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E-Business

ICT private sector development and business automation

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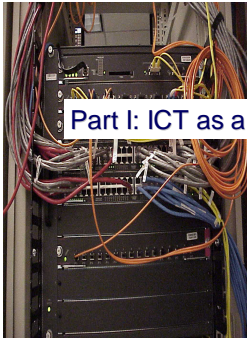
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Introduction

- ICT as a business tool
- ICT Incubators
- ICT as a sector
- Private Public Partnerships
- On-Line Financial Services

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Part I: ICT as a business tool

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What is a company?

A company is an organisation of which all assets are owned by one or more Individuals or institutions.
The main objective of a company is shareholder satisfaction. This usually means:

Make profit !!!

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Porter and ICT

Improve management Increase efficiency

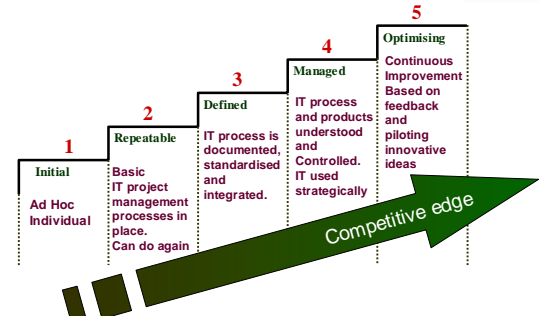
Support Activities	Infrastructure					Margin
	Human Resource Management					
	Technology Development					
	Procurement					
	Service					
Primary Activities						
Inbound Logistics		Operations		Outbound Logistics		Margin
Marketing and Sales		Service		Service		

Increase profit

Increase productivity Increase competitiveness

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Stages of ICT development: CMM

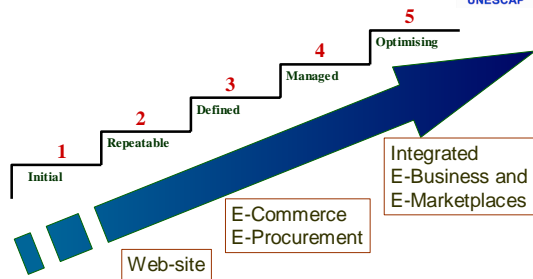


- 1 Initial**
Ad Hoc individual
- 2 Repeatable**
Basic IT project management processes in place.
Can do again
- 3 Defined**
IT process is documented, standardised and integrated.
- 4 Managed**
IT process and products understood and Controlled.
IT used strategically
- 5 Optimising**
Continuous Improvement Based on feedback and piloting innovative ideas

Competitive edge

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Stages of ICT Development in business



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E-business and E-market place



• High end application of ICT

- **E Commerce** = the application of transactions through electronic means
- **E-business** = the application of ICT as a fully integrated business tool in all facets of Porters' business model.
- **E market place** = An Internet system maintained by a company or a consortium that allows individuals or companies to offer products and services or make bids to buy products or services.

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Obstacles to ICT deployment in business



- Low awareness and skill in ICT.
 - Leads to low priority.
- Limited investment power.
- Running costs (incl. telecoms and VAT)
- Inadequate infrastructure.
- Regulatory environment
 - Import/export regulations
 - Exchange rates
 - Tax
 - In transparency, inconsistency, graft

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What can government do ?



To stimulate ICT deployment:

- Stimulate formal and informal learning
 - Increase ICT literacy and professionalism
- Stimulate professional learning
 - Encourage international certification.
- Increase awareness and use of ICT in (State Owned) Enterprises.
- Incentives for IT investment.
 - On business level
 - On citizen level

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E-Commerce prerequisites



- **Company mindset**
 - E-Commerce must provide competitive edge and lead to increased profits.
 - Company must understand importance of a trustworthy reputation.
 - Company must be aware of the resources required to implement E-Commerce.
- **Customer mindset**
 - Needs to trust the company.
 - Needs to trust the technology.
 - Needs to trust the delivery and payment procedure.
 - Needs to trust the product or service.
 - Needs to trust business processes in the country

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E-Commerce prerequisites



- Access to affordable broadband connectivity.
- Liable ISPs.
- Legal recognition of electronic contract, payments and dispute resolution.
- Access to expertise in E-Commerce.
 - National IT Industry.
 - Management and marketing consultancy.
- Appropriate Banking facilities
 - National Treasury regulatory framework
 - <http://internetlaw.pf.com/subscribers/html/newallprimarysourcedocuments.asp>

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What can government do?



