



India's IT Presence in the Asia Pacific Region



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Structure



- 1. Asia Pacific IT Landscape**
- 2. Indian IT Industry**
- 3. India IT presence in Asia Pacific**
- 4. NIIT's presence in Asia Pacific**
- 5. Opportunities for the region**



Asia Pacific IT Demographics



1999 estimates

Country	Population Statistics (M)	GDP Statistics (\$B)	No. of PCs (M)	PC / Population %	Internet Users	Internet PC %
Australia	19	422	8	43	3.8	47
China	1263	1064	12	2	2.4	20
HongKong	7	162	4	30	0.7	21
India	1012	432	3	0.3	0.5	19
Indonesia	207	156	3	1	0.3	11
Korea	47	413	20	44	3.3	16
Malaysia	23	79	2	7	0.4	29
Philippines	75	75	2	2	0.3	14
Singapore	4	85	1	40	0.6	41
Taiwan	22	280	4	20	1	23
Thailand	63	123	1	2	0.3	28
Asia	2721	3271	59	2	14.5	24
Japan	127	4267	31	5	12.1	39

Source: Goldman Sachs - Asia Internet Report



Asia Pacific e-Commerce Scenario



Asian e-Commerce market

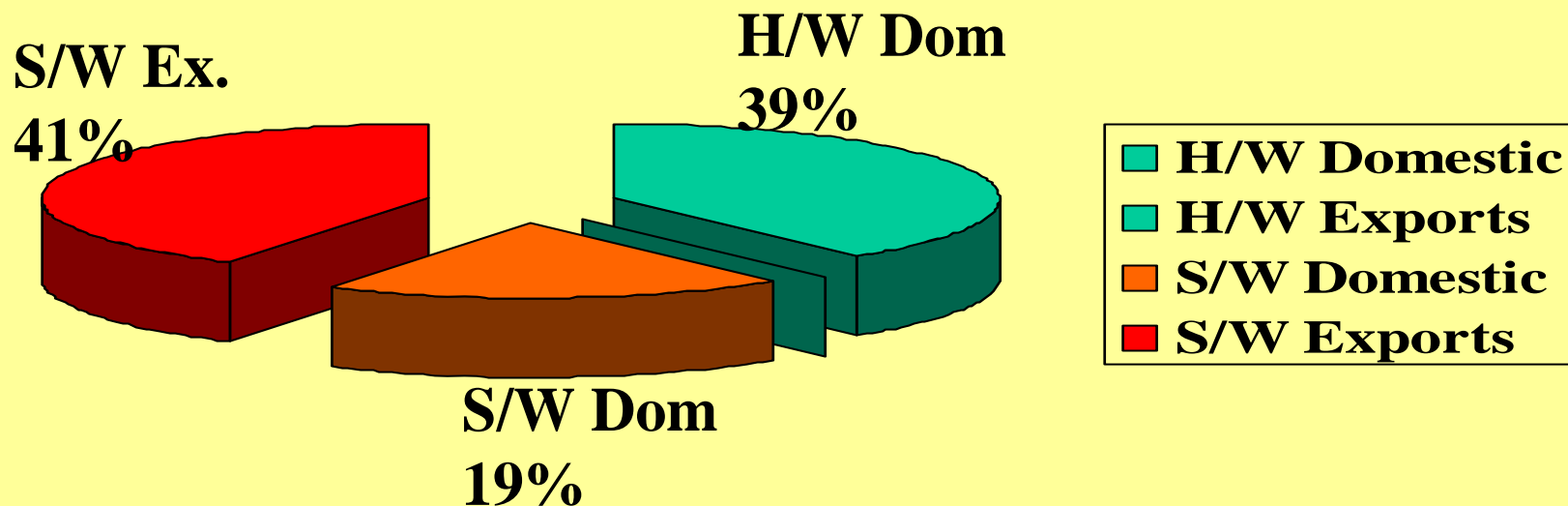
- US \$700M (1998) expected to grow to \$32B (2003) implying a CAGR of 145%
- In contrast US online markets are growing from 55% to 97% CAGR across industry segments

High Growth Potential Countries

- Australia (Largest): \$430M (1998) to \$9B (2003)
- South Korea: \$5B by 2003
- China & India (Highest growth expectations): 243% and 246% to reach \$4B & \$2B respectively



