



**Asia-Pacific
Economic Cooperation**

2012/CTI2/MAG/DIA/004

Malaysian ICT Sectoral Outlook: Trends, Challenges and Prospects

Submitted by: National ICT Association of Malaysia



**Information Technology Agreement
Dialogue
Singapore
29 March 2012**

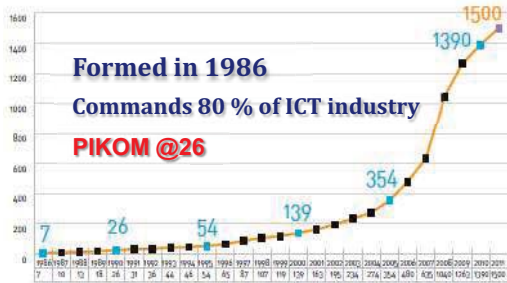


MALYSIAN ICT SECTORAL OUTLOOK: Trends , Challenges and Prospects

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The National ICT Association of Malaysia

INFORMATION TECHNOLOGY AGREEMENT (ITA) DIALOGUE
APEC MARKET ACCESS GROUP (MAG) 2
Marina Bay Sands Exhibition and Convention Centre, Singapore
29 March 2012

Membership : 1986-2011



PIKOM Annual Events



Wisma PIKOM : 2012



International Affiliations



PIKOM in Brief: Voice of ICT Industry in 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

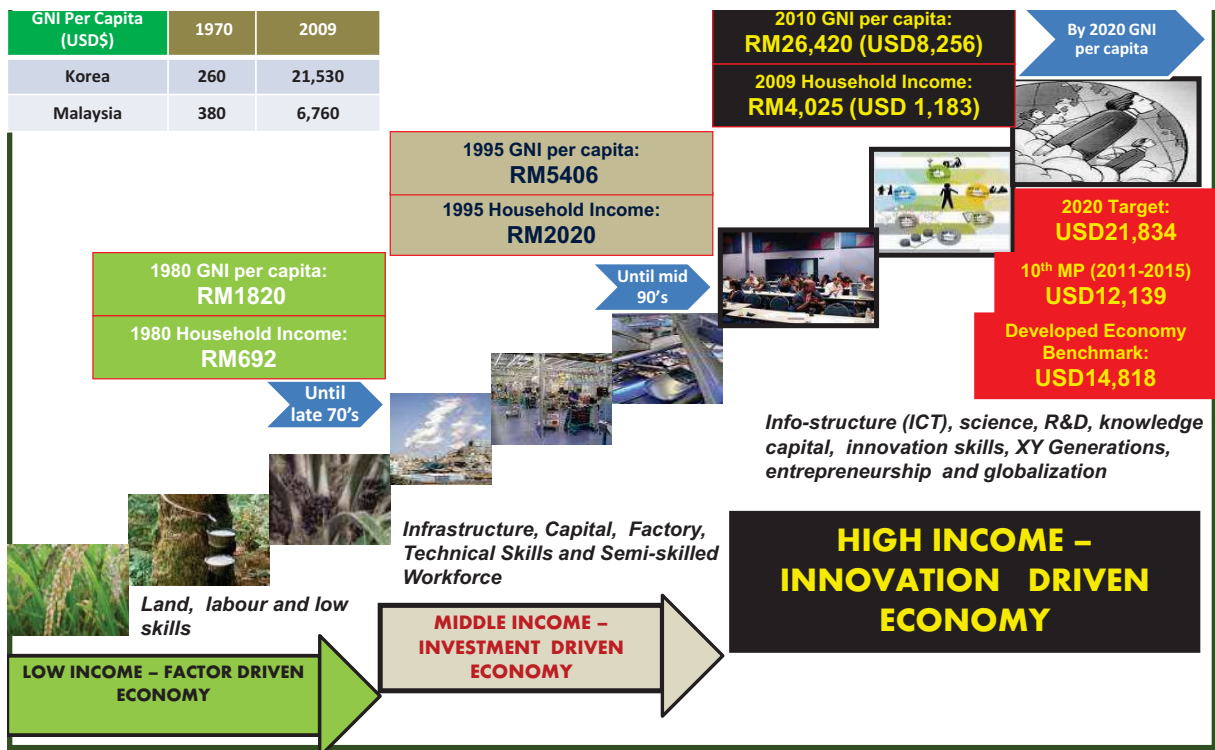
Unemployment rate : 3.6 % (low unemployment)
Consumer Price Index : 2.8 % (low inflation)
Literacy : 93.1% (high literacy)

