Chapter 8

Innovative EC Systems:

From E-Government and E-Learning to Consumer-to-Consumer Commerce

Learning Objectives

1. Describe various e-government initiatives.
2. Describe e-learning, virtual universities, and e-training.
3. Describe online publishing and e-books.
4. Discuss wikis and blogging.
5. Describe knowledge management and dissemination as an e-business.
6. Describe C2C activities.
7. Describe peer-to-peer networks and applications.

E-Government: An Overview

- **e-government**

  E-commerce model in which a government entity buys or provides goods, services, or information to businesses or individual citizens

E-Government: An Overview

- Several major categories fit within this broad definition of e-government:
    - **government-to-citizens (G2C)**

        E-government category that includes all the interactions between a government and its citizens
    - Government-to-business (G2B)
    - Government-to-government (G2G)
    - Internal Efficiency and Effectiveness (IEE)
    - Government-to-employees (G2E)

E-Government: An Overview

- **government-to-citizens (G2C)**

  E-government category that includes all the interactions between a government and its citizens

- **electronic voting**

  Voting process that involves many steps ranging from registering, preparing, voting, and counting (voting and counting are all done electronically)

- **Netizen**

  A citizen surfing the Internet

- Electronic benefits transfer

E-Government: An Overview

- **government-to-business (G2B)**
  E-government category that includes interactions between governments and businesses (government selling to businesses and providing them with services and businesses selling products and services to government)

E-Government: An Overview

- **Government-to-Business (G2B)**
  - Government e-procurement
  - Group purchasing
  - Forward e-auctions
  - Tax collection and management

E-Government: An Overview

- **government-to-government (G2G)**

  E-government category that includes activities within government units and those between governments

- **government-to-employees (G2E)**

  E-government category that includes activities and services between government units and their employees

E-Government: An Overview

- **Government-to-Employees (G2E)**
  - Internal efficiency and effectiveness
    - E-payroll
    - E-records management
    - E-training
    - Enterprise case management
    - Integrated acquisition
    - Integrated human resources
    - One-stop recruitment
- **Facilitating Homeland Security**

Implementing E-Government

- Six stages in the transformation to e-government:
  1. Information publishing/dissemination
  2. "Official" two-way transactions with one department at a time
  3. Multipurpose portals
  4. Portal personalization
  5. Clustering of common services
  6. Full integration and enterprise transformation

