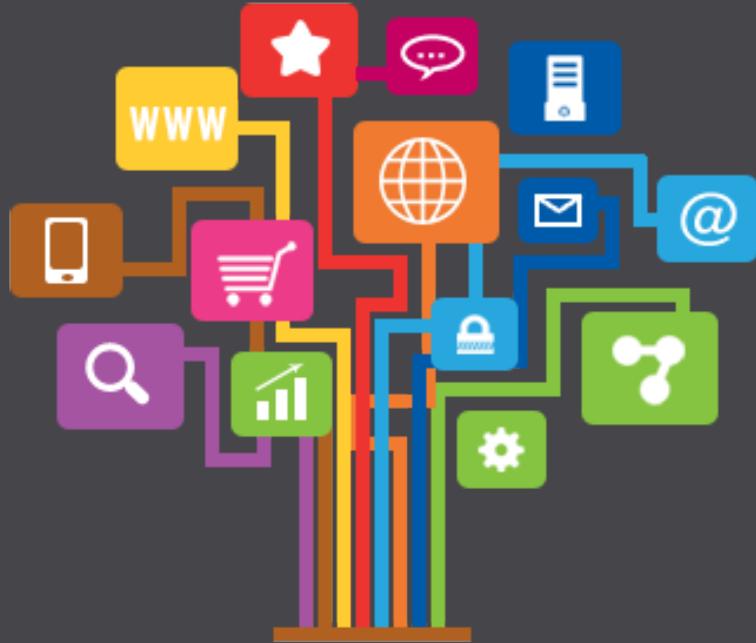


10. E-SERVICES. IT IN THE PROFESSIONAL SPHERE



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10.1. E-services

10.1. E-services

10.2. E-commerce

10.3. E-learning

10.4. E-government

10.5 IT in the professional sphere

E-services Learning Objectives

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- Define e-service
- Describe the three requirements of an e-service
- List examples of e-services

Describing E-services

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- E-service is short for electronic service
- Services for consumers (business or individual) using ICTs
- Services require a transaction to occur



E-services Components

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- Three main requirements
 - ▣ Service provider
 - ▣ Service receiver
 - ▣ Service delivery channel (i.e., technology)
- Automated
 - ▣ Not required, but many e-services are fully automated

Component (1): Service Provider

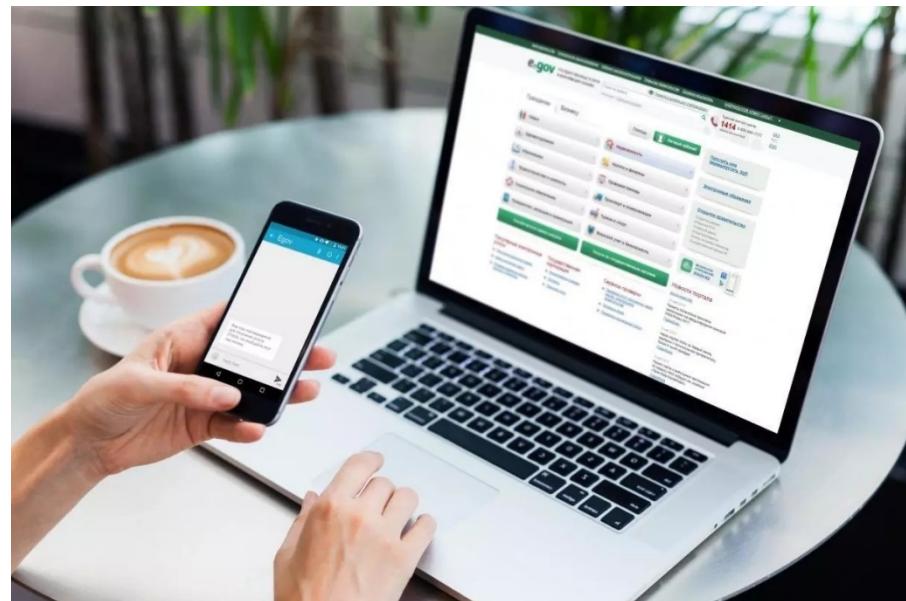
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- An agency or office that provides some service for profit or for free
 - Postal system – Sending and receiving of parcels
 - Print services – Copying or printing documents
 - Commerce – Buying or selling products
 - Banking System – Accessing or transferring funds
 - Travel Agency – Buying tickets or tour packages