QUALITY POPULATION THROUGH ICT

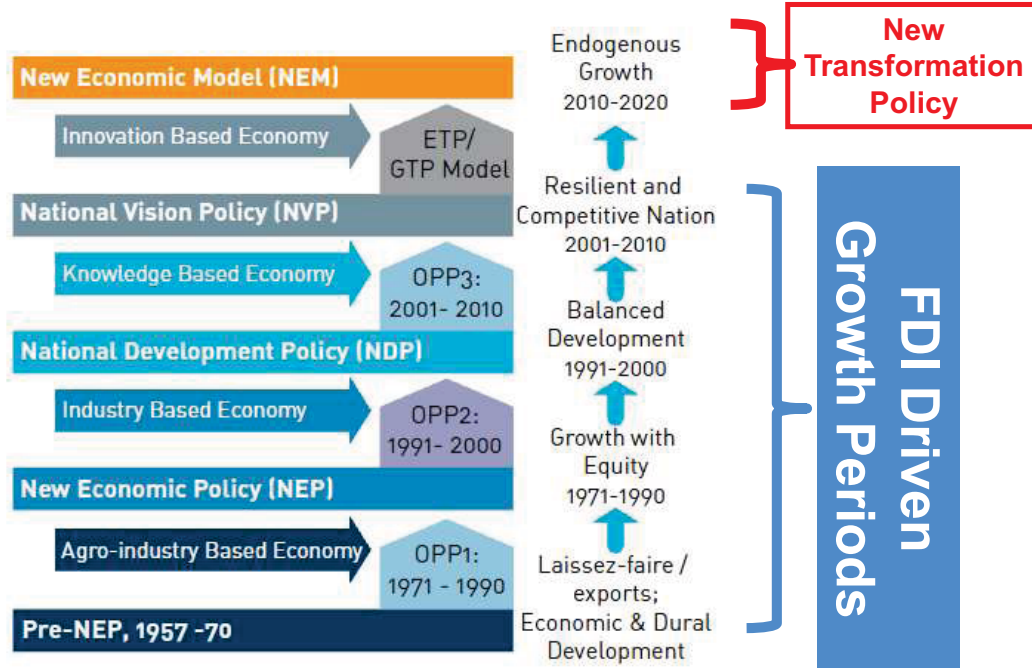
- Research
- Development
- Innovation

- Knowledge worker
- Knowledge Economy
- Knowledge Society
- Innovative Economy
- Digital Economy

About Malaysia



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



**Next Economic Major Thrust:
Endogenous Growth through New Transformation Policy**

VISION2020

	1 Malaysia	ETP	GTP	DTP	
Political Transformation Programme (PTP)	One Malaysia	Economic Transformation Programme	Government Transformation Programme	Digital Transformation Programme	Rural Transformation Programme (RTP)
	Preservation and enhancement of unity in diversity	New Economy Model: A High Income, Inclusive & Sustainable Nation	Effective delivery of Government Services	Accelerate the Development of Digital Economy; Improve Quality of life	
	People First and Performance Now	131 Entry Point Projects; 60 Business Opportunities; 8 Strategic Reform Initiatives (SRI)	6 National Key Result Areas (NKRA)	25 Entry Point Projects; 28 business opportunities;	
	Tenth Malaysia Plan (10MP : 2011-2015) / Eleventh Malaysia Plan (11MP: 2016-2020)				

National Transformation Policy Strategies

NITC drives National ICT Agenda by Setting Strategic Policy Direction



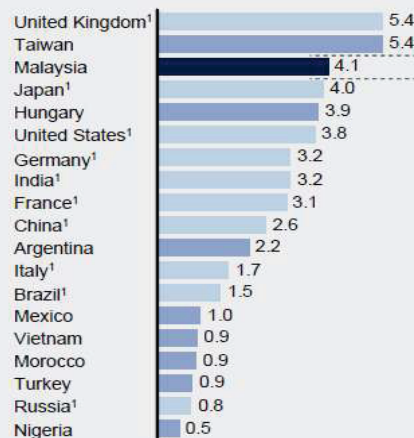
An Overview: ICT Policy Strategies in Malaysia

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ASSOCIATION OF THE COMPUTER AND MULTIMEDIA INDUSTRY MALAYSIA **PIKOM**

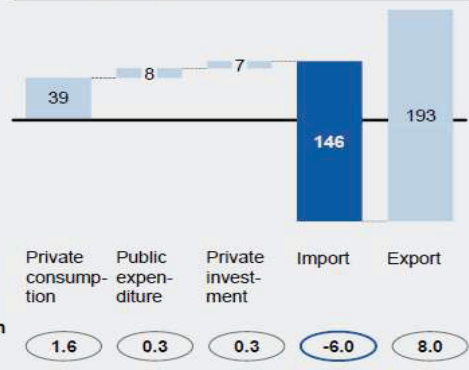
Malaysia's ICT-related trade and private consumption are driving the Internet's strong impact on the economy