Indian IT Industry 1998-99



Total IT Industry Size USD 6,400 Million

Hardware: US \$ 2,500 Million

Software: US \$ 3,900 Million

350,000 technical and managerial personnel

Source : MAIT

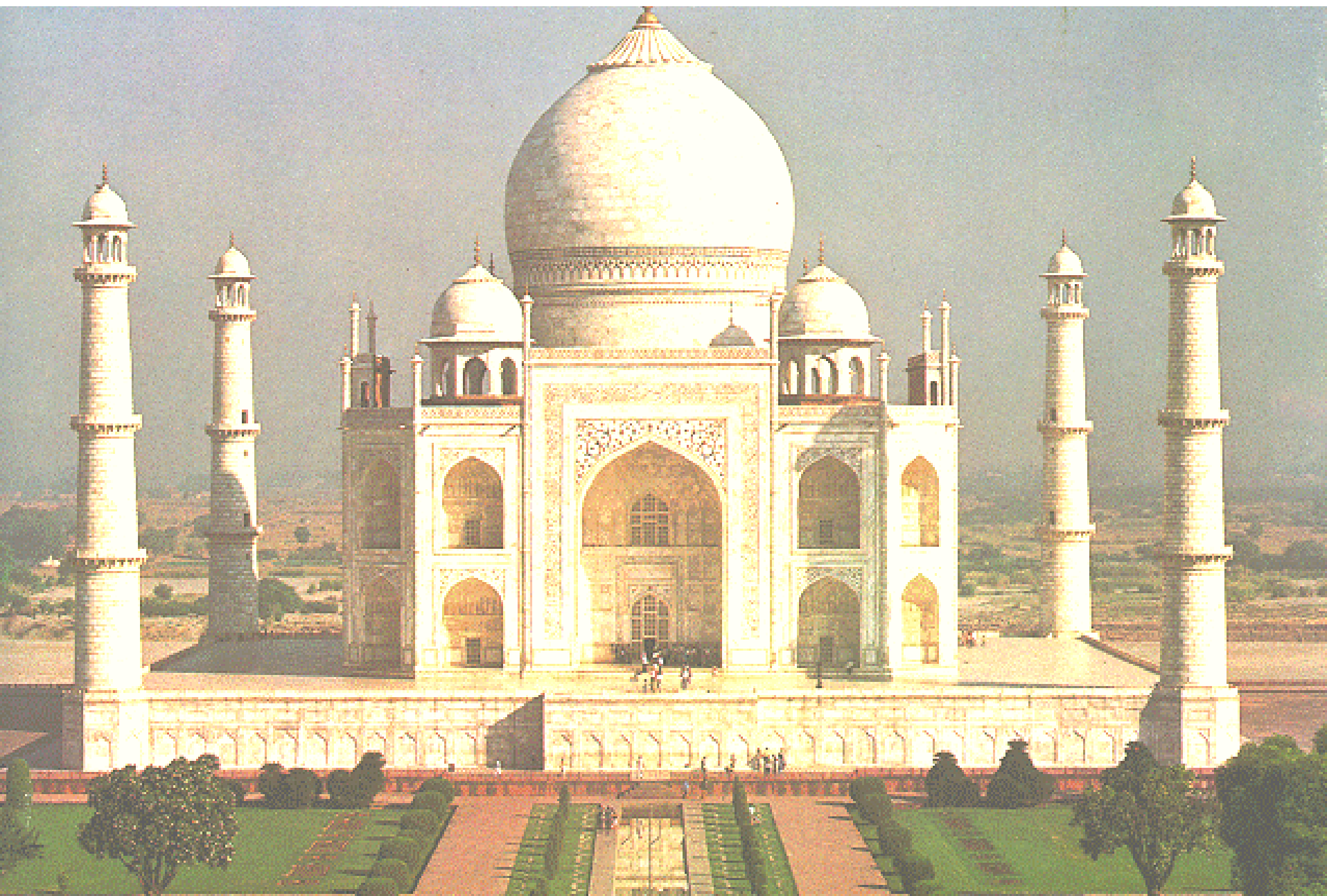


Indian IT Industry



- ➡ **PC penetration:** 3 per 1000 people
- ➡ **PC Sales (1998-99):** 1 Million Units;
- ➡ **IT Spend:** 1.1% of GDP
- ➡ **Telephone Density:** 2 per 100
- ➡ **No. of registered ISPs:** 150 +
- ➡ **Internet Connections:** 500,000
- ➡ **National Internet Backbone**
 - ↖ **Phase-I by December 1999 and Phase-II by March 2000**
- ➡ **Booming market:**
 - ↖ **PC sales expected to cross 1.4 Million Units in 1999-2000**

“To create a wonder, one must have a vision to see beyond....”





And The Wise Men said



Identifying India's IT potential

- World Bank study on Software, DoE 1992

“Software Industry is the only Industry from India which can destabilize an industry anywhere else in the world”.

- C K Prahalad, 1994

“India is likely to be the next software superpower”

- Bill Gates of Microsoft (at Davos - 1998)



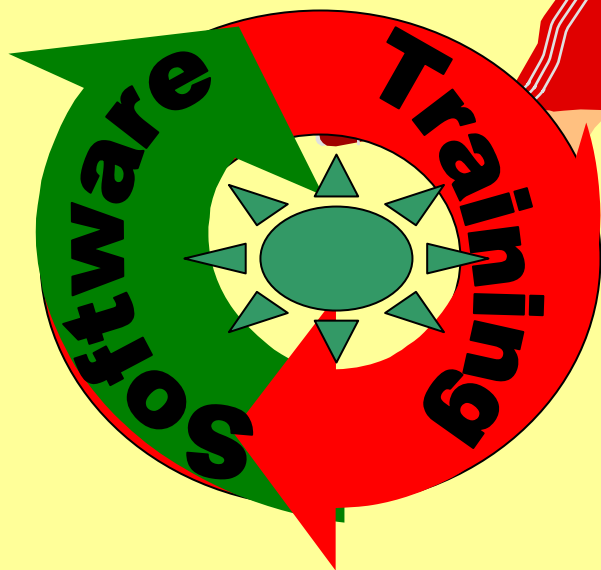
The Indian IT Juggernaut



Entrepreneur

Industry model

Coalition



India's Three pronged formula for Success....



