ICT Professional Services
The Next Stop for Thai ICT Industry

By
Jumrud Sawangsamud
Director of RFID Institute
The Federation of Thai Industry

Singapore Infocomm Development Agency Vision

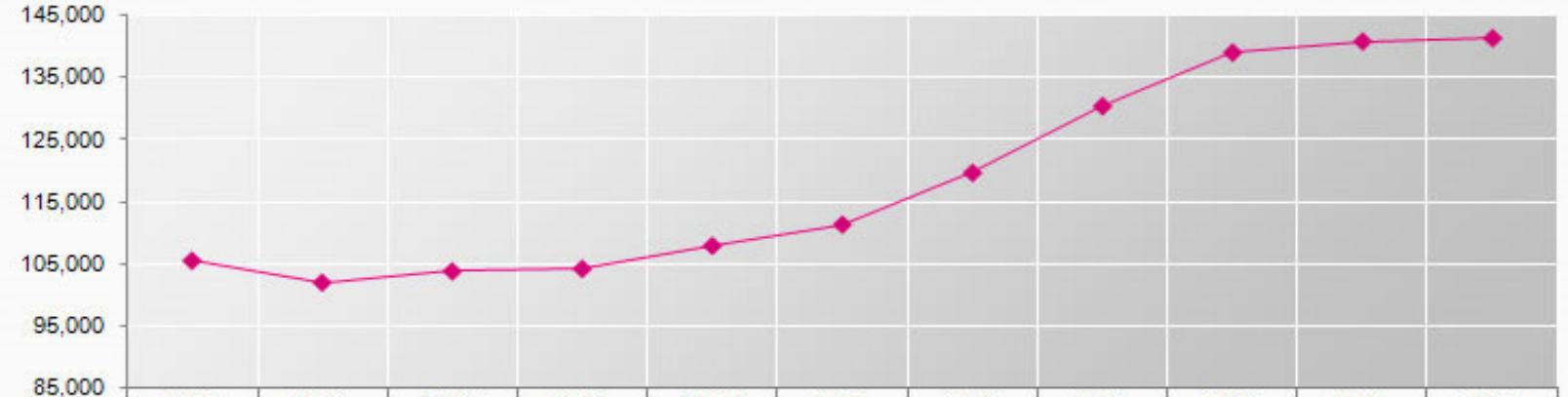
"Infocomm-savvy workforce and globally competitive infocomm manpower to drive national economic competitiveness"

Target

- Boost the number of infocomm jobs by 55,000 to about 170,000 by 2015.
- This is expected to generate another 25,000 non-infocomm jobs in the infocomm industry, to bring the number for such jobs to about 70,000.

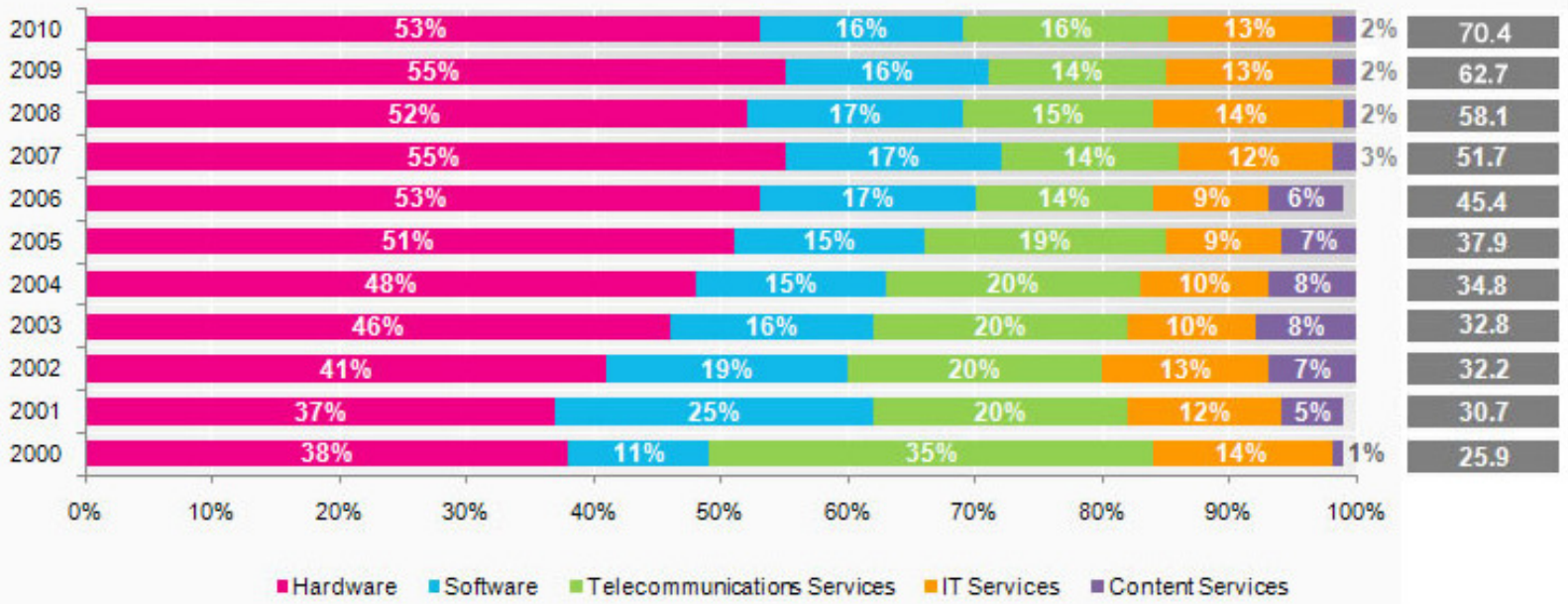
  In total, the number of new jobs created would be about 80,000

Employed Infocomm Manpower, 2000 - 2010, Annual



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Manpower	105,600	102,100	103,900	104,300	108,000	111,400	119,700	130,400	139,000	140,800	141,300