Implementing E-Government

EXHIBIT 8.4 The Stages of E-Government

Eminence of Web-based Applications

High

Low

STAGE 1:
Information Publishing

STAGE 2:
"Official" Two-Way Transactions

STAGE 3:
Multipurpose Portals

STAGE 4:
Portal Personali-zation

STAGE 5:
Clustering of Common Services

STAGE 6:
Full Enterprise Transformation and Collaboration

Low — Degree of Enterprise Transformation — High
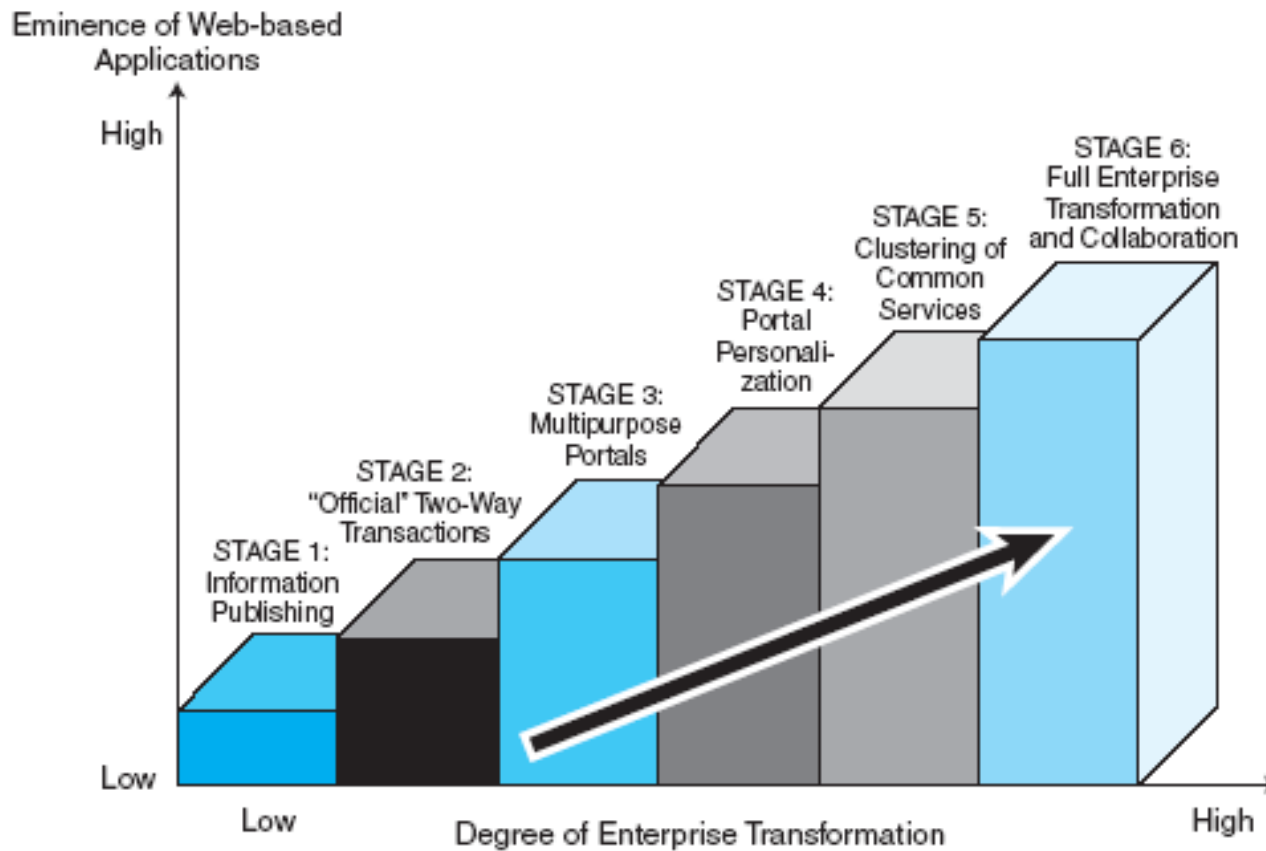
Implementing E-Government