Partnerships with India



Modes Of Entry

- **Subsidiaries**
 - Hewlett Packard
 - Motorola
 - Silicon Graphics
 - Compaq
 - Microsoft
 - Apple
 - LG
- **Joint Venture Indian Partner**
 - IBM
- **Licensing of Technology**
 - Citizen
 - Oki
 - Epson
- **Marketing/Distribution Arrangement**
 - Microsoft
 - Intel
 - Compaq
 - Apple
 - Lotus



Foreign Investment in IT Services



Early Entrants- Appln. Dev.

- Texas Instruments
- Motorola
- HP

R&D Centers

Adobe, CA, Bay
Networks, Cadence

Design Facilities

Bay Networks, HP, Cisco

Product Development

Microsoft, Oracle,.
Cisco

Back Office

GE

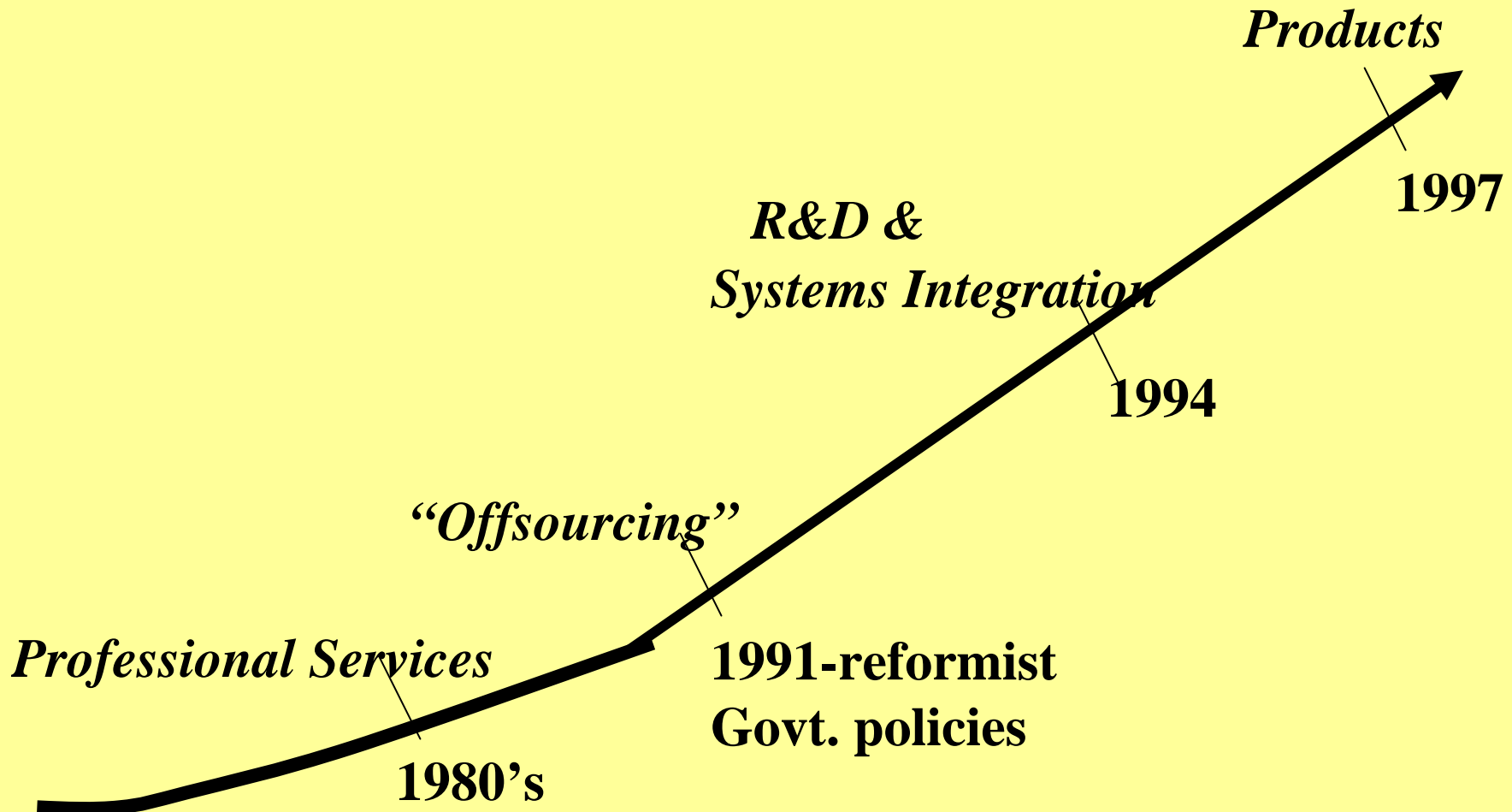
Data Capture

GE

Increasing Level of Value Add



Indian Software Export - Evolution

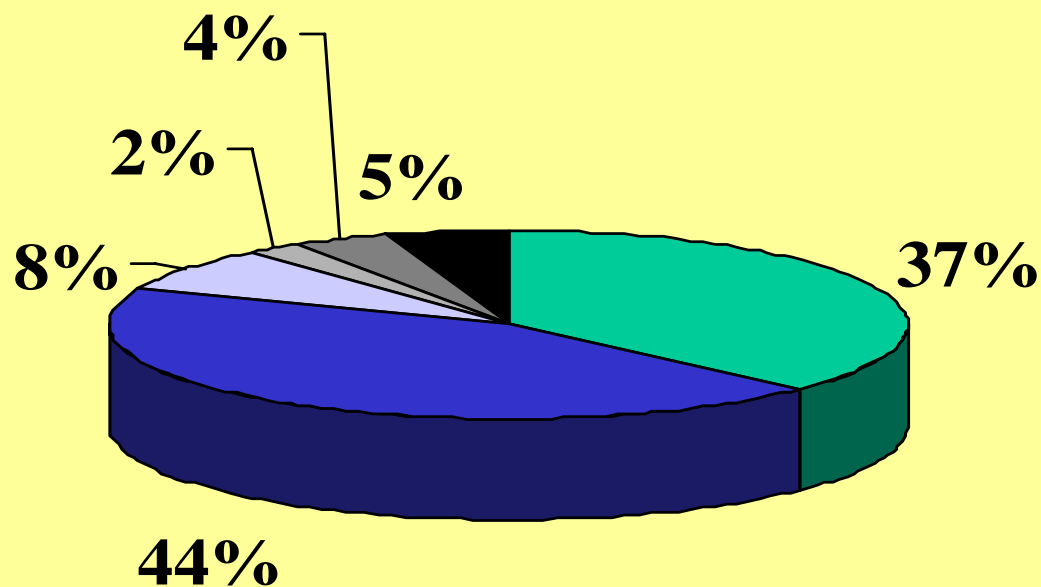




India's IT Services Exports



Activity Break-up



- Projects
- Professional Services
- Products & Packages
- Training
- Support & maintenance
- IT enabled services



Indian IT Education Competitiveness



	India	U.S.A
Population	945 Mn	269 Mn
English speaking Technical labor force (worldwide ranking)	2 nd	1 st
Computer Engineering Graduates, annual	61,000	30,000

Source: BT Alex Brown Research

India had universities like Nalanda and Takshashila, metropolises like Pataliputra and Ujjaini, emperors like Chandragupta Maurya and Samrat Ashoka, scholars like Pannini and Kautilya



India's Training Model



Value Added



Web-Based

- Greater usage and Accessibility
- Storage capacity
- Immense potential & most effective

Multimedia

- Self-paced instruction & Interactive learning
- Cost efficient

Automated

- Cost efficient
- Video based , CDs, etc.

Class-Room

- Traditional learning paradigm
- The economics of filling 'seats'



Moving Up The Value Chain



Industry - Government Interaction



From Control to Co-operation

Do not walk in front of me,

For I may not follow;