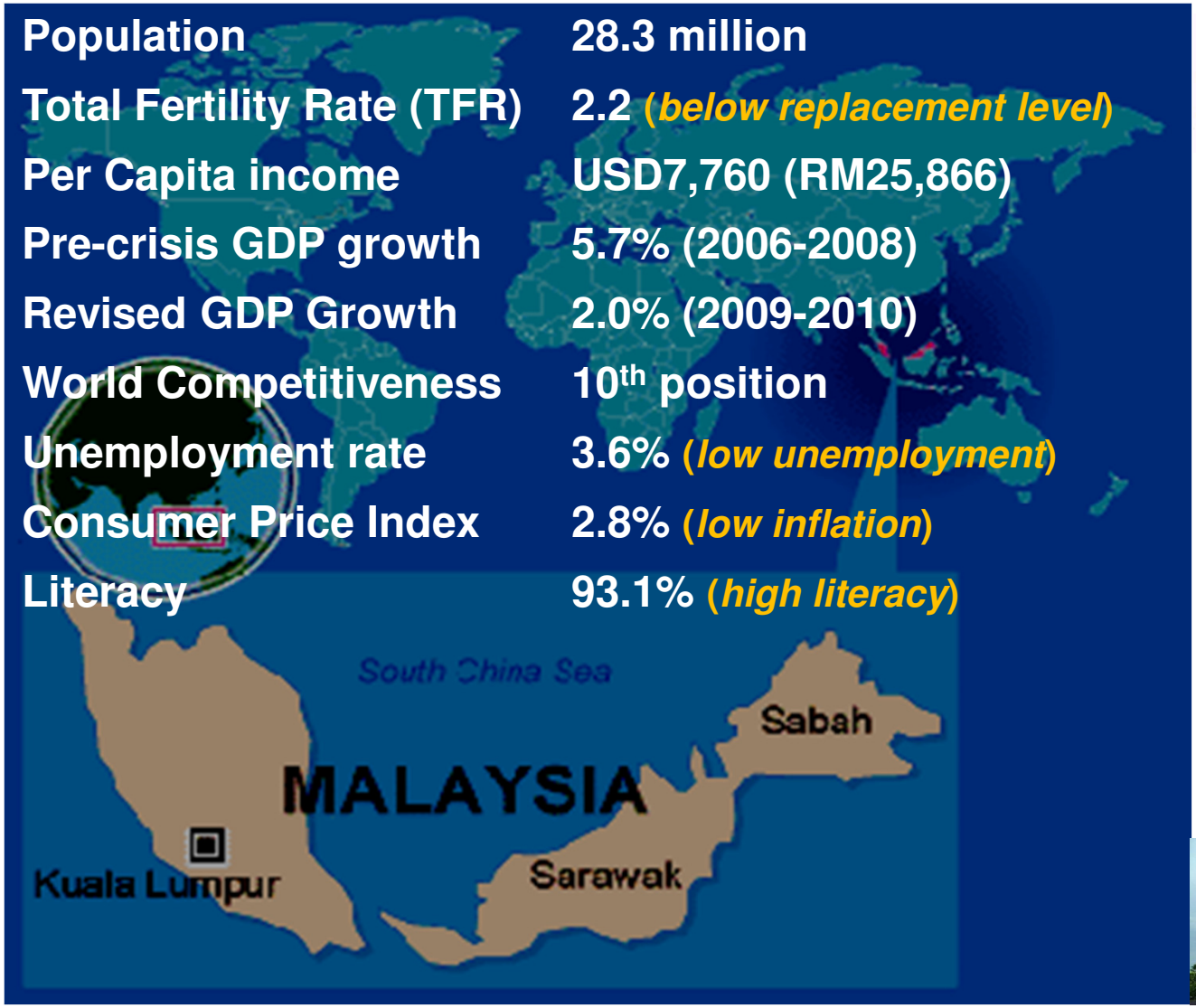
Total Infocomm Industry Revenue by Segment 2000 - 2010, Annual



Source: IDA's Annual Survey on Infocomm Industry.

About Malaysia

Population	**28.3 million**
Total Fertility Rate (TFR)	**2.2 (*below replacement level*)**
Per Capita income	**USD7,760 (RM25,866)**
Pre-crisis GDP growth	**5.7% (2006-2008)**
Revised GDP Growth	**2.0% (2009-2010)**
World Competitiveness	**10th position**
Unemployment rate	**3.6% (*low unemployment*)**
Consumer Price Index	**2.8% (*low inflation*)**
Literacy	**93.1% (*high literacy*)**



QUALITY POPULATION THROUGH ICT

- *Research*
- *Development*
- *Innovation*
- *Knowledge worker*
- *Knowledge Economy*
- *Knowledge Society*
- *Innovative Economy*
- *Digital Economy*