To stimulate E-Commerce and E-Business:

- Encourage trust by good legislation and reinforcement of the legislation.
- Provide consumer protection
- Live by example.
- Provide regulatory framework
 - E-Commerce law; contracts and signatures
 - Online Dispute Regulation
 - E-Finance

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What can government do?



To stimulate E-Commerce and E Business:

- Active (international) trade facilitation that incorporates E-Commerce and E-Business practices.
- Active (international) trade promotion that incorporates E-Commerce and E-Business practices.
- Invest in ICT in all sectors and all levels.

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What can government do ?



Dissemination of information should be

- On Time
- Accurately
- Complete
- Relevant
- Up to Date
- Easy to digest
- Easy to find
- Variety of media

Follow up should be

- On time
- Transparent
- Easy to trace
- Fair
- Procedure as simple and straight forward as possible

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Average Annual Percentage of GDP Devoted to ICT Spending (1993-2001)



Country	%	Country	%	Country	%	Country	%
New Zealand	10.3	Colombia	7.0	Chile	5.5	Slovenia	3.7
Sweden	8.8	France	6.9	Slovakia	5.5	Mexico	3.5
Australia	8.7	Czech Republic	6.8	Brazil	5.4	Turkey	3.3
Switzerland	8.4	Israel	6.6	Portugal	5.3	Bulgaria	3.1
Singapore	8.3	Belgium	6.5	Viet Nam	4.7	Philippines	3.1
United Kingdom	8.0	Finland	6.4	Italy	4.6	Thailand	3.1
United States	7.8	Germany	6.2	Taiwan	4.6	Russian Federation	2.9
Canada	7.7	Hungary	6.2	Greece	4.4	India	2.7
Netherlands	7.5	Norway	6.1	Spain	4.2	Egypt	2.2
Denmark	7.3	Ireland	5.8	Venezuela	3.9	Indonesia	2.1
Hong Kong (China)	7.2	Republic of Korea	5.8	Argentina	3.7	Gulf States	1.8
Japan	7.1	Malaysia	5.8	China	3.7	Romania	1.5
South Africa	7.1	Austria	5.6	Poland	3.7		

Source: UNCTAD, 2003

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Underlying Principles:

- Equivalence. Paper documents and their electronic counterparts have the same legal value.
- Autonomy of contracts. Whether in paper form or in electronic form, the substantive content of the contract remains the same.
- Voluntary use of electronic communication.
- The requirements for a contract to be valid and enforceable remain the same.
- Application to form rather than substance. In other words, the law regulates the contractual framework, form but not the content of the contract.
- Consumer protection laws should take precedence over the provisions of the UNCITRAL Model Law.

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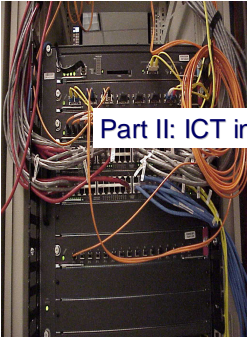
E-ASEAN Reference Framework for E-Commerce Legal Infrastructure



- Notes principles such as transparency, predictability, neutrality and non-discrimination.
- Narrow scope on the transactional aspects of E-Commerce.
- Provides guidelines for member states but is not as complete as UNCITRAL.

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Part II: ICT incubators

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Start up company characteristics

- Limited capacity to pay rents.
- Limited willingness to enter long term leases.
- Need for flexibility to accommodate growth.
- Often sponsored by venture capital or multinationals (spin-offs).
- Usually in the ICT or other high tech sector.
- Not for profit versus for profit incubators:
 - Not for profit often sponsored by government, universities or research centres.
 - For profit incubators often sponsored by real-estate agents, multinationals or venture capitalists.
- Lack of ready capital.
- Lack of market channels.
- Techno-entrepreneurs often lack business skills.

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What is an incubator?