Do not walk behind me,

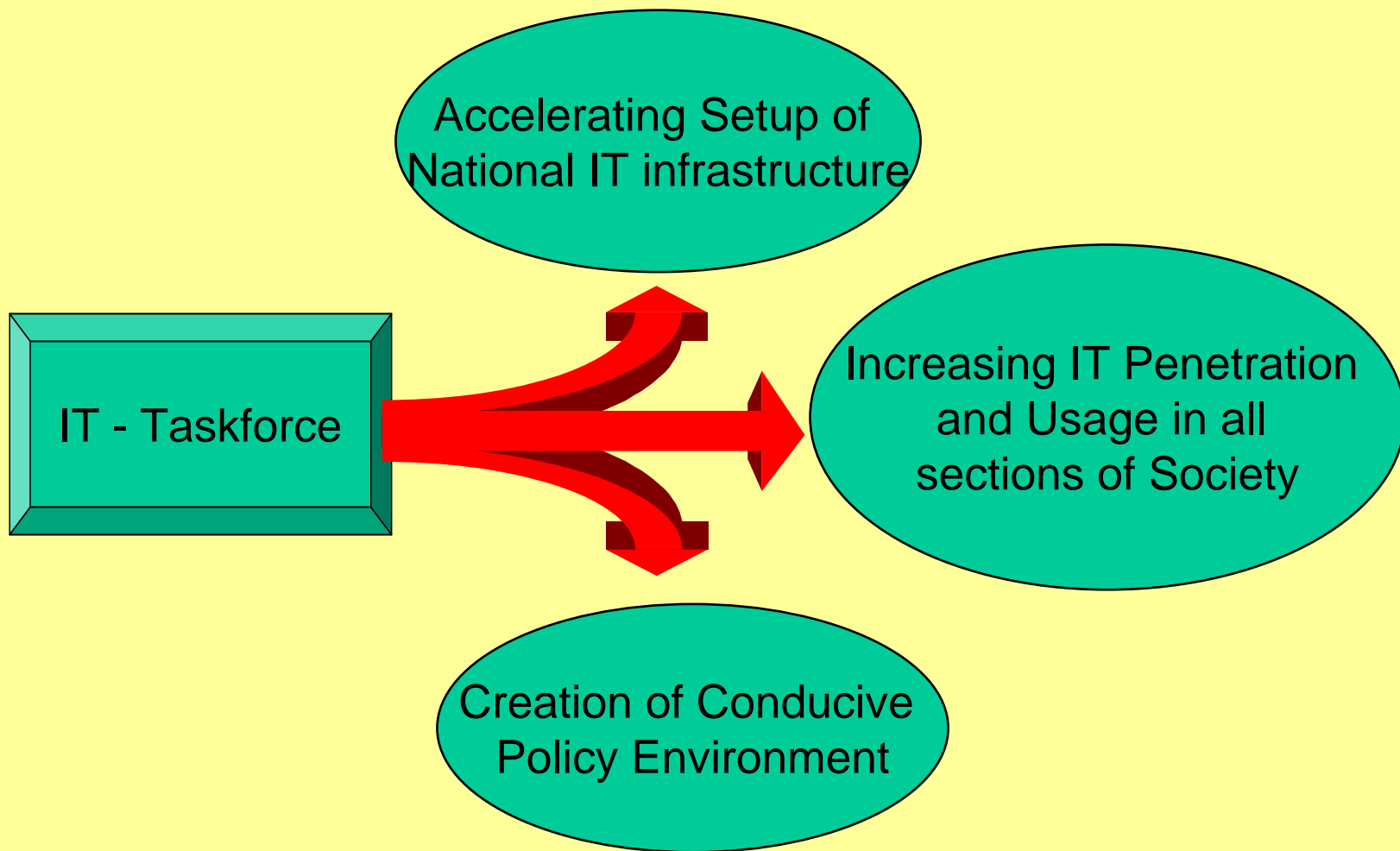
For I may not lead;

But walk beside me and be my friend,

And we shall accomplish many things together



IT Taskforce- Three Pronged Strategy





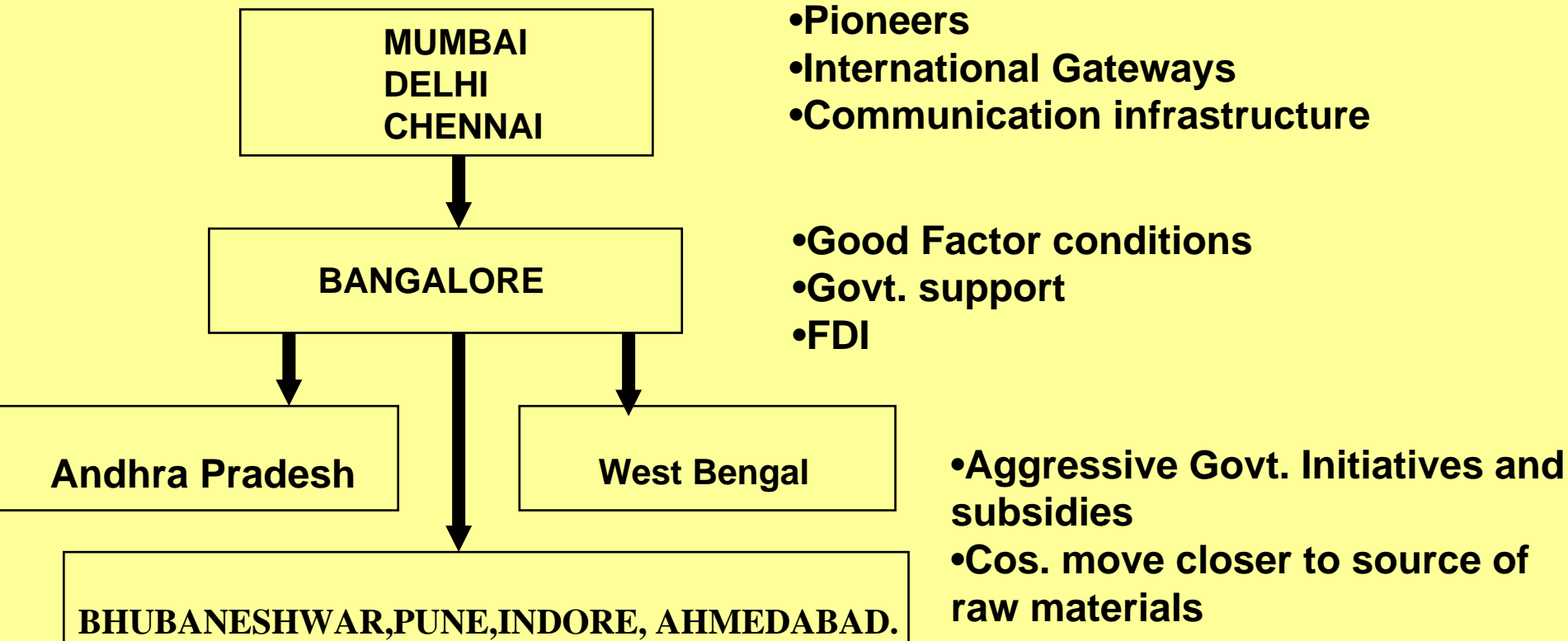
National IT Task Force Major Recommendations



