13. E-SERVICES

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13.1. E-services

13.1. E-services

13.2. E-commerce

13.3. E-learning

13.4. E-government

E-services Learning Objectives

☐ Define e-service

☐ Describe the three requirements of an e-service

☐ List examples of e-services

Describing E-services

□ E-service is short for <u>electronic service</u>

□ Services for consumers (business or individual) using ICTs

□ Services require a transaction to occur

E-services Components

- Three main requirements
  - Service provider
  - Service receiver
  - Service delivery channel (i.e., technology)
- Automated
  - Not required, but many e-services are fully automated
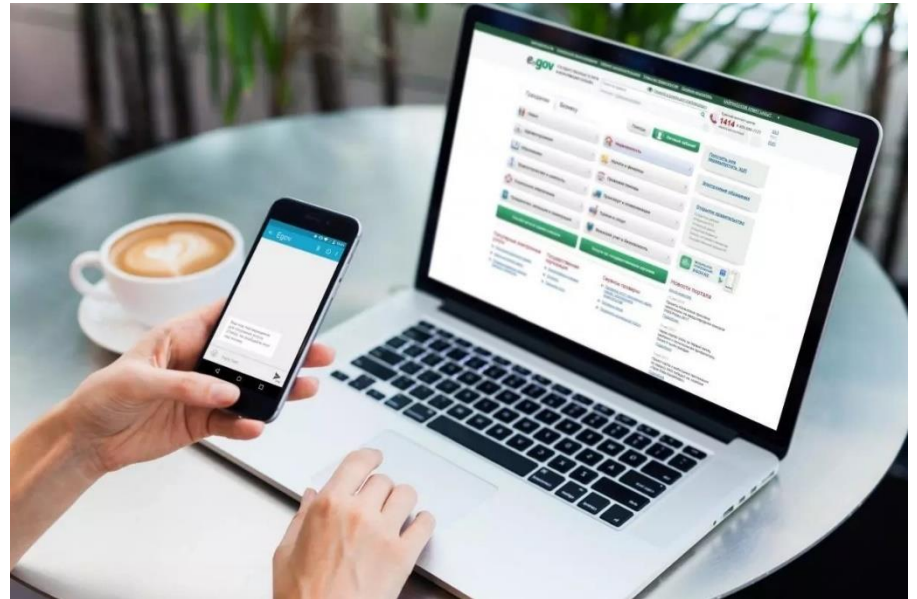
Component (1): Service Provider

- 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

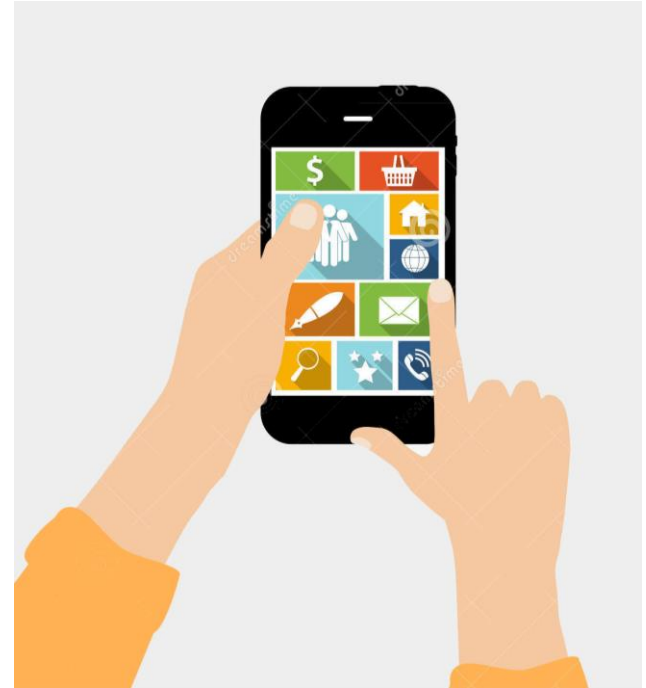☐ Anyone who uses the service

- ☐ Businesses
- ☐ Individuals

Component (3): Service Delivery

- 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

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

eMerchant
eCommerce Payment Solutions

13.2. E-commerce

13.1. E-services

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E-commerce Learning Objectives

☐ 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

- 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

□ 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

Typical E-commerce Process:

Order placed by user

Shopping Cart

Customer's credit card charged

Order completed

Order Form

E-mail is sent to customer & merchant

Sent to Warehouse for fulfillment

Shipping carrier picks up shipment

Shipment sent to customer

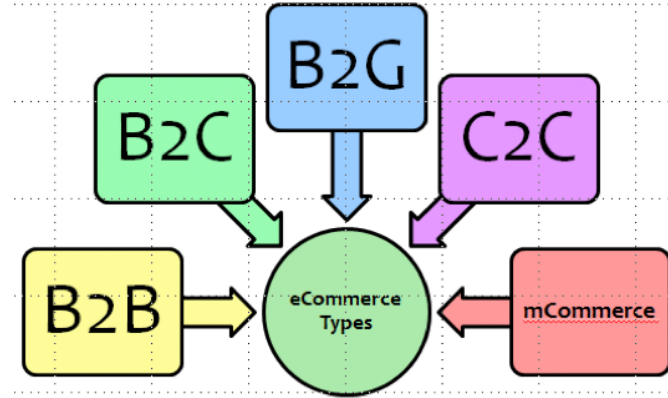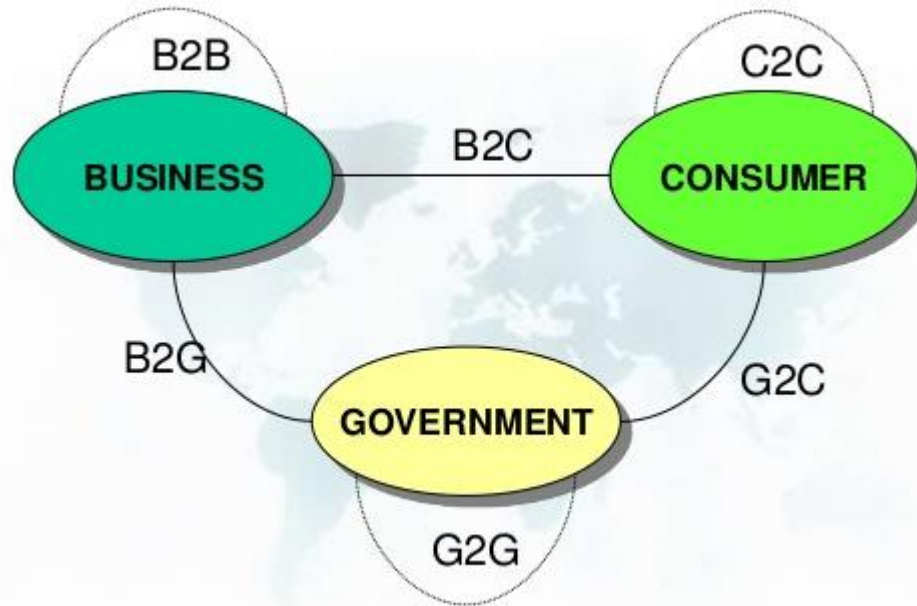# Categories of E-commerce (1)

- 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)

Advantages of E-commerce

- 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

- 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

13.3. E-learning

13.1. E-services

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E-learning Learning Objectives

☐ Define the term elearning

☐ List the benefit of elearning

☐ Describe the difference between asynchronous and synchronous learning

☐ Explain the blended and online learning

☐ List types of elearning tools

What is elearning? (1)

- Elearning is <u>intentional learning over the internet</u>
  - Uses educational psychology and instructional design
  - Thoughtful integration
  - Interactive
  - Synonymous with online learning
  - Evolves with technology

What is elearning? (2)

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

Technology & Learning

Benefits of Elearning

- 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 Elearning

- 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

Synchronous Elearning

- Synchronous learning activities are chat conversations and audio/video conferencing

- Real-time interaction between student and instructor

Asynchronous Elearning

☐ Asynchronous events are time-independent

☐ Usually students are <u>interacting and learning together</u> using an online tool

- Learning material and then discussing in a forum
- Creating a class wiki
- Developing an online presentation to share knowledge