New Economy Model Proposition: Higher Value Adding / Higher Income Nation

GNI Per Capita (USD$)	1970	2009
Korea	260	21,530
Malaysia	380	6,760

1980 GNI per capita: RM1,820

1980 Household Income: RM692

Until Late 70's

Land, labour and low skills

LOW INCOME – FACTOR DRIVEN ECONOMY

1995 GNI per capita: RM5,406

1995 Household Income: RM2,020

Until Mid 90's

Infrastructure, Capital, Factory, Technical Skills and Semi-skilled Workforce

MIDDLE INCOME – FACTOR DRIVEN ECONOMY

2010 GNI per capita: RM26,420 (USD8,256)

2009 Household Income: RM4,025 (USD1,183)

By 2020 GNI per capita

2020 Target: USD21,834

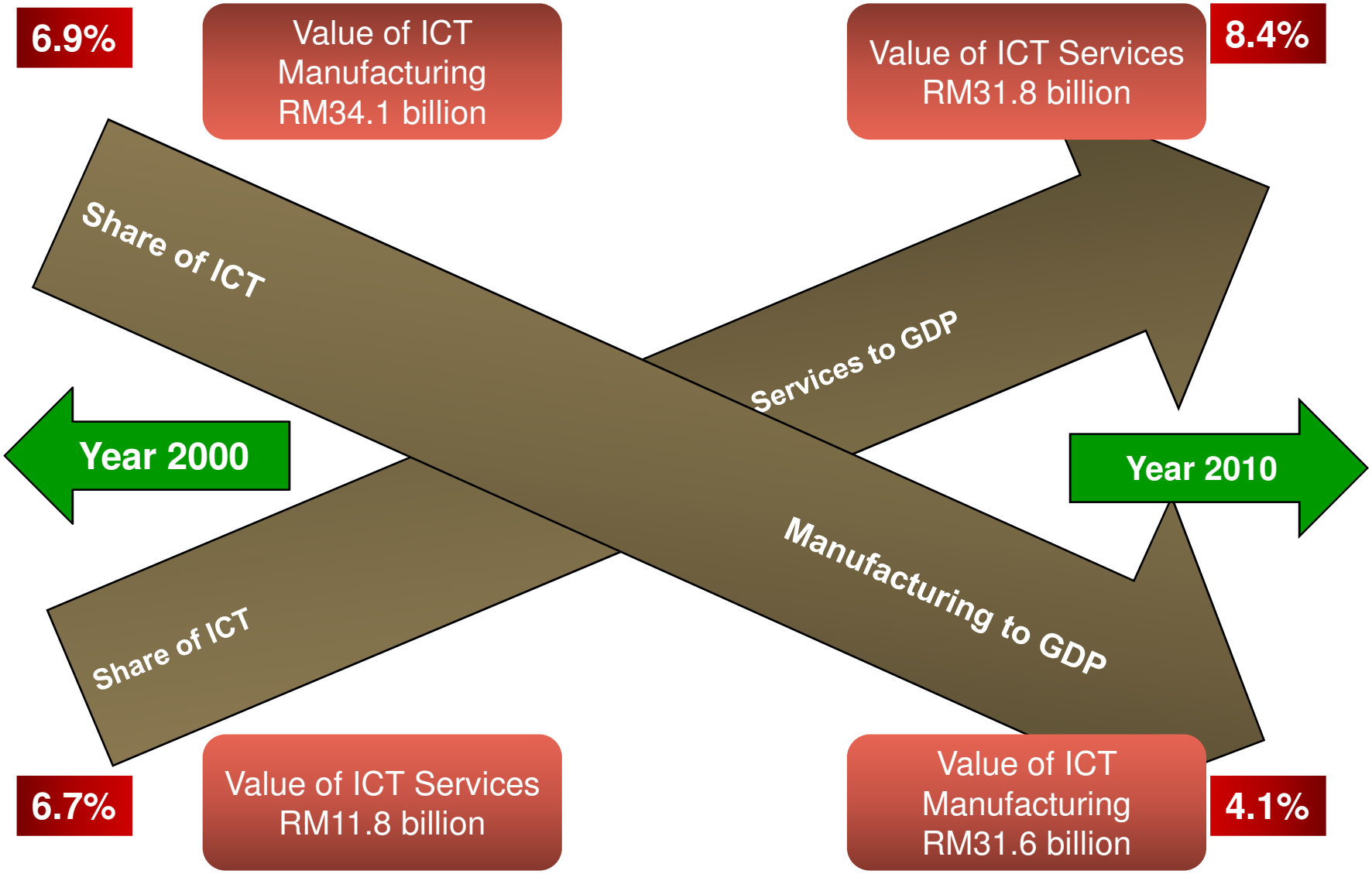
10th MP (2011-2015) USD12,139

Developed Economy Benchmark: USD14,816

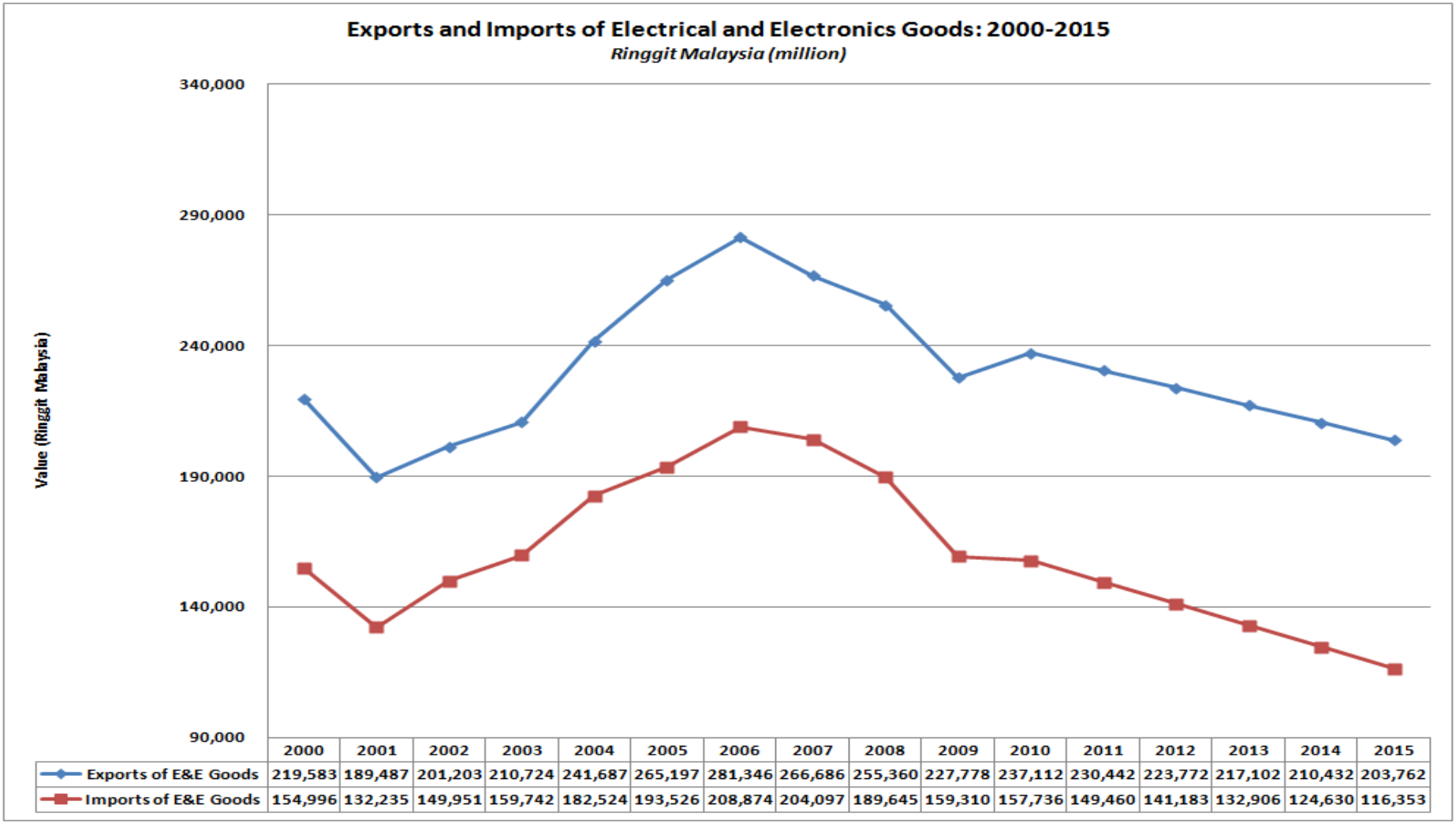
Info-structure (ICT), science, R&D, knowledge capital, innovation skills, XY Generations, entrepreneurship and globalization