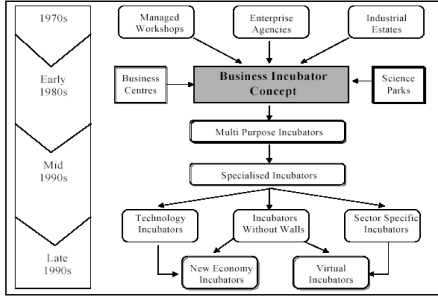
“A business incubator is an economic development tool (usually a centre) designed to speed up the growth and success of start up Companies through an array of business support resources and services. A business incubator’s main goal is to produce successful firms that will leave the programme financially viable and freestanding.” *The Incubator self should be run as a business.*

Derived from The Allen Consulting Group, Australia, 2003

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Evolution of the business Incubator model



Source: Benchmarking of Business Incubators, Centre for Strategy and Evaluation Services, EU, 2002.

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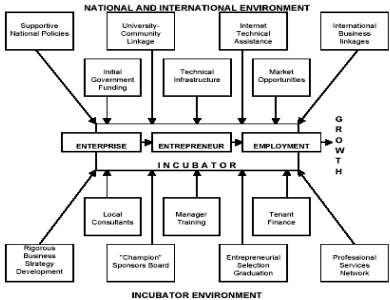
Incubation services

- Flexible low cost office space.
- Flexible lease arrangements.
- Business and management services.
- Financial assistance and capital-raising.
- Advice on government policies and assistance.
- Assistance in market access.
- Training and coaching

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Incubator critical success factors



Source: Lalkaka, R., (1996)

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Why incubators?



Assistance overcomes obstacles in:

- High capital requirement
- Research input
- Techno entrepreneurs with lack of business skills
- Access to fast moving markets
- Social and environmental consequences.
- Acquisition of Good market intelligence
- Set 'Graduation' date.

Incubation stimulates SME growth and innovation

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ICT Parks



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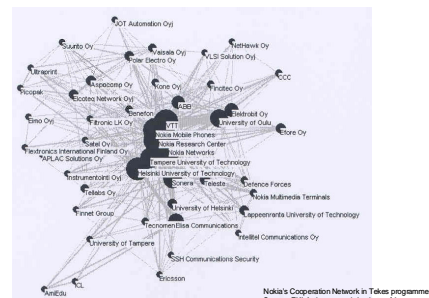
The Finnish Innovation System



An innovation system refers to the operation and interaction of universities, research institutions, other public sector organisations, and private businesses, which together influence the creation, diffusion and utilisation of novel know-how.

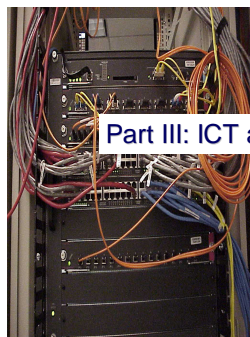
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The Finnish Innovation System



Nokia's Cooperation Network in Tekes programme
Source: EKLA, the research institute of the Finnish Economy.

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Part III: ICT as a sector



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Prerequisites for ICT Industry development (1)



- A stable political environment.
- Transparent and fair governance.
- A safe environment.
- An enabling policy and strong trade facilitation.
- Ability to understand and apply international business practices.
- Mature, secure and efficient banking sector.

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Prerequisites for ICT Industry development(2)



- An infrastructure with ample bandwidth, speed and affordability.
- Comparative and competitive advantages that will make clients choose this country over another.
- Skilled human resources and low labour costs.
- Language skills.
- Physical contacts abroad (many companies in IT export have local offices in the countries where their customers are based).
- Strong innovation/ R&D capacity.

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Hierarchy of service

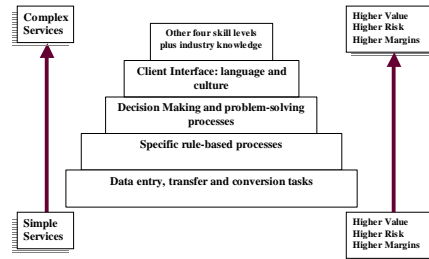


Figure 1: BPO Hierarchy of services, E-Commerce and Development Report 2003

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National Market

Learn trick of the trade, build confidence, stimulate professionalism, prepare for international orientation

Market saturation

Familiar Foreign Markets

Accidental, learn to integrate cultural management into business practice, strengthen trade facilitation, create jumping board, gain size and momentum, build partnerships for the future

Alien Markets

On purpose, learn to assess new markets, learn to take calculated risk, build strategic partnerships, reach maturity

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What can government do ?