Examples

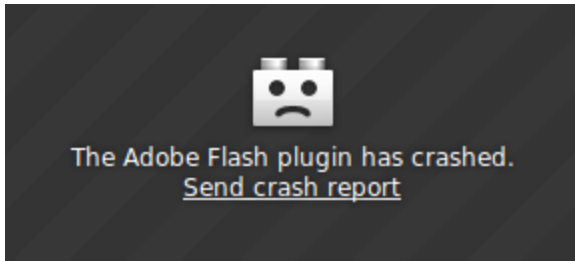| Synchronous	Asynchronous

Limitations

Synchronous

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

Asynchronous

- Students feel isolated
- Requires self-motivation

Elearning Categories

☐ Elearning covers a range of activities

☐ Most fall into these categories

   ☐ (1) Blended learning; (2) Fully-online learning

FACE-TO-FACE
TEACHING

**ICT
IN SUPPORT OF
FACE-TO-FACE
TEACHING**
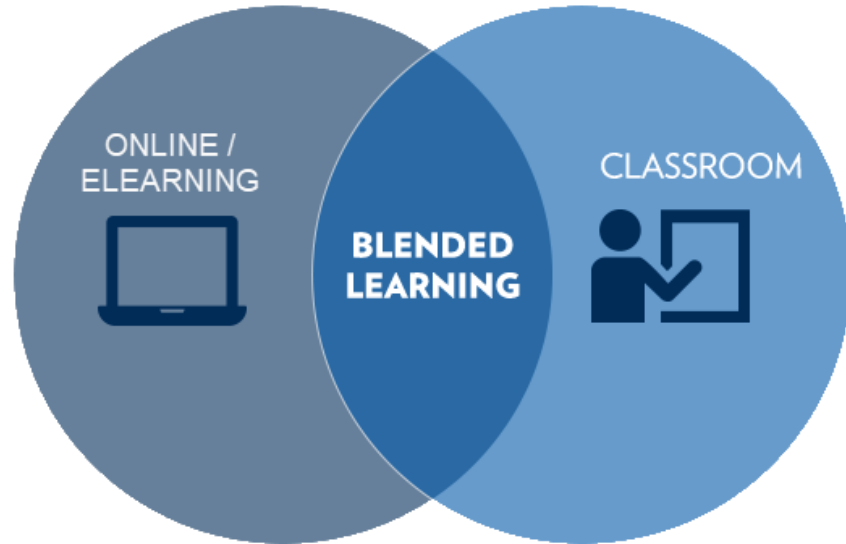
BLENDED LEARNING
(FACE-TO-FACE
+
ONLINE)

FULLY ONLINE
DISTANCE LEARNING

eLEARNING

Blended Learning

- Blended learning is **classroom learning** <u>combined</u> with **online learning**

- Takes the best of both formats

ONLINE / ELEARNING

BLENDED LEARNING

CLASSROOM

Blended Learning Examples

- Students acquire knowledge at home. During class, they discuss, apply, or demonstrate the learned material

