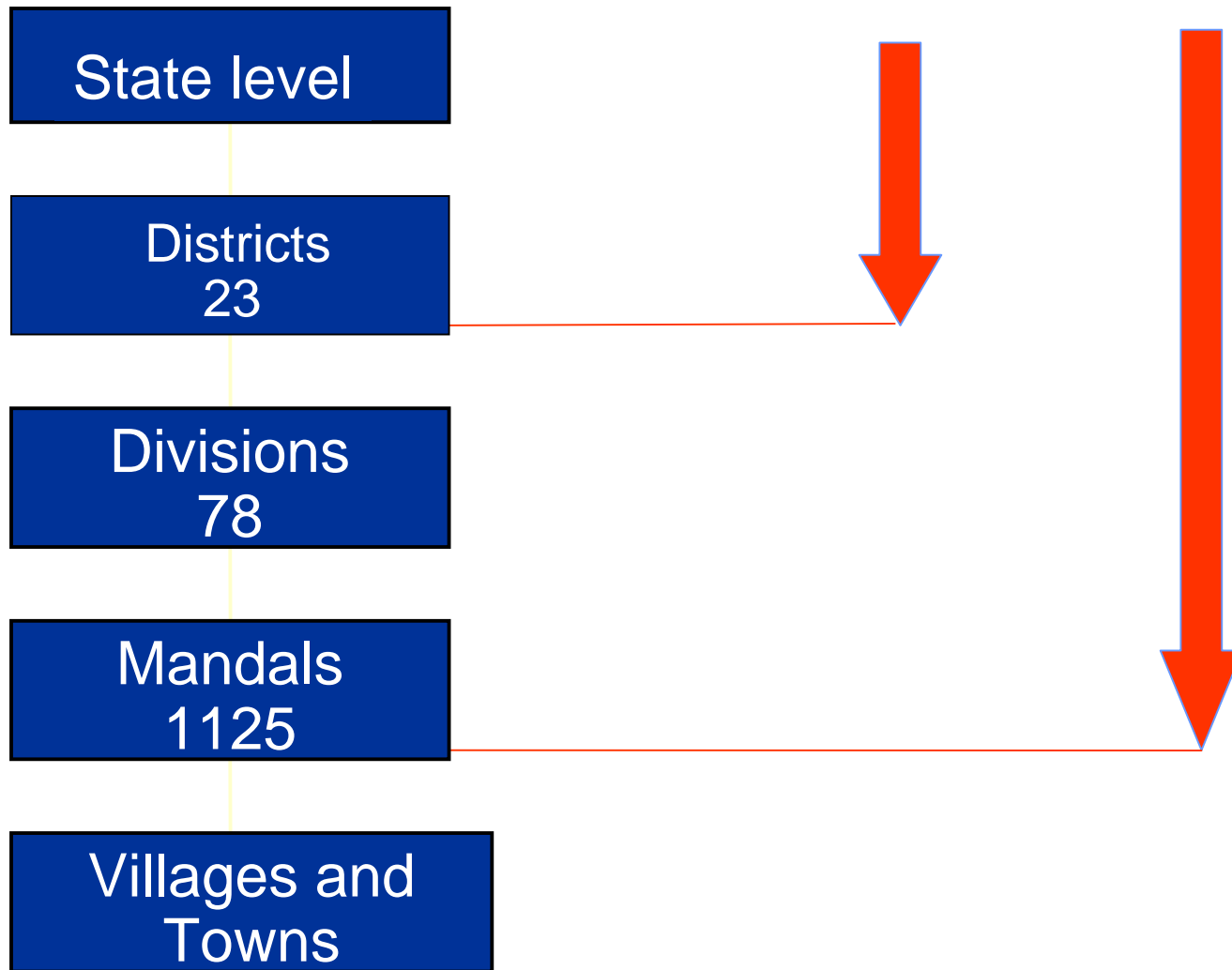


Connecting People

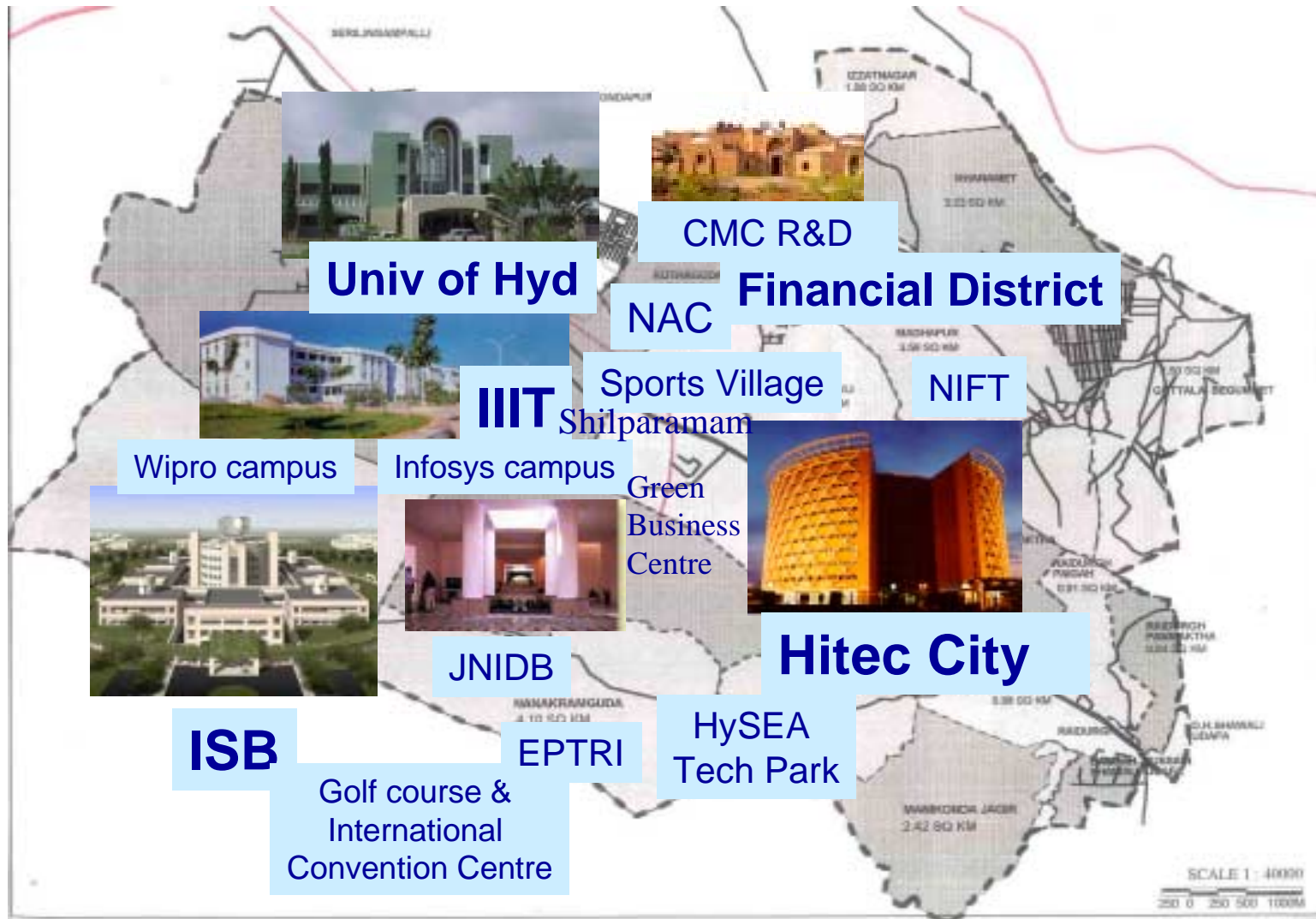
- 22,000 route kms of fibre optic laid by BSNL
- High speed digital backbone being set up by Reliance
 - Data speeds in the terabit range
 - 7500 kiosks across the state
- Ku band Satellite network for
 - Distance education in schools & colleges
 - Telemedicine
 - Self-help groups
 - e-governance



Networking the State



Hyderabad, Secunderabad...and Cyberabad





Any Questions?