HIGH INCOME – INNOVATION DRIVEN ECONOMY

Trend # 1:
Structural changes in ICT Sector



Trend # 2:
ICT Trade grew during industrial era , now declining



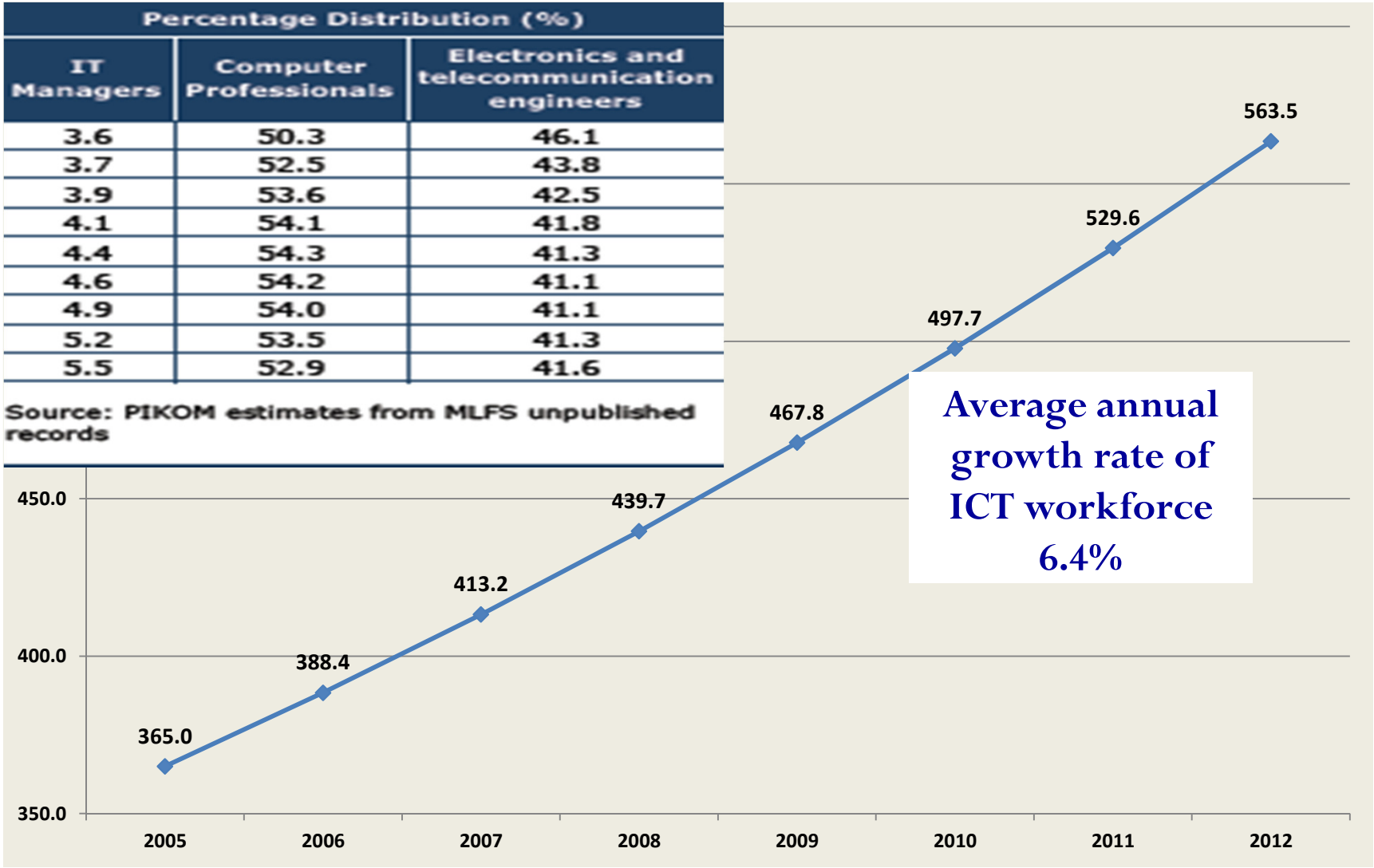
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Exports of E&E Goods	219,583	189,487	201,203	210,724	241,687	265,197	281,346	266,686	255,360	227,778	237,112	230,442	223,772	217,102	210,432	203,762
Imports of E&E Goods	154,996	132,235	149,951	159,742	182,524	193,526	208,874	204,097	189,645	159,310	157,736	149,460	141,183	132,906	124,630	116,353

Trend # 3:

Share of Computer Professionals are increasing in the ICT workforce

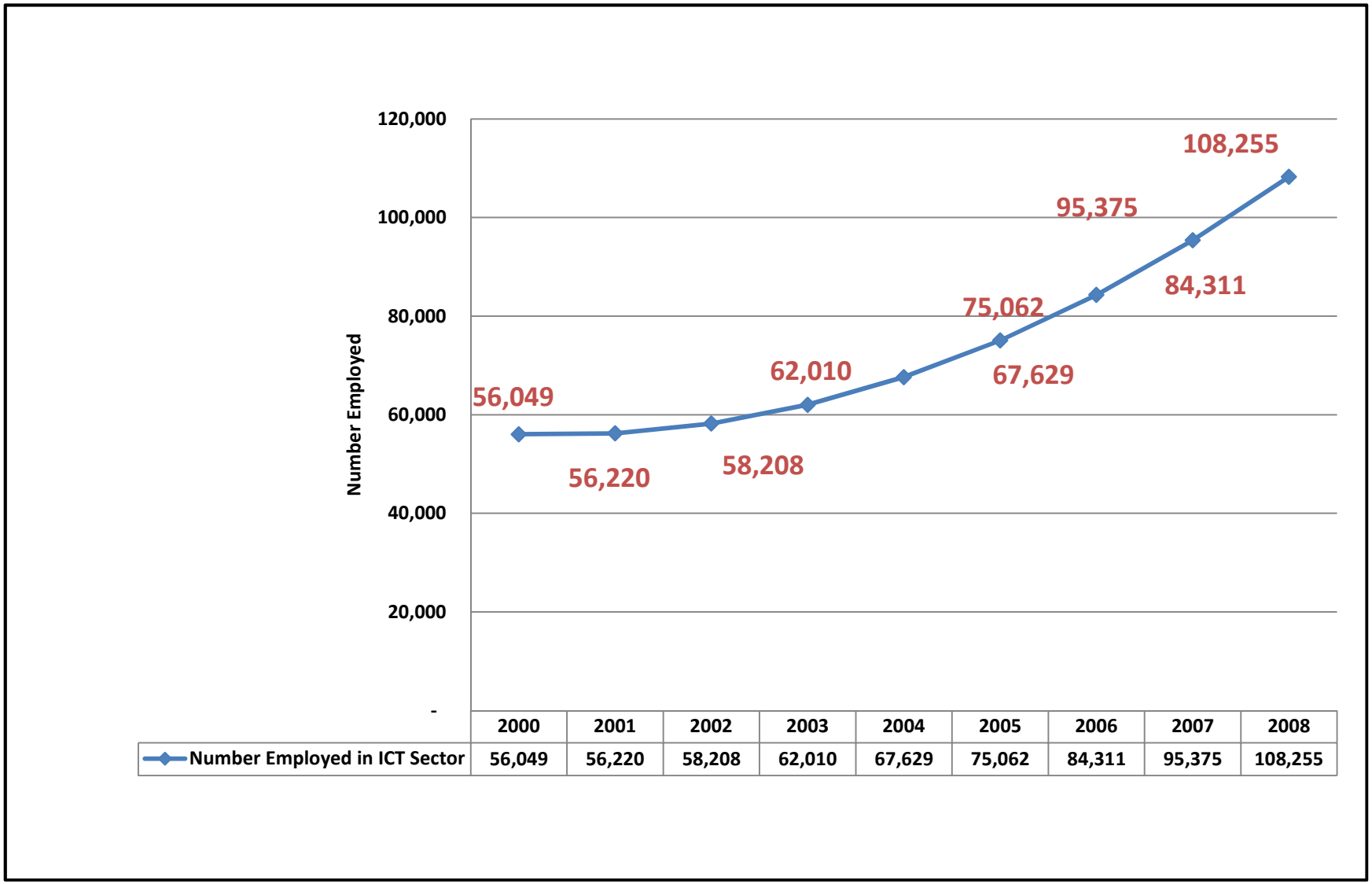
Percentage Distribution (%)		
IT Managers	Computer Professionals	Electronics and telecommunication engineers
3.6	50.3	46.1
3.7	52.5	43.8
3.9	53.6	42.5
4.1	54.1	41.8
4.4	54.3	41.3
4.6	54.2	41.1
4.9	54.0	41.1
5.2	53.5	41.3
5.5	52.9	41.6