% contribution to GDP

Peers
iGDP Index rank



Composition
% contribution to iGDP



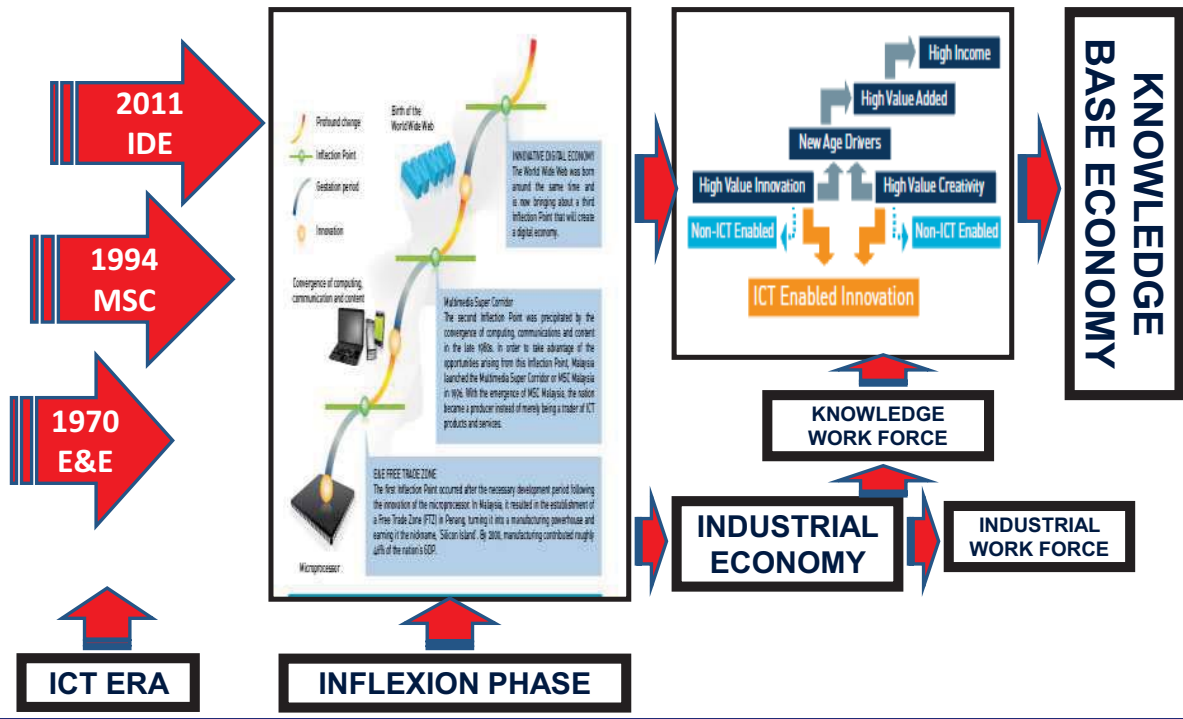
¹ 2009.

² Numbers may not sum due to rounding.

SOURCE: Gartner; Global Insight; OECD; ITU; IDC; WHO; ICD; iConsumer US 2010; Euromonitor; H2 Gambling Capital; World Travel and Tourism Council; PhoCusWright; Pyramid Research; UNESCO; McKinsey analysis

Contribution of ICT GDP mainly comes from private consumption of ICT Products

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ITA Played a Crucial Role in the Transformation of Malaysian ICT Sector

Selected tax structure

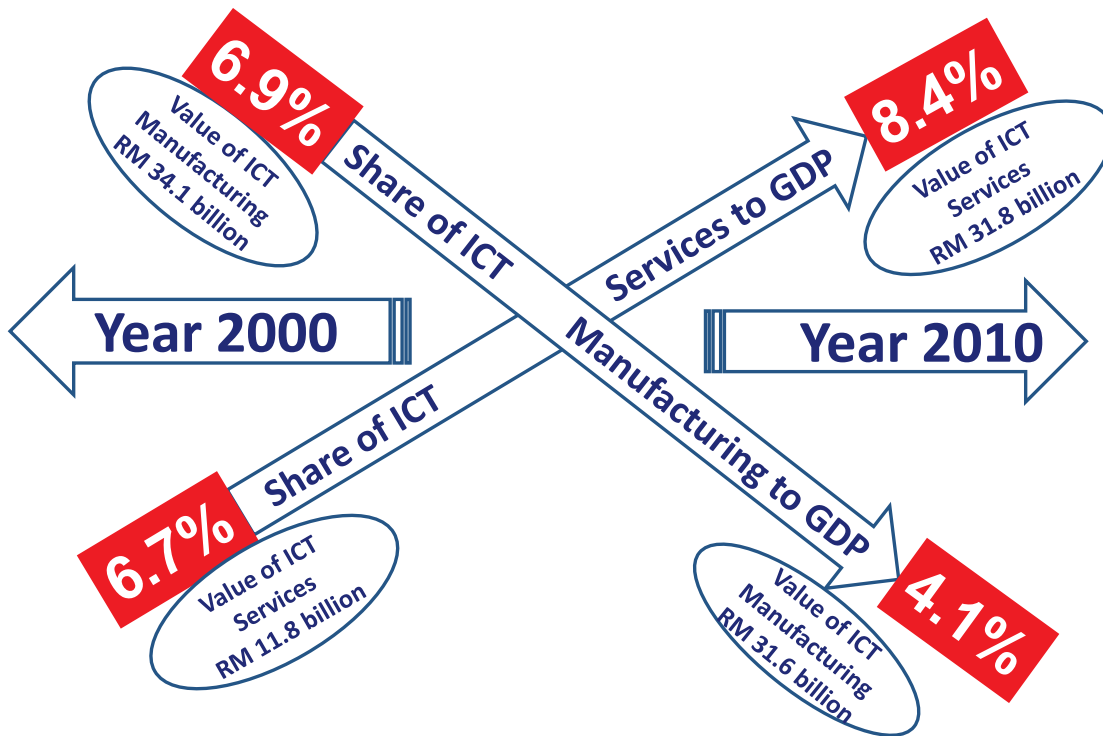
- Generally : 10%-30% import tax and 10% sales tax.
- Electrical circuit boards, integrated circuits and integrated circuit boards dutiable at 30% import tax and 10% sales tax.
- ICs 10% sales tax only. For use in PCs, no duties chargeable.
- Except CD ROMs which are for computer use, video CDs and other CDs are charged 10% sales tax.
- Computer cables are dutiable at 30% import tax and 10% sales tax. Modems require an approved permit from Telecom Malaysia.