Mindset

- Of the government itself
- Of service organisations
- Of the public at large

Trade Facilitation

Creating an attractive environment

Country Promotion

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Offshore evaluations by category



Country	Sub-categories	Metrics
Financial structure (40%)	Compensation costs	<ul style="list-style-type: none"> • Average wages • Median compensation costs for relevant positions (such as call centre representations, IT programmers and operations managers)
	Infrastructure costs	<ul style="list-style-type: none"> • Includes occupancy, electricity and telecommunications systems • Travel to major customer destinations
	Tax and regulatory costs	<ul style="list-style-type: none"> • Relative tax burden, costs of corruption and fluctuating exchange rates
People skills And availability (30%)	Cumulative business process experience and Skills	<ul style="list-style-type: none"> • Existing IT and BPO market size • Contact center and IT-quality rankings • Quality rankings of management and IT training
	Labor force availability	<ul style="list-style-type: none"> • Total workforce • University-educated workforce
	Education and language	<ul style="list-style-type: none"> • Scores on standardized education and language tests
	Attrition rates	<ul style="list-style-type: none"> • Relative BPO growth and unemployment rates

Source: A.T. Kearney, 2004

Offshore evaluations by category



Country	Sub-categories	Metrics
Business Environment (30%)	Country environment (includes economic and political aspects)	<ul style="list-style-type: none"> • Investor and analyst rating of overall business and political environments • A.T. Kearney's Foreign Direct Investment Confidence Index TM • Extent of bureaucracy • Government support for the information and communications technology (ICT) sector
	Country infrastructure	<ul style="list-style-type: none"> • Blended metric of infrastructure quality (telecommunications, IT services)
	Cultural adaptability	<ul style="list-style-type: none"> • Personal interaction score from A.T. Kearney's Globalization Index TM
	Security of intellectual property (IP)	<ul style="list-style-type: none"> • Investor ratings of IP protection and ICT laws • Software privacy rates

Source: A.T. Kearney, 2004

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What can government do?



To facilitate ICT export:

- Make use of available international networks.
- Encourage learning of international business practices and skills.
- Stimulate learning key foreign languages.
- Implement a strong coherent trade promotion strategy.

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Transparency International Corruption Perceptions Index 2002



Country rank	Country	CPI 2002 score	Surveys used	Standard deviation	High-low range
2	New Zealand	9.5	8	0.2	8.9 - 9.6
5	Singapore	9.3	13	0.2	8.9 - 9.6
11	Australia	8.6	11	1.0	6.1 - 9.3
14	Hong Kong	8.2	11	0.8	6.6 - 9.4
29	Taiwan	5.6	12	0.8	3.9 - 6.6
33	Malaysia	4.9	11	0.6	3.6 - 5.7
40	Mauritius	4.5	6	0.8	3.5 - 5.5
40	South Korea	4.5	12	1.3	2.1 - 7.1
52	Sri Lanka	3.7	4	0.4	3.3 - 4.3
59	China	3.5	11	1.0	2.0 - 5.6
64	Thailand	3.2	11	0.7	1.5 - 4.1
64	Turkey	3.2	10	0.9	1.9 - 4.6
71	India	2.7	12	0.4	2.4 - 3.6
77	Pakistan	2.6	3	1.2	1.7 - 4.0
77	Philippines	2.6	11	0.6	1.7 - 3.6
85	Viet Nam	2.4	7	0.8	1.5 - 3.6
88	Kazakhstan	2.3	4	1.1	1.7 - 3.9
95	Azerbaijan	2.0	4	0.3	1.7 - 2.4
96	Indonesia	1.9	12	0.6	0.8 - 3.0

Source: <http://www.transparency.org>

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Transparency International Corruption Perceptions Index 2003