Component(2): Service Receiver

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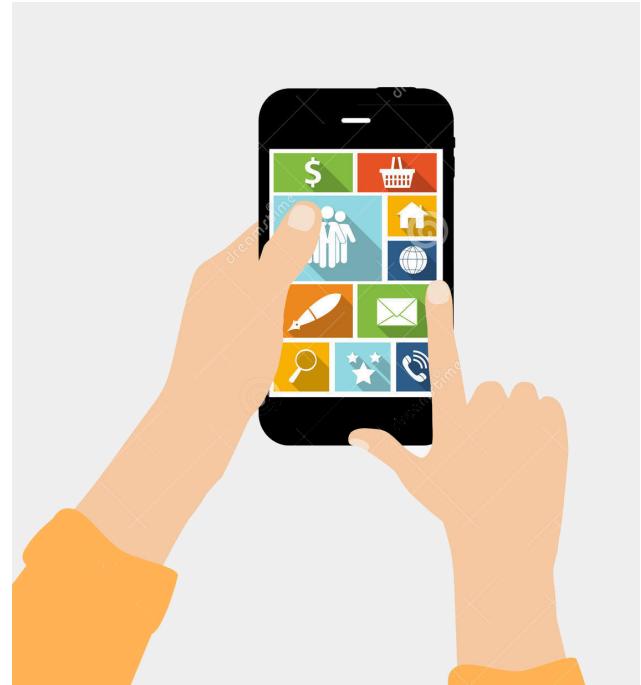
- Anyone who uses the service
 - Businesses
 - Individuals



Component(3): Service Delivery

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- The method of how the provider delivers the service
 - Internet (most commonly)
 - Cellular technologies
 - Kiosk/pay terminal
 - Call center



Component(4): Automated

- The service is usually automated
- Allows the consumer to use the service with minimal or no human intervention
 - i.e., purchasing a ticket



Examples

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Virtual Services

- Streaming music or movies
- E-books
- Cloud computing
- Online or downloaded games

Physical Services

- Metro/bus ticket
- Online commerce
- Pay and manage utility bills



E-services Summary

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- **E-service** is short for electronic service, which are services for consumers (business or individual) using ICTs.
- E-services commonly have three requirements, which are a provider, a receiver, and a delivery channel.
- A **service provider** is an agency or office that provides some service for profit or for free.
- The **service receiver** is anyone who uses the service, which includes businesses and individuals.
- **Service delivery** describes how the provider delivers the service.

10.2. E-commerce

10.1. E-services

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E-commerce Learning Objectives

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- Define e-commerce
- Explain the e-commerce procedure
- List the categories of e-commerce
- Describe the advantages and disadvantage of e-commerce

Defining E-commerce

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- E-Commerce or electronic commerce is a process of buying, selling, transferring, or exchanging products, services, or information using ICTs.
- E-business is another word for e-commerce



Defining Commerce

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- The exchange of goods and services for money
 - **Buyers** – those with money who want to purchase a good or service
 - **Sellers** – those who offer goods and services to buyers
 - **Producers** – those who create the products and services that sellers offer to buyers



E-commerce Process

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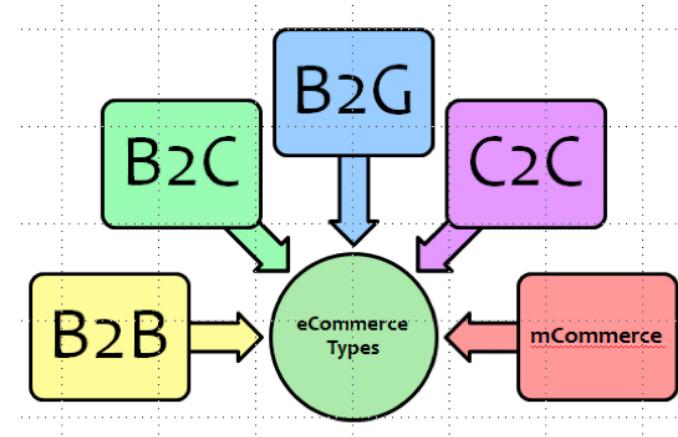
Typical E-commerce Process:



Categories of E-commerce (1)

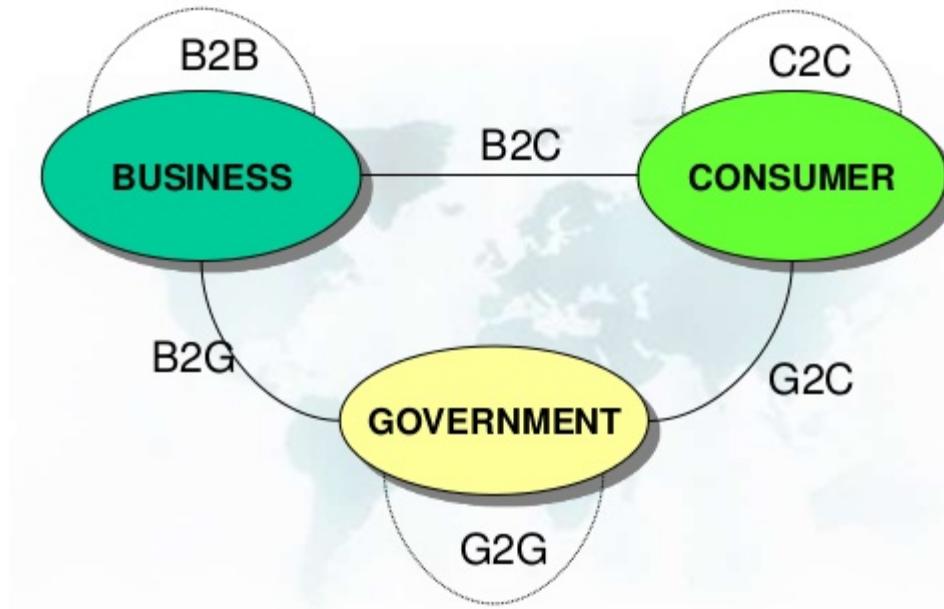
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- Business-to-business (B2B)
- Business-to-consumer (B2C)
- Business-to-government (B2G)
- Consumer-to-consumer (C2C)
- Government to consumer (G2C)
- Government-to-business (G2B)



Categories of E-commerce (2)

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Advantages of E-commerce

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- Buying/selling 24/7 from a computer
- Not limited to a geographical location
 - ▣ Businesses have a broader reach to customers
 - ▣ Customers have a larger selection
- Easier to find uncommon or special products
- Low operational costs without a physical storefront
- Easy to start and manage a business

Disadvantages of E-commerce

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- Unable to examine products personally
- Rely on other customer reviews of products
- Requires a way to transfer money electronically
- Possibility of credit card number theft
- Receive defective product
- Slow delivery
- Difficult to return products

E-commerce Summary

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- **E-Commerce** is a process of buying, selling, transferring, or exchanging products, services, or information using ICTs.
- E-commerce providers can sell virtual or physical products.
- E-commerce has three different categories of who to conduct business with: consumers, businesses, and governments.
- **Advantages** of e-commerce: companies can sell their goods online 24/7 without geographical location limits and have a broader reach to customers.
- **Drawback** of e-commerce: the buyer is unable to examine products before purchasing them.