- **108 point Action Plan**
 - **Infrastructure drive**
 - **Target IT exports: \$10 B by 2002, \$50 B by 2008**
 - **IT education for all by 2008**
- **84 point Action Plan for Hardware**
 - **PC penetration from 3 to 10 per thousand : over 200% growth**
 - **H/W and IT design to grow to US \$5B by 2005 and US \$10B by 2008**
 - **Export investment and RBI issues**
 - **IT product design and development**



State Level Initiatives



CONSIDERATIONS:

- Education Infrastructure
- Communication infrastructure
- Transportation
- Basic Infrastructure
- Power, Roads, Housing etc.



The India Advantage



- **Language Advantage:** English is the language of business
 - Second largest “English Speaking” nation
- **Human Advantage :** Well developed educational system
 - Formal sector
 - 320 Universities , 700+ private institutions
 - Over 60,000 qualified graduates every year
 - Non Formal IT Training
 - Trains over 250,000 people per annum
 - Covers Literacy, Career and Skills upgrade
- **Size Advantage**
 - Resource pool of over 240, 000 software professionals
 - One of the largest Educational Multimedia facilities



The India Advantage



- **Quality Advantage**
 - 150 companies with ISO 9000 / SEI -CMM certification¹
 - Including 6 Cos assessed at SEI_CMM Level 5
- **Productivity Advantage**
 - ‘India has the highest software cost/productivity ratio in the world’²
- **Track Record**
 - Wide acceptance by 250 and more large global corporates
 - 1.25 % of global market share in project outsourcing and maintenance contracts.

Most Importantly the increased and continual support by the Government



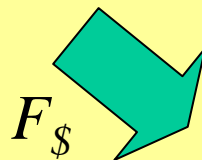
Forces Determining India's Competitiveness-Newton Revisited



A Positive Equation

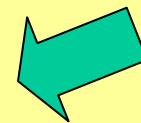
$$(F_{\$+\eta} + F_v + F_I) \gg (F_{\$} + F_{bI} + F_{att})$$