- Discuss material online through a forum

- Work on a collaborative online project

Fully Online Learning

- Formal education that takes place entirely only

- Students do not attend face-to-face lectures

- May use synchronous or asynchronous technology

- Students learn and apply knowledge online

- Usually more work and more interactive than classes in traditional education

Elearning Tools

- Learning Management System (LMS)
- Web conferencing software
- Web-based discussion tools
- Collaborative learning tools
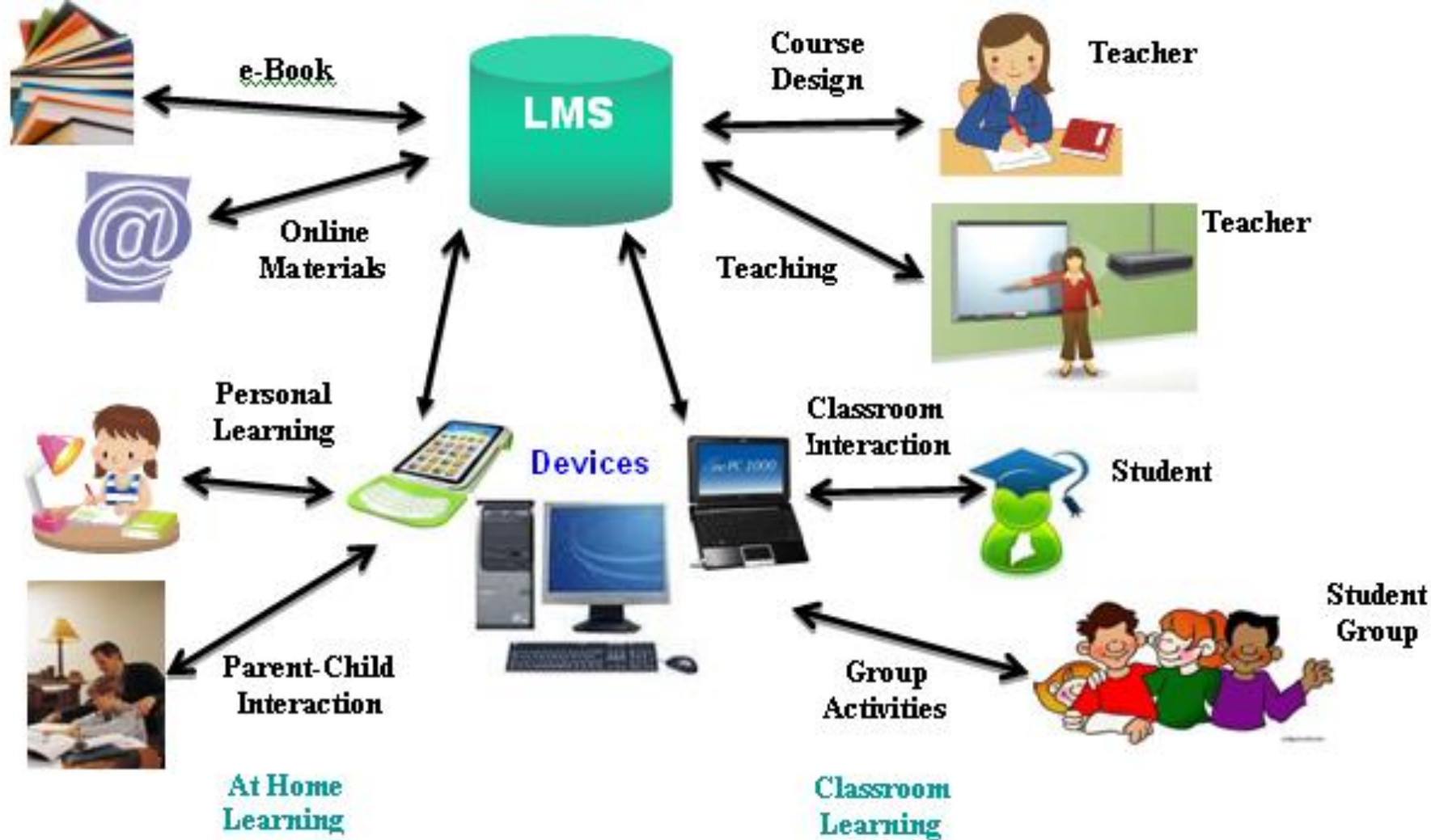
Learning Management System (LMS)

□ All-in-one online course platform that includes the essential tools for teaching and learning online

- ■ Administrative features
- ■ Asynchronous
- ■ Synchronous
- ■ Blended learning
- ■ Fully online

e-Book

Online Materials

Course Design

Teacher

Teaching

Teacher

LMS

Personal Learning

Devices

Classroom Interaction

Student

Parent-Child Interaction

Group Activities

Student Group

At Home Learning

Classroom Learning

Web conferencing software

- Allows the instructor and students to have live learning sessions online
  - Audio/video/chat
  - One-to-one
  - One-to-many

Web Participants — Presentation — **Group & Private Chat**

The Precision Approach

Glideslope (typically 3 degrees)

MAP

Decision height

Runway

Voice Participants — **Web Cam** — **Desktop Sharing**

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Web-based Discussion Tools

□ Allows students and teachers to interact online

□ Real-time chat sessions (synchronous)

□ Forums (asynchronous, group learning)

□ Blogs (asynchronous, individual learning)

Online Collaborative Learning Tools

☐ Online tools that allow students to work together to create content

- ◘ Writing projects
- ◘ Spreadsheets
- ◘ Presentations
- ◘ Multimedia
- ◘ Programming
- ◘ Wikis

E-learning Summary

- Elearning <u>facilitates and supports learning</u> using ICT
- Reaches learners who cannot attend classroom learning
- Synchronous learning happens in real time
- Asynchronous learning happens over a duration
- Fully online learning takes place entirely online
- Blended learning combines online and classroom learning
- Some elearning tools
  - LMSs, web conferencing software, web-based discussion tools, and collaborative learning tools

13.4. E-government

13.1. E-services

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13.4. E-government

E-government Learning Objectives

- ☐ Define e-government

- ☐ List the interactions of e-government

- ☐ Describe the e-government functions

Defining E-government

☐ 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

- 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)

- 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)