Malaysian Experience

- Structural Changes in ICT Sector
- Expanded trade volume
- New jobs created
- New ICT industries emerged
- Demands for new ICT products and services emerged
- Fosters new R&D in ICT sector

ITA Benefits to Malaysia



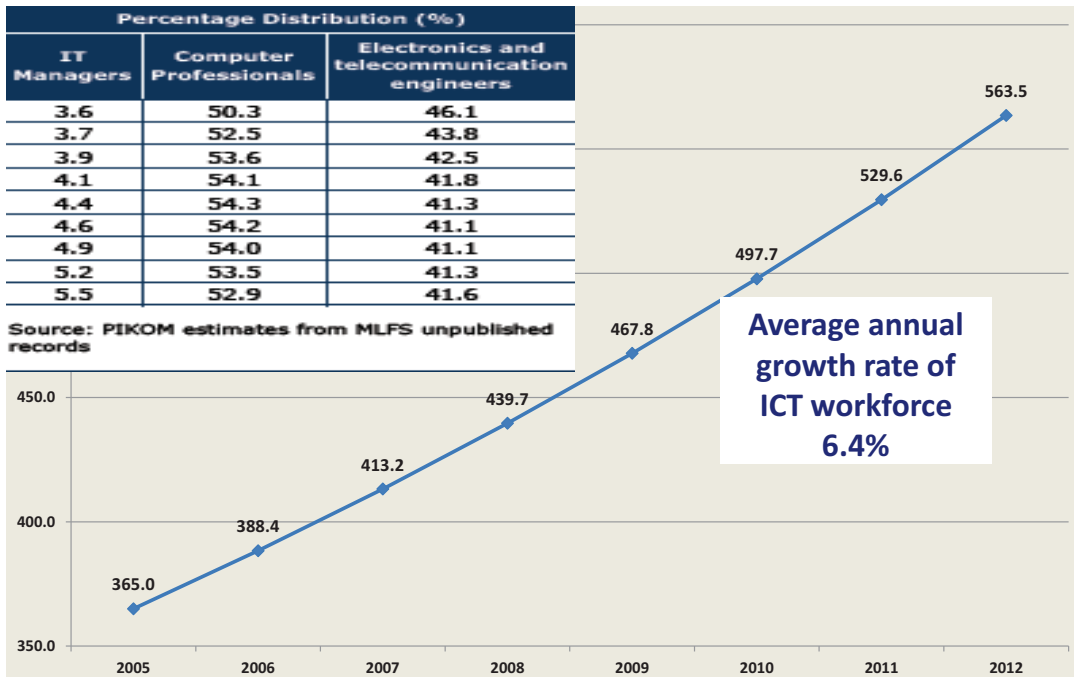
Trend # 1: Structural changes in ICT Sector

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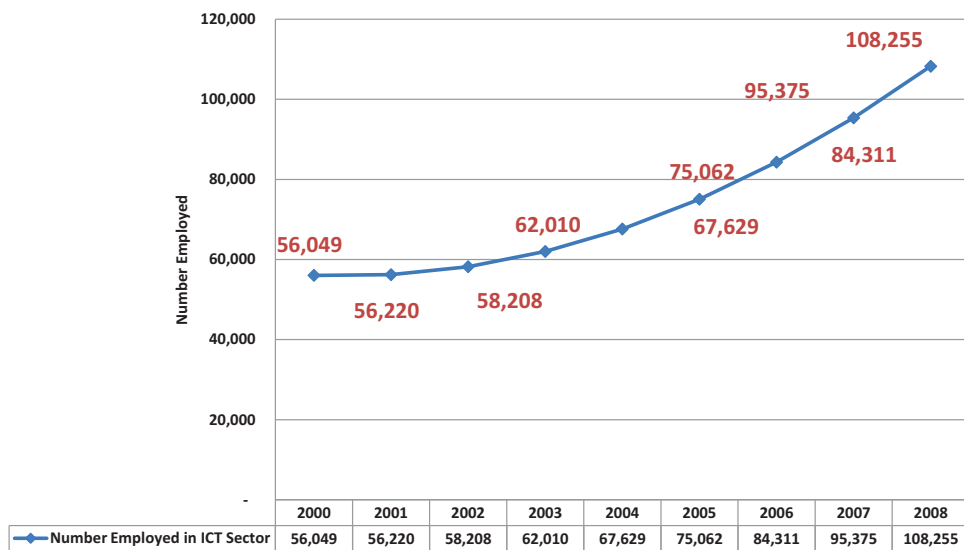


