




Session 2: Overview of ICT for Economic and Social Development

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Overview of ICT for Economic and Social Development




ICT Everywhere



Get a brand new Vnc System! up to 3.06 GHz with HyperThreading technology

Computers



PDA's



Cellphone Accessories



Laptops



Cellphones

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What is ICT?

- Information and Communications Technology
- A broad field that includes
 - Computers
 - Software
 - Communications
 - Services
- Convergence of digital processing and communications

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Short History

- 1875 - invention of the telephone
- 1910s - AM radio broadcast
- 1940s - TV broadcasting, wireless communications
- 1943 - first electronic computer
- 1970s - invention of the microprocessor, fiber-optics
- 1980s - cellular communications
- 1990s - Internet

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Multimedia

- Made possible by digital technology
- Can store, process, manipulate and **combine** digital data
- Data can be:
 - Pictures
 - Videos
 - Audio
 - Actual data

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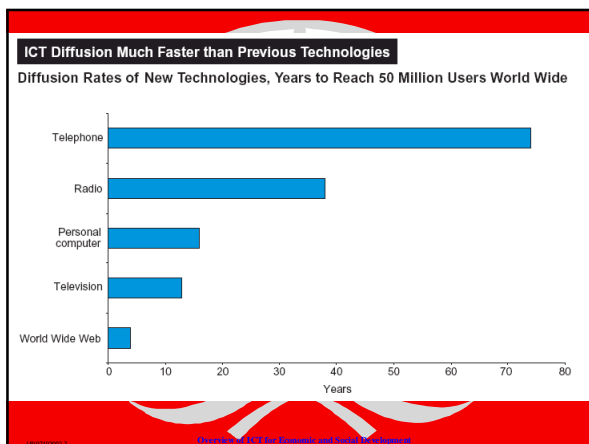



Internet

- A network of networks
- A global set of connections of computers that enables the exchange of data, news and opinion
- A platform for:
 - New ways of doing business
 - Better way for governments to deliver public services
 - Enabler for lifelong learning

* The Information Age, e-Planners for the Information Economy, Society and Policy. By Emmanuel C. Lallana and M. Uy.

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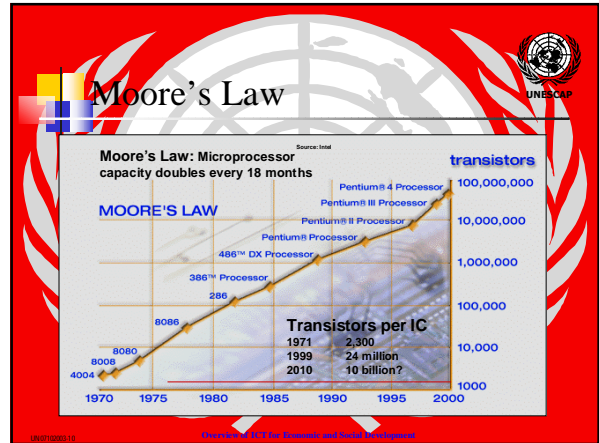
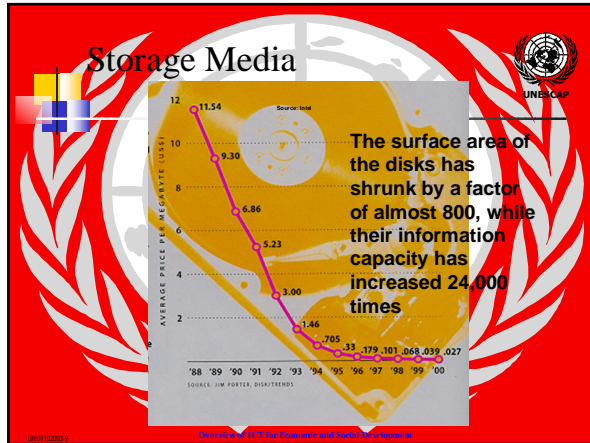
Explosive Growth of the Internet

Number of years to reach 50 million users:

- Radio - 38 years
- Television - 13 years
- PC - 16 years
- Internet - 4 years

but less than 10% of the global population is online.

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- ## Other Laws of the Internet
- Metcalfe's Law:
 - Co-inventor of the Ethernet
 - He observed that a network's value grows proportionately with the number of users
 - Internet time
 - Refers to speed of development due to the Internet
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What is E-Commerce?

The ICT revolution has transformed not only how (and where) goods are produced but also how commodities are exchanged. E-commerce is buying and selling over the Internet or any transaction concluded through an information network involving the transfer of ownership or rights to use goods or services. More precisely, it includes all business transactions that use electronic communications and digital information processing technology to create, transform and redefine relationships for value creation between organizations, and between organizations and individuals.

