Chapter 9
E-Government, E-Learning, and Other EC Applications

Learning Objectives

Upon completion of this chapter, you will be able to:
1. Describe e-government to citizens (G2C) and to business (G2B).
2. Describe various e-government initiatives.
3. Discuss online publishing and e-books.
4. Describe e-learning and virtual universities.
5. Describe knowledge management and dissemination.
6. Describe C2C activities.
7. Understand how peer-to-peer technology works in intrabusiness, in B2B, and in C2C.
8. Describe other EC applications.

Content

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Real-World Case: E-Government Initiatives in Hong Kong

Answers to Pause/Break Section Review Questions

Section 9.1 Review Questions

1.   Define e-government.

E-government is the use of IT and e-commerce to provide access to government information and delivery of public services to citizens and business partners.

2.   What are the four categories of e-government services?

The four categories are: government-to-citizens, government-to-business, government-to-government and government-to-employees.

3.   Describe G2C.

The government-to-citizens model includes all interactions between a government and its citizens. This model is meant to increase efficiencies and create greater transparency to citizens.

4.   Describe how EBT works.

The EBT system allows the government to electronically transfer benefits to citizen's smart cards instead of sending checks or other vouchers.

5.   Describe the two main areas of G2B activities.

The two main areas of government–to-business activities include electronic procurement where the government purchases goods from the private sector, and electronic auctions where the government electronically auctions surplus goods to businesses.

Section 9.2 Review Questions

1.   List and briefly describe the six stages of e-government development.

The six stages of e-government development are: information publishing/dissemination, official two-way transactions, multipurpose portals, portal personalization, clustering of common services, and full integration and enterprise transformation.

2.   Describe some e-government implementation issues.

Some of the issues involved with the implementation of e-government include the speed of transformation, the implementation of G2B implementation and security issues.

3.   Provide an example of a non-Internet e-government service.

The example provided in the text is FEMA using a telephone system to automate filling out relief forms for earthquake victims.

Section 9.3 Review Questions

1.   Define online publishing and list some advantages it offers over traditional media.

Online publishing is the electronic delivery of newspapers, magazines, books, news, music, videos and other digitizable information over the Internet. Online publishing is generally more flexible than print publishing because it is easier to modify content as well as create personalization.

2. *List the major methods of online publishing.*

The major methods of online publishing include: the online-archive approach, the new-medium approach, the publishing-intermediation approach and the dynamic approach.

3. *What issues are involved in content creation and distribution?*

Some of the issues involved in content creation and distribution include the difficulty in presenting multimedia, issues surrounding intellectual property payments and rights and a lack of advertising support for content.

4. *Describe e-books and list their advantages.*

An e-book is a book in digital form that can be read on a computer screen. Some advantages of this technology include portability, convenience, frequent updates, current information and ease of searching.

5. *Describe Weblogging (blogging).*

Blogging is a method of fast and easy publishing of thoughts and ideas to a Web site.

Section 9.4 Review Questions

1. *Define e-learning and describe its benefits.*

E-learning is the online delivery of information for purposes of education, training and knowledge management. It can provide learning at a lower cost with greater flexibility.

2. *List some of the major drawbacks of e-learning.*

Drawbacks and challenges to e-learning are listed on page 360.

3. *Describe virtual universities.*

Virtual universities are universities where students can take online classes from any location.

4. *List some e-learning tools, and describe WebCT and Blackboard.*

Student answers will vary. There are a variety of applications that enable communication, KM, testing and authentication that are used. WebCT and Blackboard

are learning management systems (LMS) that integrate many of these applications together.

5.   Describe learning centers in industry.

A learning center is a focal point for corporate training within the firm.

Section 9.5 Review Questions

1.   Define KM.

KM is the process of capturing or creating knowledge, storing it, updating it constantly, interpreting it and using it whenever necessary.

2.   Discuss the relationship between KM and EC.

EC can be better performed based on what can be learned from effective KM.

3.   Describe knowledge portals.

A knowledge portal is a single point of access software system intended to provide timely access to information and to support communities of knowledge workers.

4.   Describe online advisory services.

These are services that use stored information to help provide individuals with the information and advice they request.

Section 9.6 Review Questions

1.   List the major C2C applications.

The major applications include classified ads, personal services and exchanges.

2.   Describe how C2C works in classified online ads.

Individual consumers are able to list items for sales while other individual consumers are able to make the purchases.

3.   Describe C2C personal services, exchanges, and other support services.

Personal services advertise a service from one individual to another while exchanges offer to barter items. Support services help increase trust between customers making transactions.