Source: PIKOM estimates from MLFS unpublished records



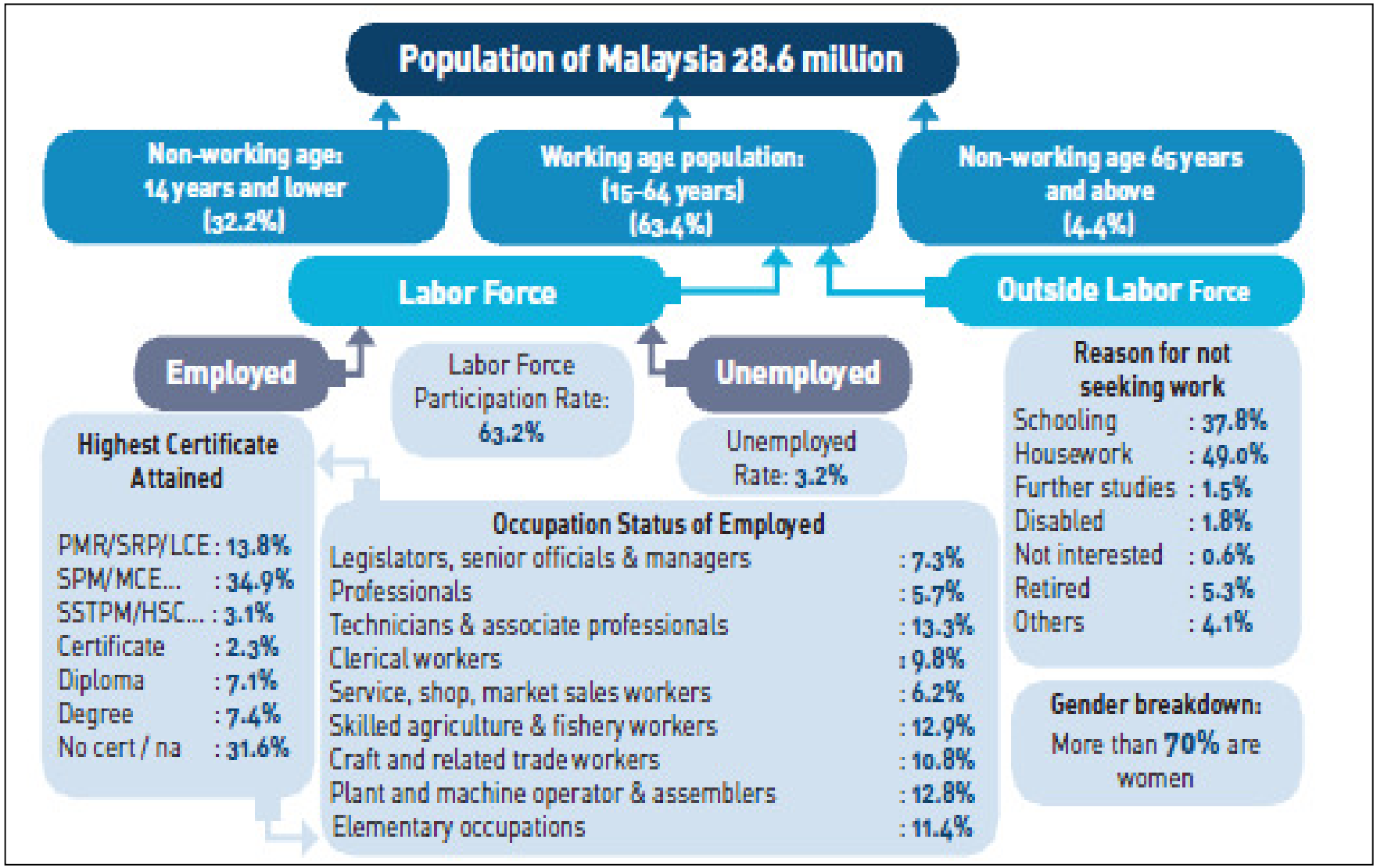
Trend # 4:

3 out of 4 ICT Graduates employed in ICT User Industries



	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number Employed in ICT Sector	56,049	56,220	58,208	62,010	67,629	75,062	84,311	95,375	108,255

Trend # 5:
Professional workforce at 13% poised to expand



Human Capital Development

In the past years Outsourcing Malaysia subsidised 65% of the Certified Outsourcing Professional (COP) through MIDA's SSCDF Fund. A total of 70 people participated in the program. The COP Master Class, which focuses on Project Management training designed for the Outsourcing Industry, is currently the only training program recognised by the MDeC's CDP

Professional Development. OM has also initiated an assessment program, the National Standard of Employability (NSE), to identify and measure the skills gap in the employable talent pool against the expectations of the industry. By identifying the skills gap, specific remedial training program can be identified and recommended to train and upgrade the employable talent pool with the necessary skills crucial in supporting the growth of the outsourcing industry and ensuring our global competitiveness.

Vietnam Software and Service Revenue

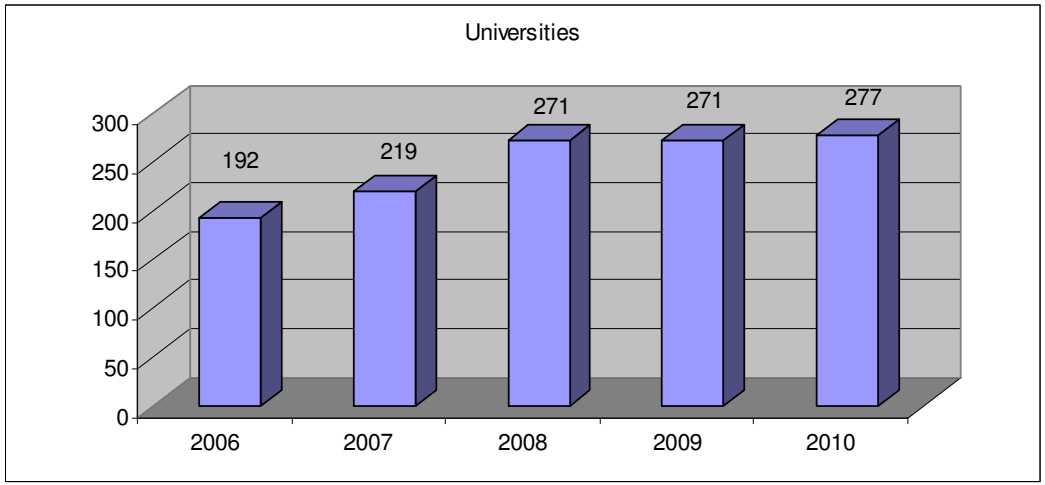
2011 Statistics	
Total Revenue (Millions USD)	2,300
Software (million USD)	1,200
Digital Content (million USD)	1,100
Number of Employees (persons)	120,000
Average of revenue per employee (USD/person/year)	15,000