Trend # 2: ICT Trade grew during industrial era , now declining

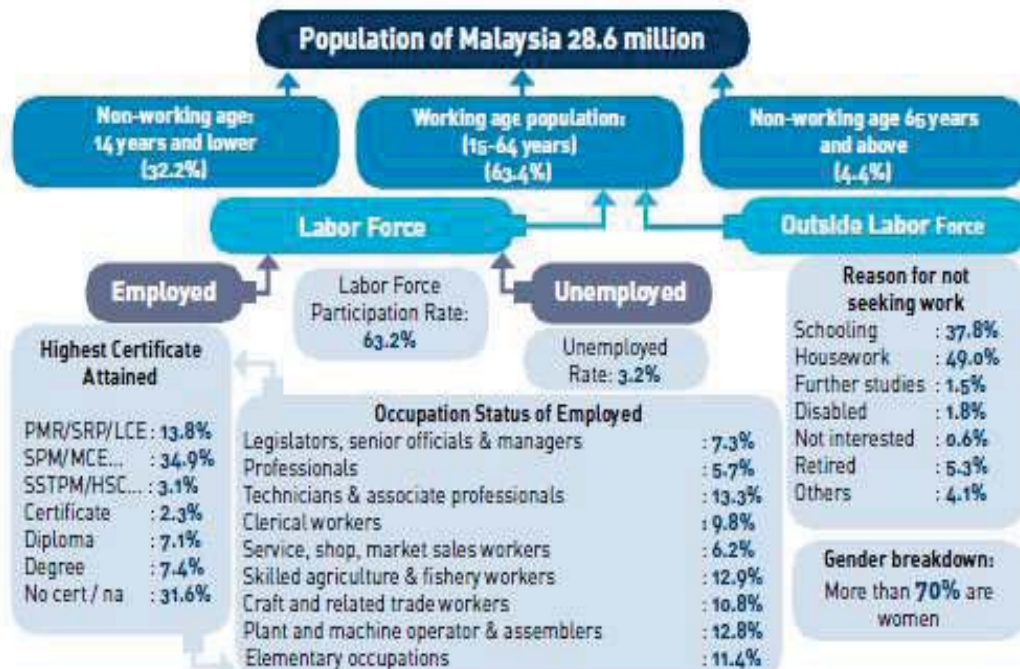
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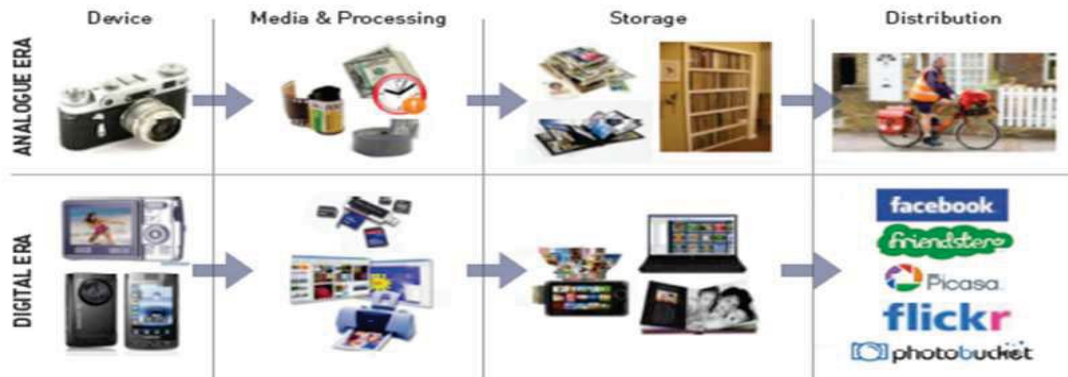
Trend # 3:
Share of Computer Professionals are increasing in the ICT workforce