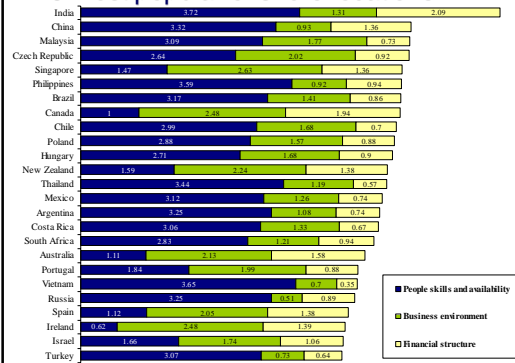


Country rank	Country	CPI 2003 score	Surveys used	Standard deviation	High-low range
3	New Zealand	9.5	8	0.2	9.2 - 9.6
5	Singapore	9.4	12	0.1	9.2 - 9.5
8	Australia	8.8	12	0.9	6.7 - 9.5
14	Hong Kong	8.0	11	1.1	5.6 - 9.3
30	Taiwan	5.7	13	1.0	3.6 - 7.8
37	Malaysia	5.2	13	1.1	3.6 - 8.0
48	Mauritius	4.4	5	0.7	3.6 - 5.5
50	South Korea	4.3	12	1.0	2.0 - 5.6
66	China	3.4	13	1.0	2.0 - 5.5
66	Sri Lanka	3.4	7	0.7	2.4 - 4.4
70	Thailand	3.3	13	0.9	1.4 - 4.4
77	Turkey	3.1	14	0.9	1.8 - 5.4
77	Azerbaijan	3.0	5	0.8	2.2 - 4.1
83	India	2.8	14	0.4	2.1 - 3.6
92	Pakistan	2.5	7	0.9	1.5 - 3.9
92	Philippines	2.5	12	0.5	1.6 - 3.6
100	Kazakhstan	2.4	7	0.9	1.6 - 3.8
100	Viet Nam	2.4	8	0.8	1.4 - 3.6
118	Kyrgyzstan	2.1	5	0.4	1.6 - 2.7
118	Palau	2.1	3	0.6	1.5 - 2.7
118	Palau	1.9	13	0.5	0.7 - 2.9
124	Azerbaijan	1.8	7	0.3	1.4 - 2.3
124	Tajikistan	1.8	3	0.3	1.5 - 2.0
129	Myanmar	1.6	3	0.3	1.4 - 2.0
133	Bangladesh	1.3	8	0.7	0.3 - 2.2

Source: <http://www.transparency.org>

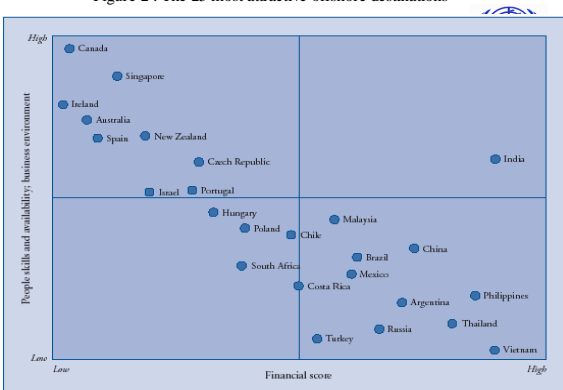
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25 most popular offshore locations



Source: A.T. Kearney, 2004

Figure 2 : The 25 most attractive offshore destinations



Source: A.T. Kearney, 2004

Trade Promotion



Trade promotion refers to programmes and activities to promote and develop trade with other countries.

Trade promotion is the market strategy of a country.

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What can government do?



To facilitate ICT export:

- Facilitating, clear and consistent trade facilitation policy.
- Respect international agreements such as TRIPs.
- Regulate excess and abuse.
- Strengthen local infrastructure; create ICT hubs.
- Encourage international players to settle in country.

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Trade Facilitation



Focus on the efficient implementation of trade rules and regulations.

Trade facilitation needs to be a coherent set of measures that facilitate smooth business transactions.

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Trade Facilitation



Key components:

- Trade and Customs Legislation and Regulations.
- Trade Documentation and Procedures.
- Customs Clearance Procedures.
- Trade and Customs Enforcement Practices.
- The efficient and effective use of ICT.
- Trade Finance Infrastructure Development

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Legislation: considerations



- Internet is borderless –which jurisdiction applies?
- Validity of contracts – electronic signatures?
- Who owns knowledge?
- Should all knowledge be protected?
- What to do with illegal or unwanted use of the Internet or other networks?
- The sky is the limit- spectrum licensing.