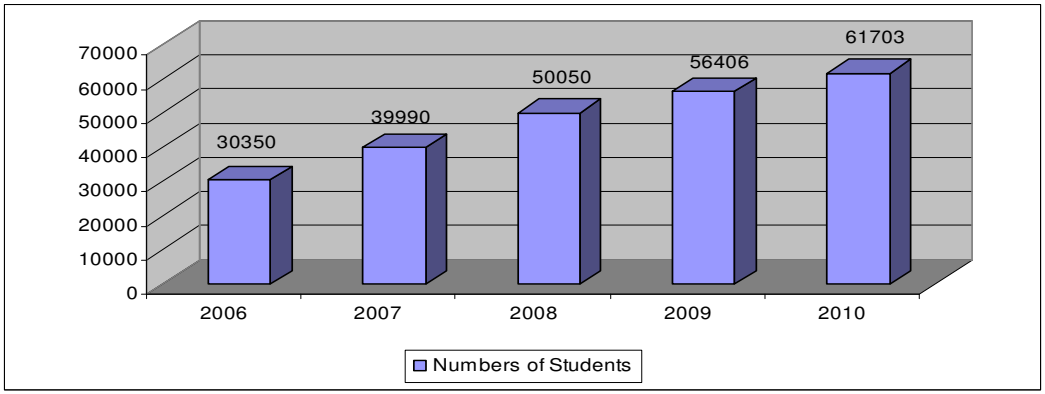
Special Report GLOBAL SERVICES | THOLONS Advisory • Investment • Research

Top 50 Emerging Global Outsourcing Cities

Rank 2009	City	Country	Region	Rank 2007	Rank 2008
1	Cebu City	Philippines	Southeast Asia	4	1
2	Shanghai	China	East Asia	8	2
3	Beijing	China	East Asia	10	3
4	Kraków	Poland	Eastern Europe	16	5
5	Ho Chi Minh City	Vietnam	Southeast Asia	6	4
6	Buenos Aires	Argentina	South America	14	9
7	Cairo	Egypt	Middle East and Africa	11	7
8	São Paulo	Brazil	South America	15	8
9	Shenzhen	China	East Asia	13	10
10	Hanoi	Vietnam	Southeast Asia	12	11
11	Curitiba	Brazil	South America	17	13
12	Dalian (Dairen)	China	East Asia	18	16
13	Chandigarh	India	South Asia	9	12
14	Prague	Czech Republic	Eastern Europe	20	14
15	Kolkata	India	South Asia	5	6
16	Santiago	Chile	South America	19	18
17	Colombo	Sri Lanka	South Asia	7	19
18	Coimbatore	India	South Asia	21	17
19	Johannesburg	South Africa	Middle East and Africa	25	20
20	San José	Costa Rica	Central America	29	27

ICT Human Resource in Vietnam





2010 Statistics	
Labors of IT Industry (persons)	**250.290**
HW industry	127.548
SW industry	71.814
DC industry	50.928

Vietnam IT Human Resource

- Human resource is a key competitive advantage of Vietnam software industry.
- 90 million population, of which 65% are young people under 35 of age.
- Science based subjects: first choice (83%) at Vietnamese Universities
- The new enrolment of IT students in universities increases 25-30%/year and reached 50,000 new IT students in 2011
- 277 universities/colleges with ICT education in the country.
- **Ambitious target of education of 1 millions new IT workers by 2020.**

Incentives from Government for IT development

- Income tax incentive:
  - No income tax for the first 5 years
  - 10% income tax for the next (9 years while other industries 25%)
- Support IT companies to get CMMi with up to 25,000 USD
- Prime Minister agreed to be the Chairman of National Commission on ICT

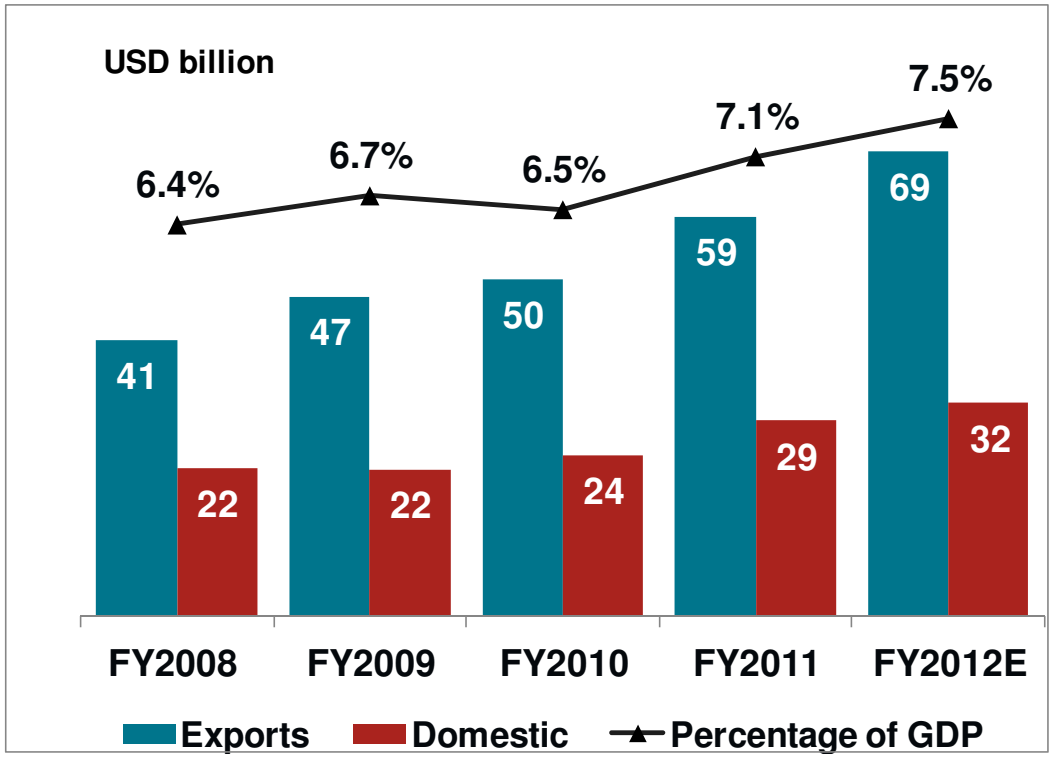
Target to 2020

Vietnam is in top ten of best software outsourcing and digital contents countries.

By 2020, IT will take 8 – 10% of GDP

- 1 million IT engineer by 2020
- 80% IT Students get global quality
- Internet user: 70% of total population
- **The Revolution #4 in Dec. 2012: ICT as an Infrastructure of the countries**