Section 9.7 Review Questions

1.   Define P2P networks and list their major characteristics.

Peer-to-peer networks have an architecture in which workstations have similar capabilities, the network peers share data and processing with each other directly rather than through a central server. These networks are characterized by user interfaces that load outside the Web browser and user computers that can act as both clients and servers. The overall system is easy to use and well integrated; and includes tools to support users wishing to create content or add functionality; and provides connections with other users. The system does something new or exciting and the system supports cross-networking protocols.

2.   List the major P2P models.

The major models include collaboration, content distribution, business process automation and distributed searches.

3.   Describe P2P applications in C2C.

The most common application is a file-sharing utility. This application allows peers to share files using the Internet as the transmission medium.

4.   Describe P2P applications in B2B.

Peer-to-peer applications could be used in business-to-business e-commerce to share information with business partners as well as facilitate communications and the exchange of digital goods.

Section 9.8 Review Questions

1.   Why are online sales of prescription drugs growing rapidly?

High prices in the U.S. create a need for lower prices.

2.   Why would one use online postal services?

It increases a customer's convenience.

3.   Why are adult entertainment sites so successful?

They attract a large market.

4.   Why are wedding-related sites successful?

They specialize in a niche market and provide valuable services.

Answers to EC Application Case Questions

EC Application Case 9.1: Contract Management in Australia

1. How is contract management in WA facilitated by e-commerce tools?

These electronic commerce tools facilitate contract management by providing an open repository of existing information and examples to assist government buyers in the development of contracts and for private industry in creating and responding to bids by government agencies.

2. What other e-commerce activities does the government perform?

The government also provides for an online exchange for the purchasing of materials as well as online training.

3. Describe the WA online training program.

The program includes online training utilizing the Internet and Web technologies in addition to videoconferencing for training and collaboration.

EC Application Case 9.2: G2E in the U.S. Navy

1. Why is the navy using multiple media channels?

The navy is using multiple media channels to ensure that they reach as much of their intended audience as possible.

2. Compare the G2E services provided by the navy with the B2E services discussed in Section 8.5.

The services provided by the navy are very similar to services provided by businesses.

EC Application Case 9.3: Online Global Learning Center at W.R. Grace

1. List the factors that drive e-learning at W.R. Grace.

There is a need for fast and easy training that is self-paced.

2. How is e-learning integrated with other learning methods?

E-learning is one of several different learning methods supplied by the company.

3.   List the e-learning offerings of W.R. Grace's learning center.

The company provides a variety of training options.

4.   Describe the critical success factors of e-learning offered by W.R. Grace.

These include buy-in from senior managers, phased implementation, encouraging involvement, variety, visibility and relevancy.

EC Application Case 9.4: Online Knowledge Sharing at Xerox

1.   What knowledge is shared via Eureka, and how?

Information on product repair is available through the Internet.

2.   What EC technologies are described in this case? Classify the EC transactions.

The technologies used are information storage and retrieval, information updating and collaboration.

3.   What were the drivers of the program?

The program was created to increase efficiency and customer satisfaction.

4.   What advantages may be provided by the wireless system?

This would allow easier and quicker communication with the system.

Answers to Discussion Questions

1.   Some say that B2G is simply B2B. Explain.

Business-to-business involves the relationships and commerce between different firms. Because many of the same activities are similar to those performed by the government, it is possible to consider the government as another business.

2.   Compare and contrast B2E with G2E.

Many of the services that are provided by businesses to their employees are very similar to the services that governments provide their employees. The only difference is the role the government plays in a society overall. Because government employees are also citizens, the numbers and types of services provided by their employer (i.e. the

government) may be different than those services provided by a business (i.e. a private entity).

3. *Discuss the major properties of P2P.*

Peer-to-peer networks have an architecture in which workstations have similar capabilities, the network peers share data and processing with each other directly rather than through a central server. These networks are characterized by user interfaces that load outside the Web browser and user computers that can act as both clients and servers. The overall system is easy to use and well integrated and includes tools to support users wishing to create content or add functionality and provides connections with other users. The system does something new or exciting and the system supports cross-networking protocols.

4. *Discuss some of the potential ethical and legal implications of people using P2P to download (i.e. file sharing) music, games, and so forth.*

Peer-to-peer file sharing is largely unregulated with standards defined by the group of individual users. Because of the lack of a controlling mechanism, it is possible to trade copyrighted materials over these networks. Many consider trading copyrighted materials to be theft and a violation of copyright laws. This potential lawbreaking has both ethical and legal implications.

5. *In what way can online publishing support a paper-based publication?*

Student examples will vary. One example is online Web sites providing up-to-date supplements and corrections to paper-based books.