- **Implementation Issues of E-Government**
  - Transformation speed
  - G2B implementation
  - Security and privacy issues
  - Wireless applications
  - Business aspects
- **Citizen Adoption of E-Government**
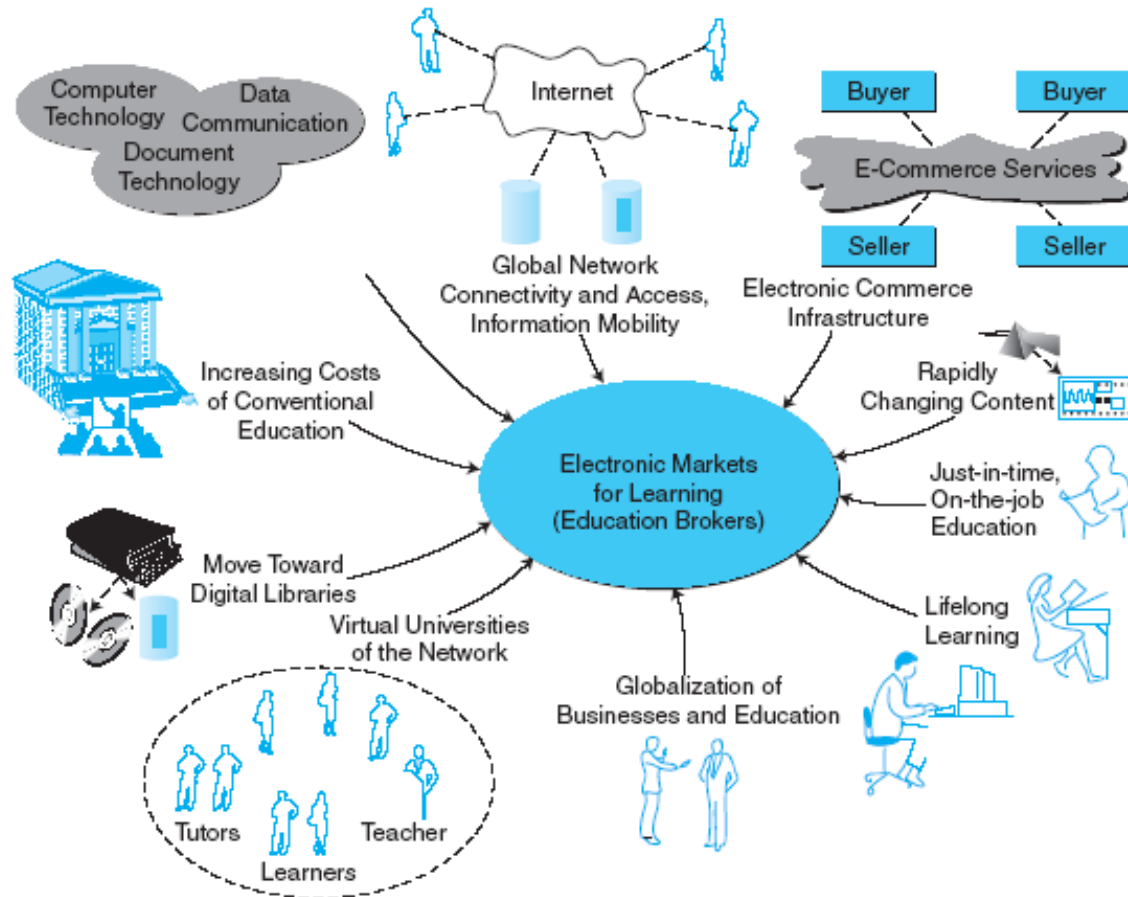- **Non–Internet E-Government**

E-Learning

- **e-learning**

  The online delivery of information for purposes of education, training, or knowledge management

E-Learning

EXHIBIT 8.5   The Effects of E-Commerce Forces in Education

E-Learning

- **Benefits of E-Learning**
  - Time reduction
  - Large volume and diversity
  - Cost reduction
  - Higher content retention
  - Flexibility
  - Updated and consistent material
  - Fear-free environment

E-Learning

- **Drawbacks and Challenges of E-Learning**
  - Need for instructor retraining
  - Equipment needs and support services
  - Lack of face-to-face interaction and campus life
  - Assessment
  - Maintenance and updating
  - Protection of intellectual property
  - Computer literacy
  - Student retention

E-Learning

- **Why E-Learning Fails**
  - Believing that e-learning is always a cheaper learning or training alternative
  - Overestimating what e-learning can accomplish
  - Overlooking the shortcomings of self-study
  - Failing to look beyond the course paradigms
  - Viewing content as a commodity
  - Ignoring technology tools for e-learning or fixating too much on technology as a solution
  - Assuming that learned knowledge will be applied

E-Learning

- **distance learning**

  Formal education that takes place off campus, usually, but not always, through online resources

- **virtual university**

  An online university from which students take classes from home or other off-site locations, usually via the Internet

E-Learning

- **Online Corporate Training**
  - The drivers of e-training
    - Technological change
    - Competition and cost pressures
    - Globalization
    - Continual learning
    - Network connectivity

E-Learning

- **edutainment**

  The combination of education and entertainment, often through games

- **E-Learning Tools**
  - IBM Workplace Collaborative Learning 2.6
  - ComputerPREP
  - Macromedia
  - eCollege
  - Artificial Life