Indian IT-BPO industry revenue crosses USD 100 billion

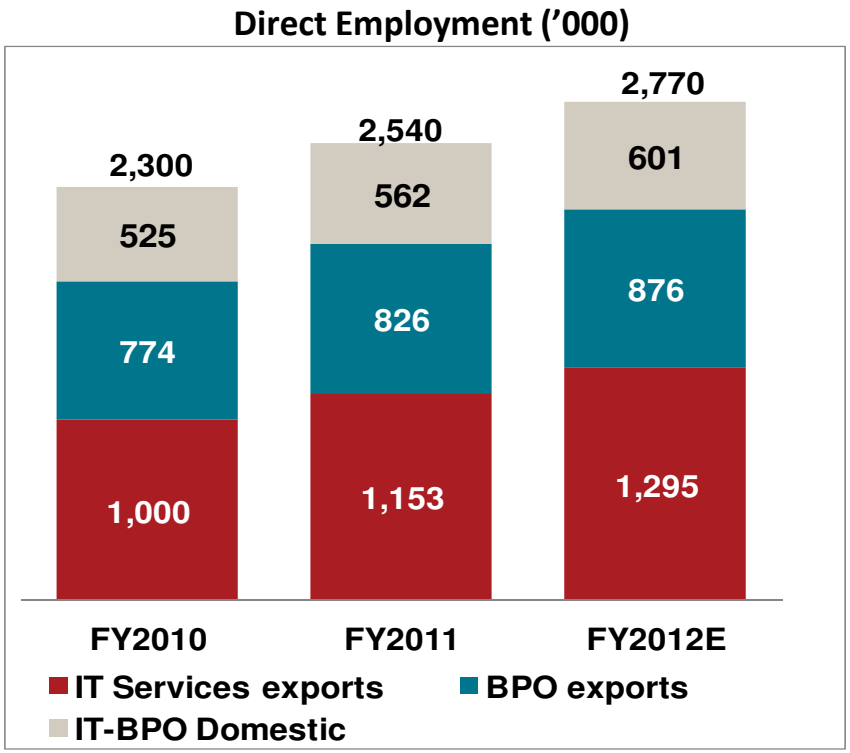


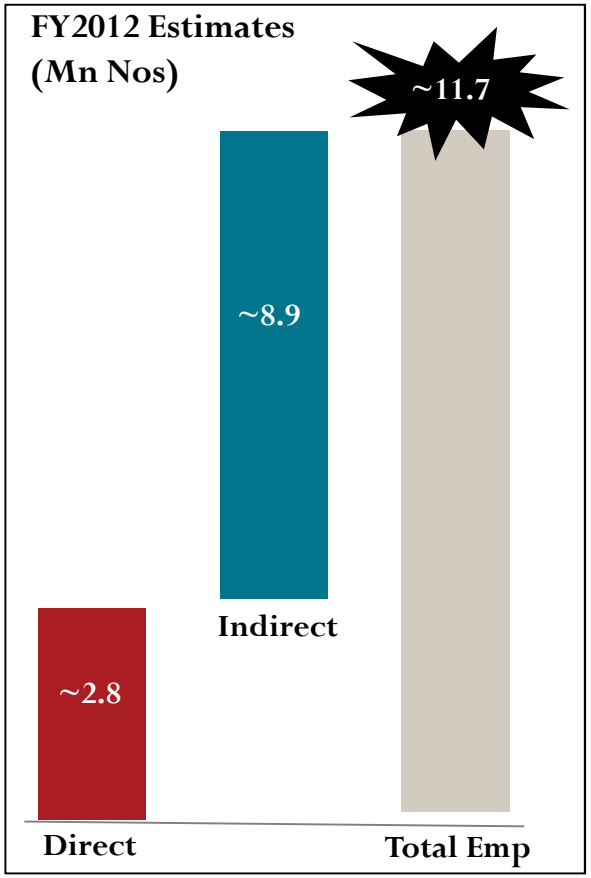
IT-BPO revenue aggregate[1]

- Total revenue: ~USD 101 billion
- Relative to India's GDP: ~7.5 per cent
- Relative to merchandise exports: ~25%
- Value add: 60-70 per cent
- Exports CAGR: 17 per cent for last 5 years
- Domestic CAGR in USD: ~10 per cent – reflects impact of variable rupee

Note: 1) Exports (IT services, software products, OSPD, ER&D, BPO, hardware); Domestic (Hardware, IT services (incl. ER&D), S/W products, BPO)
E: Estimate
Source: World Bank, NASSCOM

The industry to provide employment to about 12mn people in FY2012

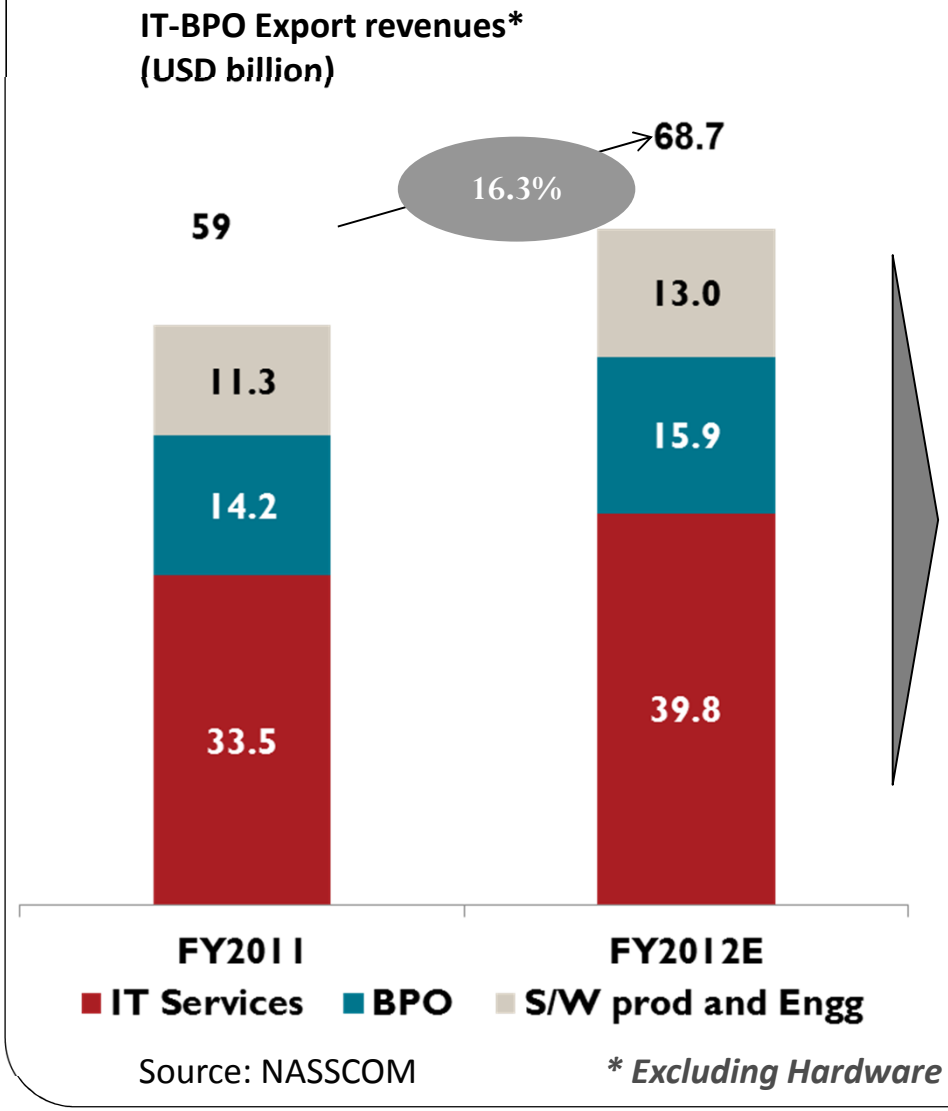




- IT-BPO industry expected to employ around 2.8 million professionals (growth rate of 9 per cent) in FY 2012
- IT service exports remains the largest employer, with around 47 per cent share of total direct employment