6. *Discuss the advantages and disadvantages of e-books.*

Some advantages of this technology include portability, convenience, frequent updates, current information and ease of searching. Some disadvantages of this technology include the costs of the hardware needed to view e-books, difficulty in transporting types of this hardware (PCs) and difficulty reading computer screens.

7. *Will paper-based books and magazines be eliminated in the long run? Why or why not?*

Student responses will vary.

8. *Describe the social phenomenon of blogging and speculate on its commercial possibilities.*

Blogging allows individuals to quickly and easily publish information to a personal Web site. Student answers will vary on its impact and commercialization.

9. Check an online version of a newspaper or magazine you are familiar with and discuss the differences between the print and online versions.

Student responses will vary.

10. Discuss the advantages of e-learning for an undergraduate student.

E-learning provides a number of advantages to students. Some of these advantages would include: greater convenience in class scheduling, elimination of location as a factor in school choice, variety of instructional technologies used and greater personalization of the student's educational experience.

11. Discuss the advantages of e-learning in the corporate training environment.

There are many potential advantages to e-learning in a corporate training environment including reduced travel costs, increased volume of training—leading to greater employee knowledge, elimination of time and distance barriers, as well as cost savings.

12. Discuss the relationship between KM and a portal.

Knowledge management systems strive to capture, retain, categorize, retrieve, and display information to users. Portals also attempt to display a variety of knowledge-based products to individuals. Portals are designed for the general public and will generally include only knowledge from public sources. Knowledge management systems are generally used internally by a company to provide access to a combination of both public and private information to aid decision making.

13. In what ways does KM support e-commerce?

Knowledge management can be used as a means to provide customers with additional information on products before or after a purchase is made. This additional information can help customers in their purchasing decisions and can help them support products that they have purchased after the sale.

14. Which e-government EC activities are intrabusiness activities? Explain why they are intrabusiness.

The two e-government activities that could be classified as intrabusiness are government-to-government and government-to-employee. These activities could be considered intrabusiness because the government is dealing with internal constituencies and not with the general citizenry or businesses. These activities are very similar to those that might be performed by a private sector business.

15. Identify the benefits of G2C to citizens and to governments.

Some of the many possible benefits to citizens include easier access to information, lower transaction costs, greater flexibility and greater efficiencies. The benefits to governments can include greater public access, better participation in government activities by citizens and lower transaction costs.

16. *Discuss the relationship between P2P and KM. (Hint: See Kini 2002).*

P2P can be used as an effective architecture to share information and act as a KM system. Its decentralization provides benefits of ease of access, updating and collaboration, but control is lost.

Internet Exercises
(Note: URLs may change over time; please check the Internet Exercises on the Turban Web site for possible updates: www.prenhall.com/turban.)

1. *Enter **whitehouse.gov/government** and review the "Gateway to Government." Based on the stages presented in Exhibit 9.2, what stage does this site represent? Review the available tours. Suggest ways the government could improve this portal.*

Student answers to this question will vary. It currently appears that the system is at stage 2 of the model, where information is published and there are official two-way transactions between citizens and the government.
Student answers to the question concerning improvements will vary.

2. *Enter **oecd.org** and identify the studies conducted by the Organization for Economic Cooperation and Development (OECD) on the topic of e-government. What are their major concerns?*

Reports on electronic government are found under public governance. A wide variety of reports are published about the potential uses of e-government. Specific student answers will vary based on the time of the search. Many of these reports deal with the potential of this application, but are concerned with the public's ability to access the application in addition to its best possible uses.

3. *Enter **fcw.com** and read the latest news on e-government. Identify initiatives not covered in this chapter. Check the B2G corner. Then enter **gcn.com**. Finally, enter **ec.fed.gov**. Compare the information in the three Web sites.*

This site provides information for government IT officials. There are a wide variety of technologies and issues identified in the site, student responses and examples will vary greatly.

4. *Enter **procurement.com** and **govexec.com**. Identify recent e-procurement initiatives and summarize their unique aspects.*

These are online magazines for government executives and cover a wide variety of topics in government including e-commerce initiatives. Student reports and examples will vary widely.

5. *Enter **govhost.com/conyersga** and find the specific G2C citizen's information provided.*

This site is not available at this time.

6. *Enter **pcmag.com, fortune.com** or other e-zines. How would you compare reading the electronic magazine against the print version?*

These sites are the electronic versions of the print magazines. Student opinions on benefits, disadvantages, as well as comparisons will vary.