Trend # 4:
3 out of 4 ICT Graduates employed in ICT User Industries

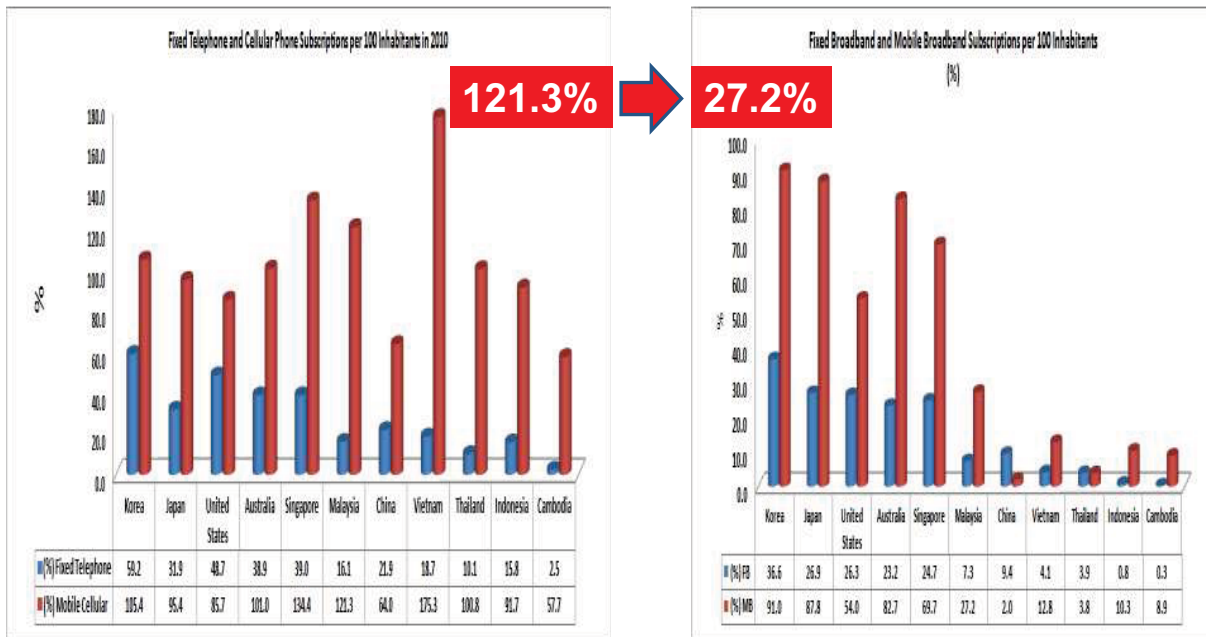


**Trend # 5:
Professional workforce at 13% poised to expand**



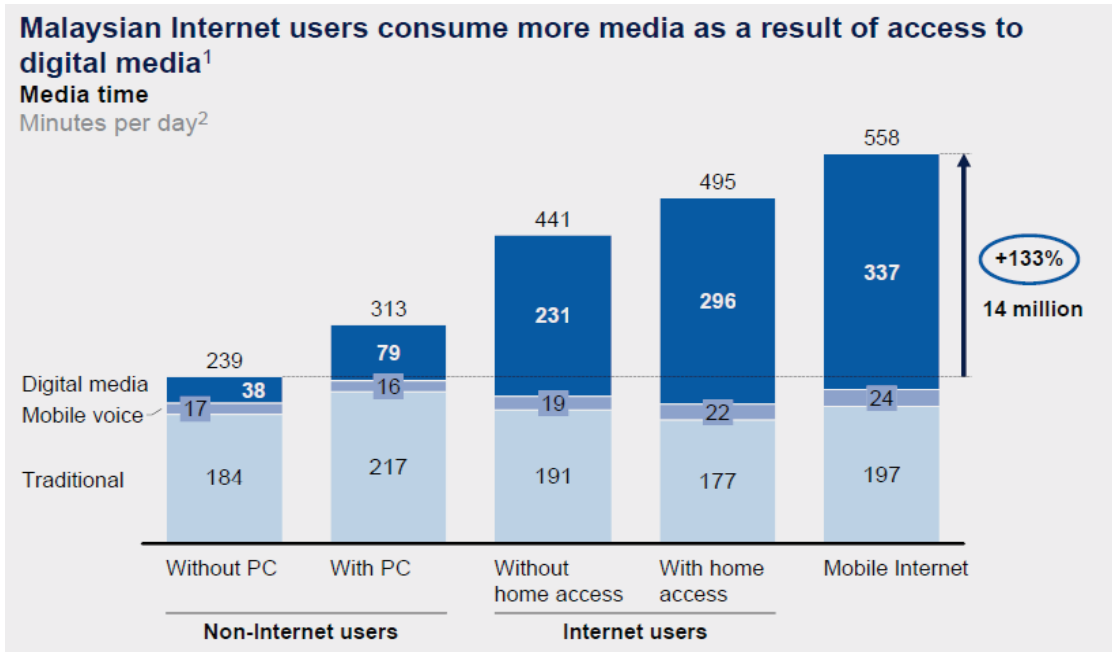
Digital contents can be created or captured or manipulated in various devices	Digital processes requiring shorter frame of time, cost effective and ease handling	Digital storage requires less physical storage, ease of storage and retrieval and longer shelf-life	Digital distribution easily done, cost effective, globally sharable and targeted mass
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**Trend # 6:
New ICT Products are emerging in line with IDE**