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WIPO - IPRs



"**Intellectual property** refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images, and designs used in commerce.

Intellectual property is divided into two categories: **Industrial property**, which includes inventions (patents), trademarks, industrial designs, and geographic indications of source; and **Copyright**, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and those of broadcasters in their radio and television programs."

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WTO - TRIPS



Agreement on Trade Related Aspects of Intellectual Property Rights:

- Emphasizes the ownership of intellectual property.
- Regulates globally copyrights, trademarks, industrial design, patents.

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ICANN- DNS



- DNS = Domain Name System. (dot...)
- ICANN = The Internet Corporation for Assigned Names and Numbers.
 - Allocates domain names.
 - TLDs = Top Level Domains
 - Generic: .com, .org, .net
 - Country code: .vn, .th, .nl
- Uses “Registrars” – local ISPs.
 - Pay to ICANN for services

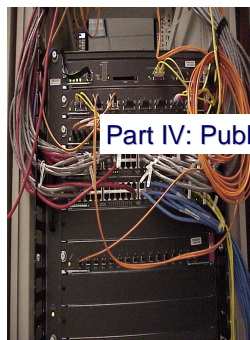
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ICANN- Trade mark conflict



- Domain names can conflict with trademarks:
 - What to do with someone registering:
 - www.cocacola.com?
- ICANNs response:
 - Minimum quality requirements for registration
 - Respect of IPRs.
 - Uniform Domain Name Dispute Resolution Policy (UDNDRP)

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Part IV: Public Private Partnerships



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Public Private Partnership



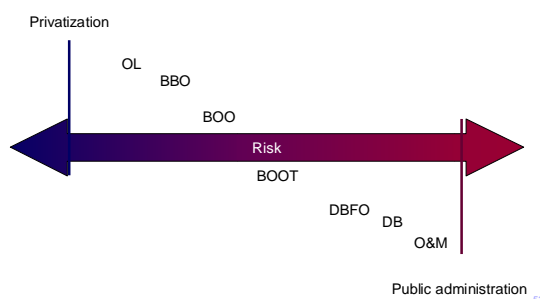
Definition:

A cooperative venture between the public and private sectors, built on the expertise of each partner, that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards.

(The Canadian Council for Public-Private Partnerships)

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Public Private Partnership



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Types of PPP



- **Design-Build (DB)** = The private sector designs and builds infrastructure to meet public sector performance specifications, often for a fixed price, so the risk of cost overruns is transferred to the private sector.
- **Operation & Maintenance Contract (O&M)**: A private operator, under contract, operates a publicly owned asset for a specified term. Ownership of the asset remains with the public entity.
- **Design-Build-Finance-Operate (DBFO)**: The private sector designs, finances and constructs a new facility under a long-term lease, and operates the facility during the term of the lease. The private partner transfers the new facility to the public sector at the end of the lease term.
- **Build-Own-Operate**: The private sector finances, builds, owns and operates a facility or service in perpetuity. The public constraints are stated in the original agreement through on-going regulatory authority.
- **Build Own Operate Transfer (BOOT)**: A private entity receives a franchise to finance, design, build and operate a facility (and to charge user fees) for a specified period, after which ownership is transferred back to the public sector.
- **Build-Buy Operate (BBO)**: Transfer of a public asset to a private or quasi-public entity usually under contract that the assets are to be upgraded and operated for a specified period of time. Public control is exercised through the contract at the time of transfer.
- **Operation Licence (OL)**: A private operator receives a license or rights to operate a public service, usually for a specified term.
- **Finance Only (FO)**: A private entity, usually a financial services company, funds a project directly or uses various mechanisms such as a long term lease or bond issue.