- 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
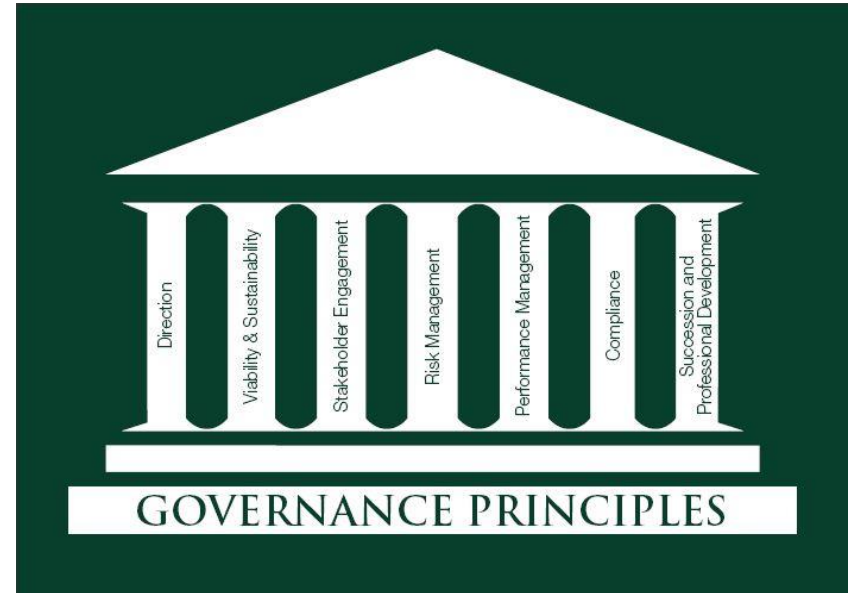
Primary Goals (1)

□ E-government systems should aim to:

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

GOVERNANCE PRINCIPLES

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.
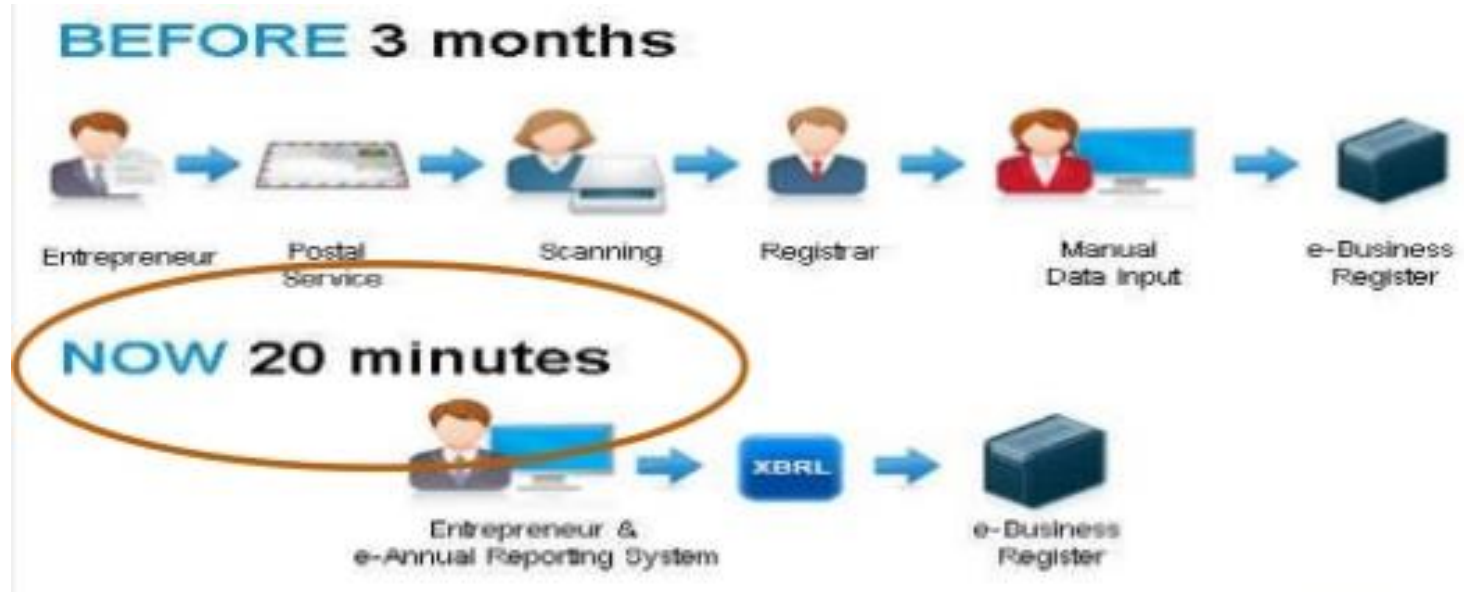
E-government Advantages

- 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

E-government Disadvantages

- 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