10.3. E-learning

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E-learning Learning Objectives

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- Define the term e-learning
- List the benefit of e-learning
- Describe the difference between asynchronous and synchronous learning
- Explain the blended and online learning
- List types of elearning tools

What is E-learning? (1)

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- E-learning is intentional learning over the internet
 - Uses educational psychology and instructional design
 - Thoughtful integration
 - Interactive
 - Synonymous with online learning
 - Evolves with technology



What is E-learning? (2)

- Elearning facilitates and supports learning through the use of information and communications technology
 - ▣ Learning is the key component to elearning
 - ▣ Elearning describes how students learn using technology



Benefits of E-learning

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- Engages learners who have difficulty attending face-to-face lectures
 - ▣ Live far away; work during class hours; taking care of a sick family member or kids; disabled
- Different learning modes for those who struggle with lectures
 - ▣ Low language, ineffective listening skills, writing disability
- Interactive learning continues outside of the classroom

Modes of E-learning

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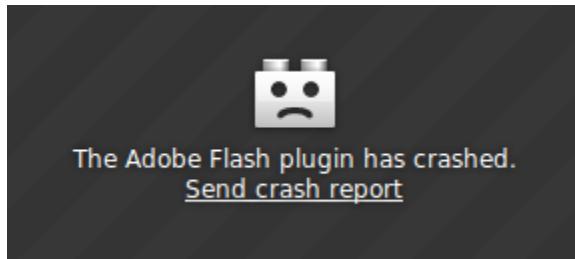
- **Synchronous**
 - ❑ Elearning sessions that happen in real time
 - ❑ Not as common in elearning
- **Asynchronous**
 - ❑ Elearning happens over a duration (e.g., a week)
 - ❑ Commonly used in elearning

Limitations

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Synchronous

- Technology may not work
- Students have to meet at a fixed time



Asynchronous

- Students feel isolated
- Requires self-motivation



E-learning Summary

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- E-learning facilitates and supports learning using ICT
- Reaches learners who cannot attend classroom learning
- Synchronous learning happens in real time
- Asynchronous learning happens over a duration

10.4. E-government

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E-government Learning Objectives

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- Define e-government
- List the interactions of e-government
- Describe the e-government functions

Defining E-government

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- E-government (short for electronic government) is the use of ICTs to provide public services to citizens and other persons in a country or region.



E-government Interactions

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- Between a citizen and their government (C2G)
- Between governments and other government agencies (G2G)
- Between government and citizens (G2C)
- Between government and employees (G2E)
- Between government and businesses (G2B)

E-government Functions (1)

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- Pushing information over the internet
 - ▣ Making information available online
- Two-way communications between the agency and user
 - ▣ Users can engage in dialogue with agencies and post problems, comments, or requests to the agency
 - ▣ Ability to interactively access and exchange information with the system

E-government Functions (2)

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□ Conducting transactions

- Accessing or paying taxes, applying for services and grants, document renewal, etc.

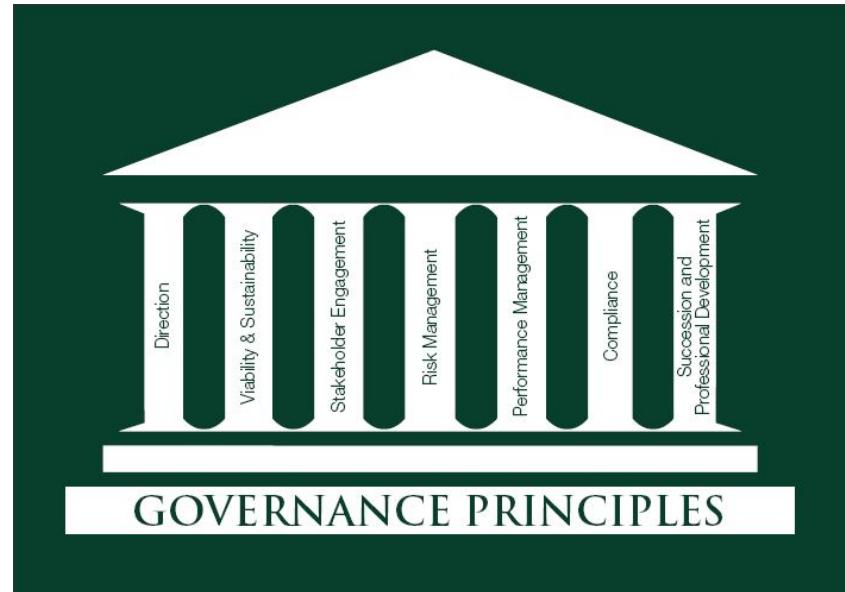
□ Governance

- To enable the citizen transition from passive information access to active citizen participation by:
 - (1) informing the citizen; (2) representing the citizen; (3) encouraging the citizen to vote; (4) consulting the citizen; (5) involving the citizen

Primary Goals (1)

□ E-government systems should aim to:

(1) Improve the quality,
cost, accessibility, and
speed of delivering
government information
and services.