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Establishing partnerships



- A real need
- Understanding
- Mutual trust
- Visible benefits
- Clear incentives

Awareness

Participation

Implementation

Ownership

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Public Private Partnerships



- **Know and understand your partner.**
 - Recognize the strengths and the weaknesses of the partnership.
- **Build synergies and trust.**
- **Maintain open communication.**
 - Give complete and timely communication.
 - Seek to solve problems together.
- **Emphasize and strengthen the partnership through formal written agreements.**
- **Honour these agreements.**
- **Share risks and rewards.**

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Risk assessment



- A good risk assessment saves resources.
- Include ratings from global companies such as S&P
- Risk assessment and management during the Feasibility and Analysis phase of project development.
- Example methods:
 - Simple Factor Rating
 - Design-Reality Gap Assessment Techniques

<http://www.e-devexchange.org/eGov/ris/assess.htm>

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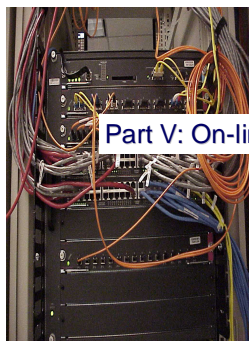
OECD Risk Ratings of Selected Countries



Country	Country risk classification	Country	Country risk classification
Azerbaijan	6	Maldives	5
Bangladesh	6	Mongolia	7
China	2	Myanmar (Burma)	7
Chinese Taipei	1	Nepal	7
Hong Kong	2	Pakistan	7
India	3	Philippines	5
Indonesia	6	Solomon Islands	7
Kazakhstan	5	Sri Lanka	5
Kyrgyz Republic	7	Thailand	3
Laos	7	Uzbekistan	7
Malaysia	2	Vietnam	5

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Part V: On-line financial services



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On-line financial services



- Definition
- Supporting existing banking mechanisms
- Facilitation of customer services delivery:
 - Automated payments systems
 - Electronic Fund Transfer (ATM)
 - Prepaid cards
 - Telebanking
 - Internet banking
 - Home banking
 - E-Cash
 - Credit cards, Debit cards, Smart cards
 - E-trading
 - Consumer Reward Systems

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Key elements of E-finance



- Order
- Contract
- Transaction
 - Of money
 - Of service
 - Of physical goods
- Delivery
- Dispute

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Key elements of E-finance



- Solvency, reliability and reputation of national banking institutions.
- Interoperability with international banking systems.
- User trust
 - Predictability
 - Reliability
 - Technical Competence
 - Fiduciary Responsibility
- Instil trust
 - Data and transaction security
 - User privacy
 - Online Dispute Resolution (UNCTAD 2003)
 - Consumer protection

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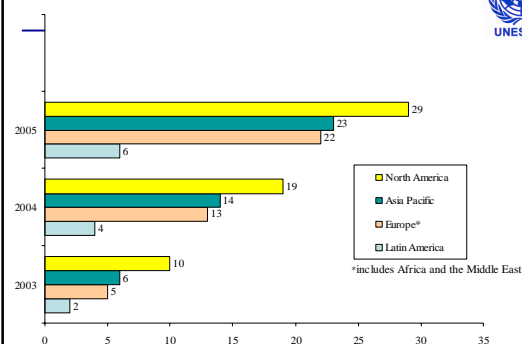
Data Security and Encryption



- **Data security** – the mechanisms that control access to and use of databases.
- **Encryption** – as set of secret codes which defends sensitive information that crosses over public channels.
- **SPAM** - Unsolicited "junk" e-mail sent to large numbers of people to promote products or services.
- **Spy-ware** - A general term for a program that surreptitiously monitors your actions
- **Bot** - Derived from the word "robot," a bot is a software program that performs repetitive functions, such as indexing information on the Internet

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Chart 1.8: Spam growth by region, 2003-2005, per cent rates



Source: UNCTAD, 2003

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Solutions



- **Data security** – the mechanisms that control access to and use of databases.
- **Encryption** – as set of secret codes which defends sensitive information that crosses over public channels.
- **Firewall**- software, located at a network gateway server, that protects the resources of a private network from users from other networks.
- **Anti virus program** - A software program that detects and removes viruses.

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Public Key Infrastructure (PKI)



The architecture, organisation, techniques, practices and procedures that collectively support the implementation and operation of a certificate-based public key cryptographic system. The PKI consists of systems which collaborate to provide and implement the Public Certification Services

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Concluding remarks



- ICT as a sector or business tool is complex,
- Therefore use as much as possible existing structures and networks,
- Work closely together with the ministry of Trade and Industry and
- Piggyback as much as possible on existing initiatives.

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