* The Information Age, e-Prayers for the Information Economy, Society and Policy, By Emmanuel C. Lallana and M. Uy.
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Types of E-Commerce

- business-to-business (B2B);
- business-to-consumer (B2C);
- business-to-government (B2G);
- consumer-to-consumer (C2C); and
- mobile commerce (m-commerce).

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In the late 1990s, over reacting to perceived benefits of the new economy, markets pushed up the value of ICT and e-commerce companies. After April 2000, the values of these companies began falling and many high profile bankruptcies occurred. Although this has created major short term restructuring costs, the share market collapse is likely to have limited long term effects on new technologies' economic and productivity gains.

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The Dotcom Bust

- Too much hype
 - Over-investment
 - Excess capacity
- Incorrect business models or lack of a clear cut business plan

But

- E-government and ICT in general, continue to be relevant

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Main Segments of the ICT Sector

- Hardware industries
- Communications equipment production
- Software and other services industries
- Communication services industries

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ICT Hardware Industries

ICT hardware industries, including production of computers and equipment, magnetic and optical recording media, electron tubes, printed circuit boards, semiconductors, passive electronic components, industrial instruments for measurement, instruments for measuring electricity, laboratory analytical instruments and calculating and office machines, as well as wholesale and retail trade in computers and equipment.

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Communications Equipment

Communications equipment production, including production of household audio and video equipment, telephone and telegraph equipment, and radio and TV communications equipment.

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Software and Other Services Industries

Software and other services industries, including software development and engineering, pre-packaged software, wholesale and retail software trade, computer-integrated system design, computer processing, data preparation, information retrieval services, computer services management, computer sales, rental and leasing, computer maintenance and repair and other computer-related services.

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Communication Services

Communication services industries including networks and security, system administration and support, database development and administration, user support and help desk, graphics and multimedia, instruction and training, hardware engineering, smart cards, telephone and telegraph communications.

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Growth Impact of the ICT Revolution

- Exceptionally sharp fall in the relative prices of goods
- Diffusion of ICT is occurring more quickly in developing economies than previous technologies

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ICT and E-commerce can boost economic growth through...

- increasing productivity in the ICT producing sector itself through large scale manufacture of more powerful ICT equipment with little increase in inputs
- increasing productivity from ICT through growing investment in ICT capital goods
- increasing productivity in ICT using industries due to increasing returns from ICT use, spillovers from network economies, availability of timely information to manage complex production chains, more efficient distribution systems, effective management of risks, lower search and transactions costs, and enabling firms to exchange and access more information

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Implications to a Country

- National Development
- Industrialization
- Economic
- Social
- Political
- Technological
- International Relations



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- ICT is not an end in itself
- It is a tool to empower people and communities to
 - become self-sufficient in meeting their basic needs
 - Help people reach their full potential
- Access to information - critical for change and empowerment

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Advantage of ICT

- Access to information for private and professional decision making: ICTs expand the range of choices and opportunities by facilitating greater access to economic, educational and development related information
- Geography and distance become less of a consideration with ICTs. Research is much easier with ICTs and the Internet especially

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 Strategy of ICT for Economic and Social Development




- Access to opportunities: ICTs empower individuals, businesses and especially SMEs, local and community groups, women and marginalized or disenfranchised people or groups to do what they do, only better. With ICTs and the capacity to use ICTs, these groups can access the same information that government and large corporations use. Access to information can contribute to leveling the playing field by increasing participation in economic and human development activities and in those applications that depend on information such as markets

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- Greater ability to learn: distance learning
- Greater environmental awareness: information about the weather and the environment in general is more readily available. This information can help to predict and prepare or environmental perturbations and catastrophes.

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- More awareness of factors affecting individual well being
- Greater ability to influence and participate in decision making
- Transaction processing: ICTs speed up and ease transactions of all types, and are especially important for business and government transactions

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- Trade: ICTs enhance and facilitate trade. ICTs make markets more efficient. Commerce is enabled and extended. All markets have the potential of being international or of being selective, depending on the case

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Emergence of New Activities

- Online outsourcing of services
- Production of different types of ICT goods

These activities enable countries, including developing ones, to diversify their economies, enhance their export competitiveness and produce high-value-added services that boost the local economy.

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Impact on Firms and Industries

- Increased information flows, which result in knowledge transfer as well as improved organization.
- In particular, ICT have become important tools for improving productive capacity and increasing international competitiveness by
 - reducing the transaction costs involved in the production and exchange of goods and services, increasing the efficiency of management functions, and enabling firms to exchange and access more information.

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- ICT cannot substitute for human intervention, for example, in the creation of business relationships

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Class Discussion Country Presentations

- What do you see is the role of ICT in your National Development?
- What needs can ICT address?
- Is there a positive correlation between ICT adoption and country growth? Please provide examples
- Lessons learned from ICT adoption; what ICT can and cannot do?

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End of
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Thank you!

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