**Trend # 7:
Shifts in mobile communication sector towards cellular products**

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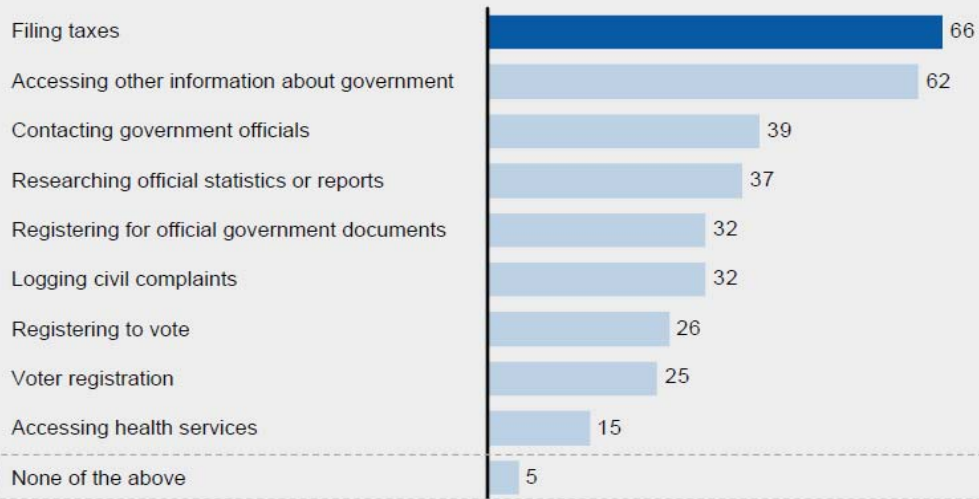
**Trend # 8:
Demand for Internet digital media products growing**

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Filing taxes is the most popular e-government service in Malaysia

% of respondents using each e-government online service in the last year.

Sample size for Malaysia = 311



SOURCE: 2011 McKinsey survey of 311 SMEs in Malaysia; McKinsey analysis

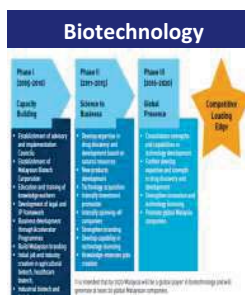
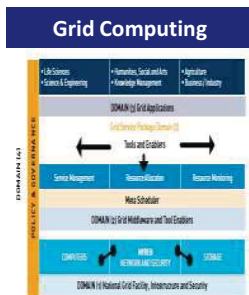
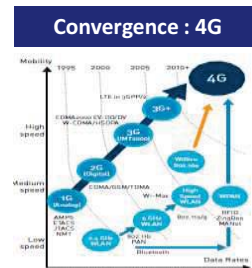
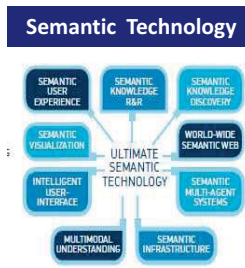
Trend # 9: Significant Expansion in e-Government Services

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MEMS Technology

Market	Applications
Automotive	<ul style="list-style-type: none"> Airbag systems Vehicle security systems Interior brake lights Headlight leveling Roll-over detection Automatic door locks Active suspension
Biotechnology	<ul style="list-style-type: none"> Diagnostic Drug delivery Drug recovery Implantable devices
Consumer	<ul style="list-style-type: none"> Appliances Sports training devices Computer peripherals Car and personal navigation devices
Industrial	<ul style="list-style-type: none"> Earthquake detection and gas shutoff Machine health Shock and tilt sensing
Military	<ul style="list-style-type: none"> Weaponry Equipment for soldiers Embedded sensors
Communications	<ul style="list-style-type: none"> Fibre-optic network components RF relays, switches and filters Tunable lasers

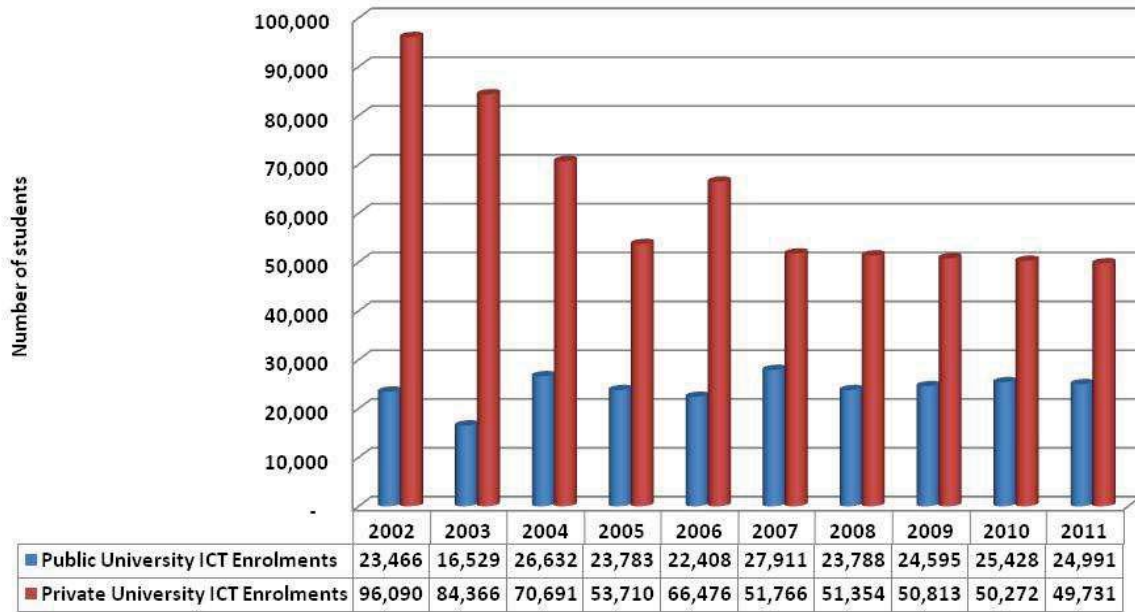


Trend # 10: R&D micro-electronics sector poised to introduce new ICT products and services in the market