*Excluding Hardware
Source: NASSCOM

Indian IT-BPO exports continues on the growth path in FY2012



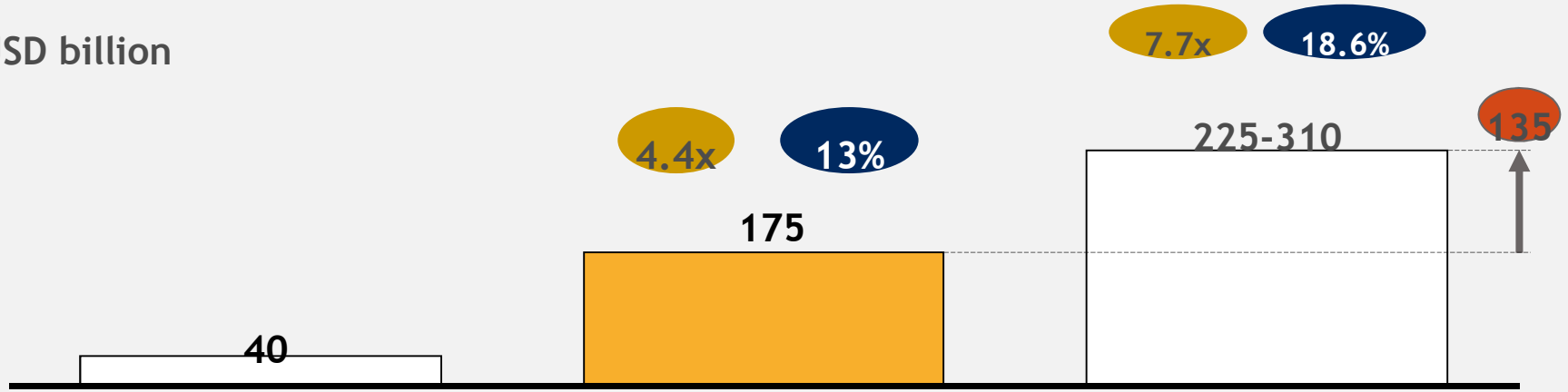
Source: NASSCOM

** Excluding Hardware*

- India's share in global sourcing - 58 per cent in 2011, up from 55 per cent in 2010
- IT services exhibiting fastest growth at 19 per cent, BPO growing by 12.2 per cent, and Software Products & ER&D by 15 per cent
- Transformation, new business models, driving organisation wide efficiencies
- Services around disruptive technologies- cloud, mobility, analytics, social media
- Flexible product portfolios, verticalised solutions

India's technology and business services export market in 2020 – scenarios*

USD billion



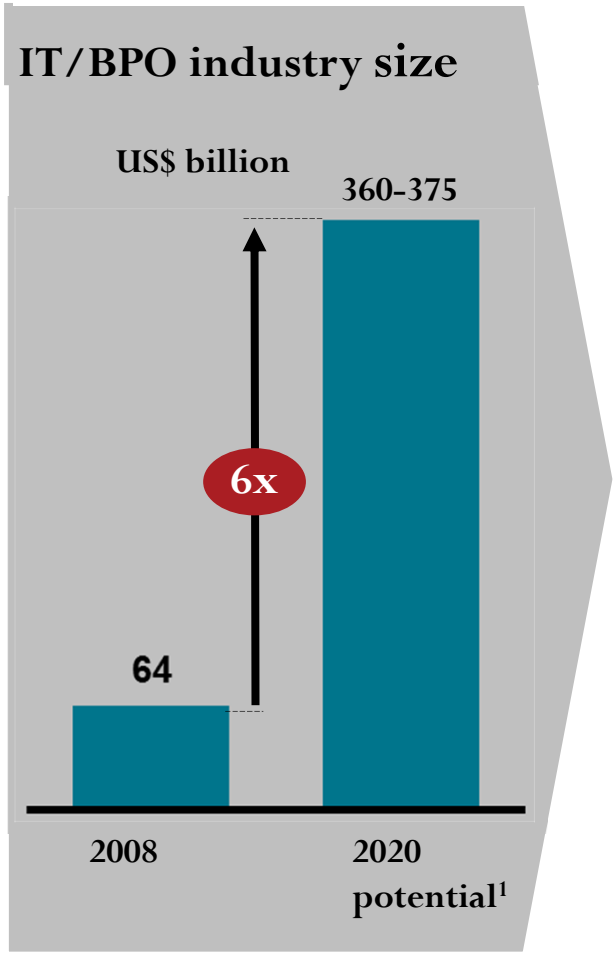
FY 2008	FY 2020-Current Initiatives	FY 2020-Focused Initiatives and Innovation - driven growth
	• Slow pace of reforms in education (talent pool of 10 million) • Limited development of Tier II, III cities • Continued trust as a sourcing hub • Continued government support • Limited lash back from protectionism	• Expedited reforms in tertiary education • 10-15 Tier II cities with world class infrastructure • Adoption of new business models by the industry • India among the top 3 innovation hubs of the world • Talent pool of 13.5 million

Likely scenario

Growth multiple

CAGR

By 2020, this industry can become a strategic growth engine for India



Areas	Contribution by 2020
Economy	• ~10% of annual GDP • 18-20% of annual exports
Employment	• 30 million employment opportunities (direct and indirect) • Job creation in rural and non-metro areas - 20-fold increase in the number of employees operating from tier 2/3 locations • Increased diversity (women are 50% of the total workforce) • Significant global career opportunities due to location-independent models
Balanced Regional Growth	• 8-10 satellite townships around Tier-I cities • 10-15 Tier-II cities with upgraded basic and business infrastructure
Reduced fiscal burden	• ICT can provide solutions at a fraction of the cost of traditional solutions
Globally reputed innovative solutions	• Innovation driving additional GDP contribution of ~2%

*Innovation driven growth scenario

Comprehensive Plan for making India's large talent base "employable"

	Objectives	Initiatives
Short Term	• Enhance overall yield • Improve employability • Expand to tier 2 locations • Lower skill dependence	• Industry to enhance investments in training • Entry-level assessment for BPO and IT, finishing schools : Through NAC, NAC-Tech • New locations identified; govt's engaged
Medium Term	• Lower training investment • Enhance specialist and project management expertise	• Faculty Development Program: to increase the suitability of teachers • Facilitating industry access to specialist programs offered by independent agencies
Long Term	• Add education capacity • Promote education reform	• Expansion of higher-education infrastructure: government to set-up 20 new IIITs • Program to increase PhDs in technology • NASSCOM VC fund focused on technology innovation

Recognizing this imperative, the industry is proactively working on several initiatives to strengthen India's long-term cost advantage

Thailand has adequated human resources BUT...

- Ministry of ICT conducted a report of "ICT Human Resource Development Plan during 2010-2013 and found that Thailand has graduated ICT related student from 2003-2012 at 585,926 people and trend of number is still growing
- But the ICT Industry is growing at level 10-15% a year and especially Software Industry had a low level of growing compared to other AEC countries

Year	2007	2008	2009	2010	2011	2012(F)
Growth Rate	13.1%	11.2%	2.3%	12.5%	10.1%	17.2%

- By the large number of graduated student every year while industry growing at lower rate, Thailand need an urgent development plan to move Thai ICT industry to step-in ICT Professional Services industry.


Question & Answer
Thanks