7. *Enter **webct.com** and **blackboard.com**. Compare the capabilities of the two products.*

Both products provide Web-based access to a variety of different learning objectives. Both products support open standards and are very similar. Student reports will vary.

8. *Enter **e-learningcentre.co.uk** and evaluate its resources and activities.*

This site provides a variety of electronic courses and resources. Most courses appear to be in the information technology area, related to specific skill sets and industry certifications. Additionally, the firm provides information about electronic learning and discussion group for learners.

9. *Enter **iguide.com, elearningmag.com**, and **onlinelearningmag.com**. Identify current issues and find articles related to the effectiveness of e-training. Write a report.*

Sites provide a variety of information about initiatives. Student reports will vary.

10. *Identify a difficult business problem. Post the problem on **elance.com**. Summarize the offers to solve the problem.*

Student reports will vary.

11. *Enter **knowledgeleader.com**. This knowledge base resides on Andersen's intranet. Sign up for the service for sample material. Why is such a system better when used on an intranet? Why not use a CD-ROM-based technology?*

   This is a knowledge management system that provides information on several different topics mostly related to accounting. This service is better run on an intranet because of

the wide variety of information available and the necessity of constantly updating that information.

12. Enter **xdegrees.com, centrata.com**, and **badblue.com** and evaluate some of the solutions offered. Also, enter **aberdeen.com** to learn more about P2P operations. How can a search for a song be expedited at **gnutella.co.uk**?

Xdegrees.com - is a secure business-to-business file transfer system.
Centrata.com - provides services that help companies track the utilization of their IT resources.
Badblue.com- offers a peer-to-peer file-sharing solution that could be used by individuals or businesses.
Aberdeen.com - provides a variety of business research in various areas and information technology. Several reports are available on the use of peer-to-peer systems or businesses.
Gnutella.co.uk - is a protocol that allows peer-to-peer file sharing. This protocol is utilized by several different applications. Users would search using one of these applications and would not be using the protocol directly.

13. Enter **groove.com, netrana.com, opencola.com** and explore the latest developments in P2P.

Student reports will vary.

Team Assignments and Role Playing

1. Assign each team to a different country. Each team will then explore the e-government offerings of that country. Have each team make a presentation to convince the class that its country's offerings are the most comprehensive. (Exclude Hong Kong and Singapore.)

Student reports will vary.

2. Create four teams, each representing one of the following: G2C, G2B, G2E, and G2G. Each team will prepare a plan of its major activities in a small country such as Denmark, Finland, or Singapore. A fifth team will deal with the coordination and collaboration of all e-government activities in each country. Prepare a report based on the activity.

Student reports will vary.

3. Have teams search for virtual universities (e.g., the University of Phoenix,uophx.edu). Write a summary of the schools' e-learning offerings.

Student reports will vary.

4. *Have each team represent one of the following sites: **netlibrary.com, ebooks.bn.com, ebooks.com**, and **zanderebooks.com**. Each team will examine the technology, legal issues, prices, and business alliances associated with its site. Each team will then prepare a report answering the question, "Will e-books succeed?"*

Student reports will vary.

End-of-Chapter Real-World Case Questions: E-Government Initiatives in Hong Kong

1. *Identify each of the five initiatives as G2C, G2B, C2G, or G2E.*

ESD – G2C
IGSD – G2C
ETS – G2B
HKSAR – G2C
HK Post E-Cert – G2B/G2C

2. *Visit **info.gov.hk/digital21** and identify the goals of the five e-government initiatives.*

ESD – This is a very broad service that aims to provide citizens with access to a large variety of public services, in addition to creating several online communities for citizens of different ages and interests.
IGSD – This service augments ESD by providing other services related to directory services, local investing, employment and traffic information.
ETS – This is a reverse auction system for government supplies.
HKSAR – This is a general information science site that provides citizens with a wide array of government and civic information.
HK Post E-Cert - This is a certificate system, it validates server certificates for local Internet providers.

3. *How will the role of the HK government change when the initiatives mature and are fully utilized?*

Student responses will vary. It is possible that this service will fold the other services into it.

4. *Compare the services offered by Hong Kong with those offered in Singapore (**ecitizen.gov.sg**). What are the major differences between the two?*

This site also provides a wide range of services to citizens. A detailed list of the services offered will vary based on the time the survey is conducted. It appears that this site offers a number of the same features offered in the example. It does not appear that this site offers access to many of the public utilities and departments.

5. *What applications could the HK government add in the future?*

Student responses will vary. The exhibit in the text indicates that this example is currently in the third stage of development. Future stages will allow for greater personalization, clustering of common services, and eventually the transformation of the way citizens interact with government.