Salaries



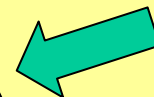
$F_{\$}$

Basic Infrastructure



F_{bI}

Attrition



F_{att}

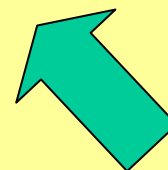
Indian IT Industry
The Ball is Rolling



F_I

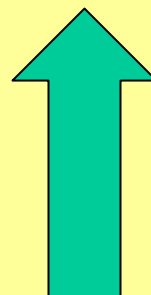
Knowledge Infrastructure

- Communication Infrastructure
- Education infrastructure



F_v

Moving up the Value Chain



$F_{\$+\eta}$

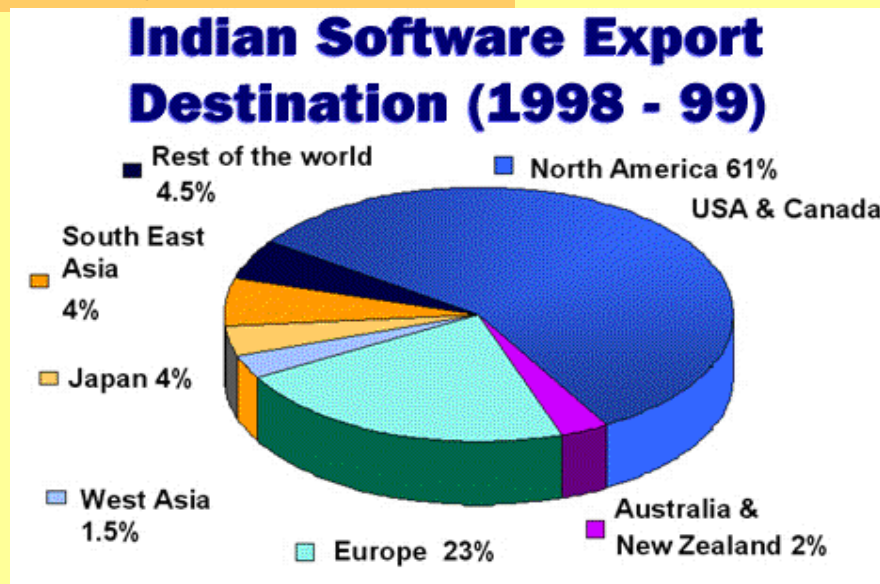
Dollar - Rupee Parity
Productivity



India's IT Trade with Asia Pacific



Exports – predominantly IT Services



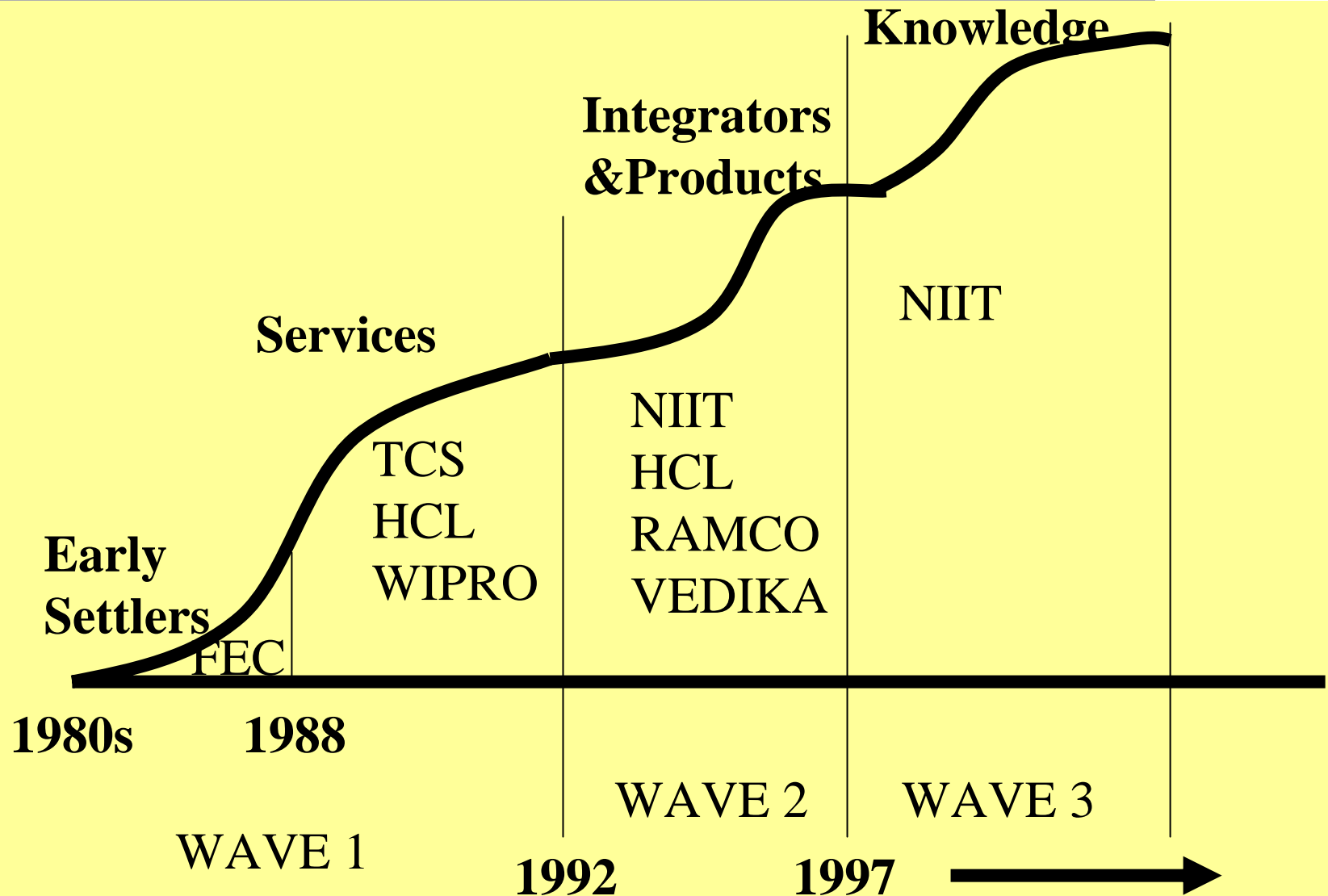
- S/W exports nearly \$265M to Asia Pacific

Imports – predominantly Hardware

- *Imports from Asia Pacific are nearly \$1.5B*
- *Main sources are Taiwan , Japan, Korea, HongKong and Singapore*



Indian IT Presence in Asia





NIIT's Contribution



...now with SEI CMM L5 capability

Projects



Sys. Integ.



MultiMedia



K-Mgmt.





NIIT Projects in APAC



.....touching people in everyday life

- **Ministry of Community Development, Singapore**
- **Inland Revenue Authority**
- **Singapore Sports Authority**
- **UNITAR, Malaysia**
- **Smart Schools project, Malaysia**



NIIT's Contribution to APAC



LOGIN - Microsoft Internet Explorer

File Edit View Go Favorites Help



Address http://www.sdu.gov.sg/adm/login.asp?Mode=CM

Links



SDU Membership Card No.

Password

Login

Help

First Time User

Forgot Password?

Social Development Unit



Internet zone

Start

Inbox - ...

[02] 03:...

Explorin...

Welco...

Miscell...

LOGI...

Microso...