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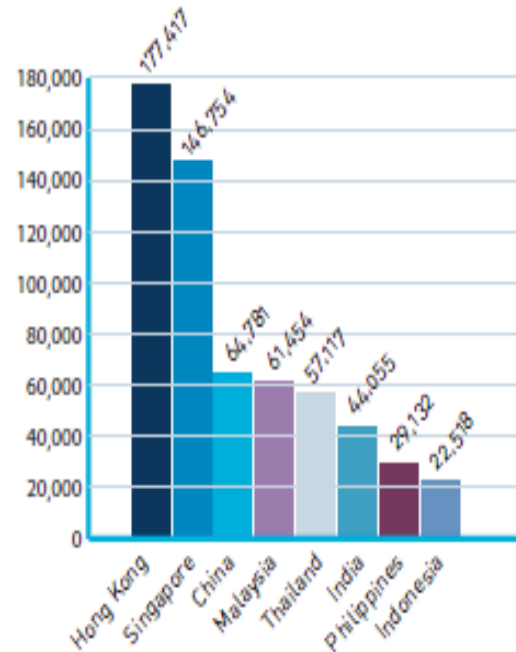


ICT Enrolments in Public and Private Institutes of Higher Learning: 2000-2011



Key Challenge # 1: Supply of quality ICT graduates declining

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Key Challenge 2 # ICT Remuneration still low

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Broadband Plan Descriptions	Capacity Quota (GB)	Monthly Fee	RM per GB	Download Speed Kbps	Download Speed Mbps	Cost per Mbps
	FIXED BROADBAND					
GM	34.1	133.6	3.9	4365	4.4	30.6
Mean	48.5	145.5	4.6	6308	6.3	38.2
Maximum	120.0	249.0	11.8	20000	20.0	122.5
Minimum	5.0	49.0	2.1	400	0.4	12.5
Range	115.0	200.0	9.7	19600	19.6	110.1
Standard Deviation	36.0	55.8	3.1	4983	5.0	32.9
Coefficient of Variation (CV)	74.2	38.4	66.1	79	79.0	86.1
MOBILE BROADBAND						
GM	4.34	79.44	18.54	1773.89	1.77	44.7
Mean	5.97	88.96	20.88	3169.53	3.17	65.8
Maximum	16	248	60	7200	7.2	225.7
Minimum	0.5	30	6.6	384	0.384	6.7
Range	15.5	218	53.4	6816	6.816	219.0
standard deviation	4.66	47.32	11.02	3048.83	3.05	53.8
coefficient of variation (CV)	78.0	53.2	52.8	96.2	96.2	81.7
MOBILE INTERNET						
GM	2.1	63.2	30.9	2791.7	2.79	20.2
Mean	4.4	73.9	46.4	4309.1	4.31	39.2
Maximum	20.0	198.0	180.0	7200.0	7.2	125.7
Minimum	0.1	18.0	5.0	400.0	0.4	2.5
Range	19.9	180.0	175.1	6800.0	6.8	123.2
standard deviation	5.4	43.9	48.1	3046.5	3.05	44.9
coefficient of variation (CV)	124.0	59.4	103.6	70.7	70.7	114.4

Key Challenge 4 # Highly skewed broadband provision

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Challenge # 4: Lack global competitive edge in broadband leadership

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Key ICT / E-Commerce Parameters	Year 2000	Year 2010
Strong Political Will	✓	✓
Government Institutional Support	✓	✓
Education System / ICT Relevant Courses	✓	✓
Broadband Infrastructure	✗	✓
Paradigm Shift to Cloud Computing	✗	✓
Emergence of Social Media for Business	✗	✓
Unified Communications / VOIP Technology	✗	✓
Tablet Computing replacing PC	✗	✓
Web 2.0 Technology	✗	✓
M-Commerce / Mobile Banking / Pay Pal Payment	✗	✓
Quality / Processes Methodology in Software development (CMMI/PCMM, etc)	✗	✓
E-Commerce Killer Applications / Trend Setters (e.g. Air Asia)	✗	✓
Critical mass XY technology savvy generation	✗	✓

A number of parameters are in place in order for the nation to move up not through infrastructure alone but also through building human capital and harnessing the demands of YZ technology savvy generation

Challenge #5 : Meeting ICT demands of YZ technology savvy generation generation

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1. To increase ICT contribution to 17% by 2020;
2. To increase the contribution of ICT Services in trade;
3. To nurture high value adding research, development and innovation activities in ICT segments in micro-electronics, nano-technology, MEMS, bio-informatics, cyber security, cloud computing and mobile commerce;
4. To increase scope and coverage of broadband ubiquity;
5. To expand the scope and coverage of pervasive computing in all spheres of life;
6. To create competent workforce;
7. To create competent and vibrant ICT industry;
8. To create adequate top-notch ICT jobs;
9. To promote green ICT across all sectors of economy;
10. To be globally competitive

Top 10 Aspirations for Malaysia as a member in Information Technology Agreement

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THANK YOU

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