Primary Goals (2)

- E-government systems should aim to:
(2) Make government more accountable by increasing the opportunity for citizen participation in the governance process and bringing citizens closer to elected officials and public servants.



Primary Goals (3)

- E-government systems should aim to:
(3) Organize the production and distribution of public information and services in new ways, that is, to transform government services to meet citizens' needs in an automated world.



E-government Advantages

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- More services offered to citizens more cheaply
- Citizens can perform much of the work online
 - ▣ E.g., Visit office for certain things, such as document verification for a name change after marriage
- Government transparency
- Increases citizen participation
 - ▣ E.g., Voter awareness and participation in elections

Example of an Improved Process

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E-government Disadvantages

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- Lack of equality in public access to computers and the internet
 - ▣ Some citizens can't access a government service
- Distrust of government
 - ▣ System failure leads to distrust of the government
 - ▣ Makes it easier for governments to track their citizens
- Cost
 - ▣ Cost is shifted from working with the citizens to maintaining the system for the citizens

E-government Summary

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- E-government uses ICTs to provide public services to citizens and other persons in a country or region.
- It benefits the citizens by making the government more accessible and increases access to government services.
- The primary goal of e-government systems is to improve the quality, cost, accessibility, and speed of delivering government information and services.

10.5. IT in the professional sphere

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10.5 IT in the professional sphere



What is IT? (1)

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- Information Technology (IT) is often misunderstood
 - People use IT as a generic term to refer to various kinds of computer-related work
 - IT has become a catch-all phrase for any job that works with computers
 - Some consider software developers to be IT workers while others consider them engineers

What is IT? (2)

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- Information technology (IT) is the **use of computers to store, retrieve, transmit, and manipulate data, or information**, often in the context of a business or other enterprise.
- IT is considered to be a subset of information and communications technology (ICT).

Distinguishing IT from ICT

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- IT and ICT have many similarities
 - ▣ ICT is a European term that is often synonymous with IT
 - ▣ North America and Asia favor the term IT
- IT focuses on **information** (storing, transmitting, etc.)
 - ▣ IT assumes communication
- ICT focuses on the **communication** aspect using telecommunications

IT Characteristic(1): Data Storage

- **Stored information is data**
 - Stored on various physical media, such as hard drives
- IT stores the data in an organized manner
 - Databases
 - Filesystems



IT Characteristic(2): Data Retrieval

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- Retrieving data on demand
- Languages, such as SQL retrieve specific data from databases
- Meaningful data becomes information



IT Characteristic(3): Data Transmission

50

- Data transmission has three aspects
 - ▣ Transmission – Sending data
 - ▣ Propagation – Distributing data from one data source to other data sources
 - Data is not all stored in the same location
 - The same data is accessible in various locations
 - ▣ Reception – Receiving data

IT Characteristic(4): Data Manipulation

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- The process of changing data to make it easier to read or better organized.
 - Sorting data alphabetically
 - Summarizing data
 - Generating reports with specific data



What do you think?

52

- Is IT a subset of ICT?
 - ▣ Does IT have a lesser focus on communication?
- Does ICT extend IT by adding a telecommunication component?
 - ▣ Does ICT have a lesser focus on information?
- Are they the same thing just different terms?
- Or, are the two fields different?

IT Work

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- Those who work in IT:
 - Manage the systems required for organizations, businesses, or clients to store, retrieve, transmit, and manipulate data.



IT Department Primary Job

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- To keep the company or organization running
- Companies are built on IT infrastructure
 - Networks, servers, computers, software, etc.



IT Department Core Functions

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- Stores the data
- Protects the data
- Provides technical support
- Ensures connectivity
- Keeps technology current
in the organization
- And many more...