4:44 PM

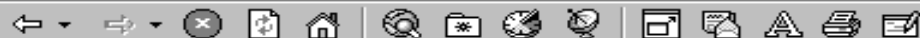


NIIT's Contribution to APAC



iBook - Sports Facilities Reservation System - Microsoft Internet Explorer

File Edit View Go Favorites Help



Address http://www.ibook.ssc.gov.sg/ibook/plsql/SP_GEN_ADHC_HIRER_RGSTRN_I



SINGAPORE
SPORTS COUNCIL



Ordinary Hirer Registration

Singaporeans and Singapore permanent residents, please enter NRIC No. Foreigners please enter Passport No.

All fields are mandatory

☒ NRIC ☐ Passport No. :

Name :

Email Address :

Submit

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Opportunities for the future



Industrial Era to Knowledge Era

ATOMS

BITS

5 Ms to 4 Ms

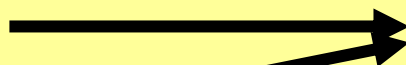
Man

Money

Method

Machine

Material



Mind

Focus : the MIND

Logic

Thoughts

Cold Bits

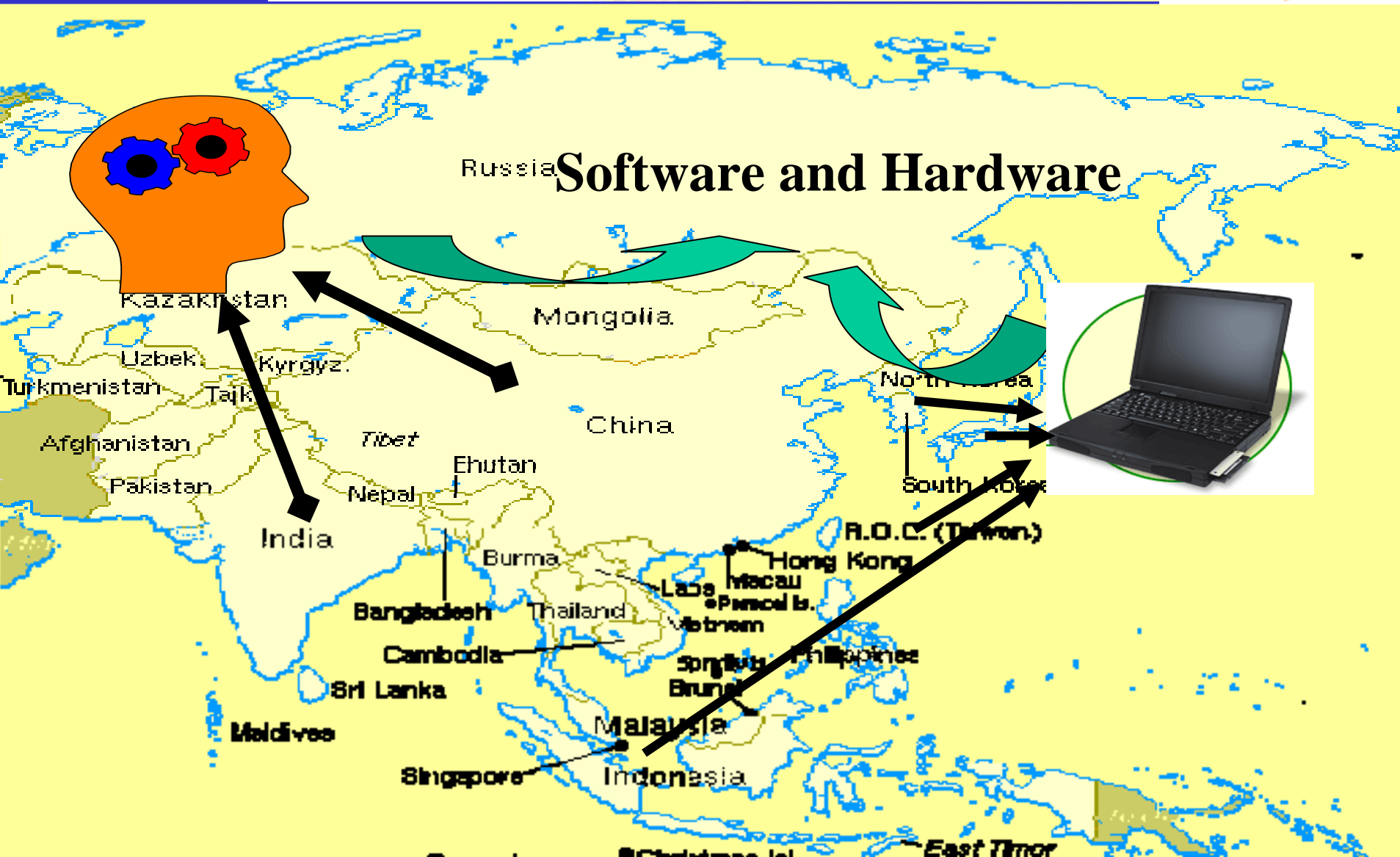
Intuition

Feelings

Warm Bits



Asia Pacific - Competitive Advantage





Ingredients for success



- Policy
- Physical Infrastructure
- Knowledge Infrastructure
 - Content
 - Education

Literacy needs redefinition



Minimally Invasive Education





...and finally



*Give a person a fish and feed him for a day
Teach a person to fish and feed him for a
lifetime*