Online Publishing and E-Books

- **online publishing**

  The electronic delivery of newspapers, magazines, books, news, music, videos, and other digitizable information over the Internet

- **e-zines**

  Electronic magazine or newsletter delivered over the Internet via e-mail

Online Publishing and E-Books

- **Approaches and Methods to Online Publishing**
  - Online-archive approach
  - New-medium approach
  - Publishing-intermediation approach
  - Dynamic approach

Online Publishing and E-Books

- Content providers and distributors
- Publishing of music, videos, games, and entertainment
- **Webcasting**

  A free Internet news service that broadcasts personalized news and information, including seminars, in categories selected by the user

- **Webinars**

  Seminars on the Web (Web-based seminars)

Online Publishing and E-Books

- **podcast**

  A media file that is distributed over the Internet using syndication feeds for playback on mobile devices and personal computers. As with the term *radio*, it can mean both the content and the method of syndication

- **podcaster**

  The host or author of a podcast

Online Publishing and E-Books

- **e-book**

  A book in digital form that can be read on a computer screen or on a special device

- E-books can be delivered and read via:
  - Web download
  - A dedicated reader
  - A general-purpose reader
  - A Web server

Online Publishing and E-Books

- **Types of E-Books**
  - Traditional book format
  - Online bookshelf
  - The download
  - The Rubics-cube hyperlink book
  - The interactive, build-your-own (BYO) decision book
  - The online reference book model

Online Publishing and E-Books

- **Advantages and Limitations of E-Books**
- **E-Book Issues**
- **Digital Libraries**

Online Publishing and E-Books

- **Print-on-Demand**

  1. A publisher creates a digital master, typically in Adobe Systems' Acrobat format, and sends it to a specialized print-on-demand company. The files are stored on the printing company's network

  2. When an order is placed, a print-on-demand machine prints out the text of the document or book and then covers, binds, and trims it. The entire process can take about a minute for a 300-page book

  3. The book is packaged and shipped to the publisher or the consumer

Blogs and Wikis

- **Weblogging (blogging)**
  Technology for personal publishing on the Internet

- **blog**
  A personal Web site that is open to the public to read and to interact with; dedicated to specific topics or issues

Blogs and Wikis

- Seven principles for building effective blogs:
  1. Focus intently on a narrow niche, ideally one whose audience has a predilection for high-margin products
  2. Set up blogs so that each post gets its own permanent URL
  3. Think of a blog as a database, not a newspaper-like collection of dispatches
  4. Blog frequently and regularly, at least half a dozen posts every weekday
  5. Use striking images that liven up the pages and attract readers
  6. Enable comments and interact with readers
  7. Make friends with other bloggers, online and off

Blogs and Wikis

- **wikilog (wikiblog or wiki)**
  A blog that allows everyone to participate as a peer; anyone may add, delete, or change content.
- Commercial uses of blogs
- Potential risks of blogs
  1. Establish comprehensive, written rules and policies
  2. Educate employees about blog-related risks, rules, and regulations
  3. Enforce blog policy with disciplinary action and technology
- Bloggers and politics

Knowledge Management and E-Commerce

- **knowledge management (KM)**

  The process of capturing or creating knowledge, storing it, updating it constantly, interpreting it, and using it whenever necessary

- **Organizational knowledge base**

  The repository for an enterprise's accumulated knowledge

Knowledge Management and E-Commerce

- KM has four tasks:

  1. Creating knowledge repositories where knowledge can be stored and retrieved easily

  2. Enhancing a knowledge environment in order to conduct more effective knowledge creation, transfer, and use

  3. Managing knowledge as an asset so as to increase the effective use of knowledge assets over time

  4. Improving knowledge access to facilitate its transfer between individuals

Knowledge Management and E-Commerce

- Core knowledge management activities for companies doing EC should include the following electronically supported activities:
  - Knowledge creation
  - Knowledge capture and codification
  - Knowledge classification
  - Knowledge distribution
  - Knowledge utilization
  - Knowledge evolution

Knowledge Management and E-Commerce
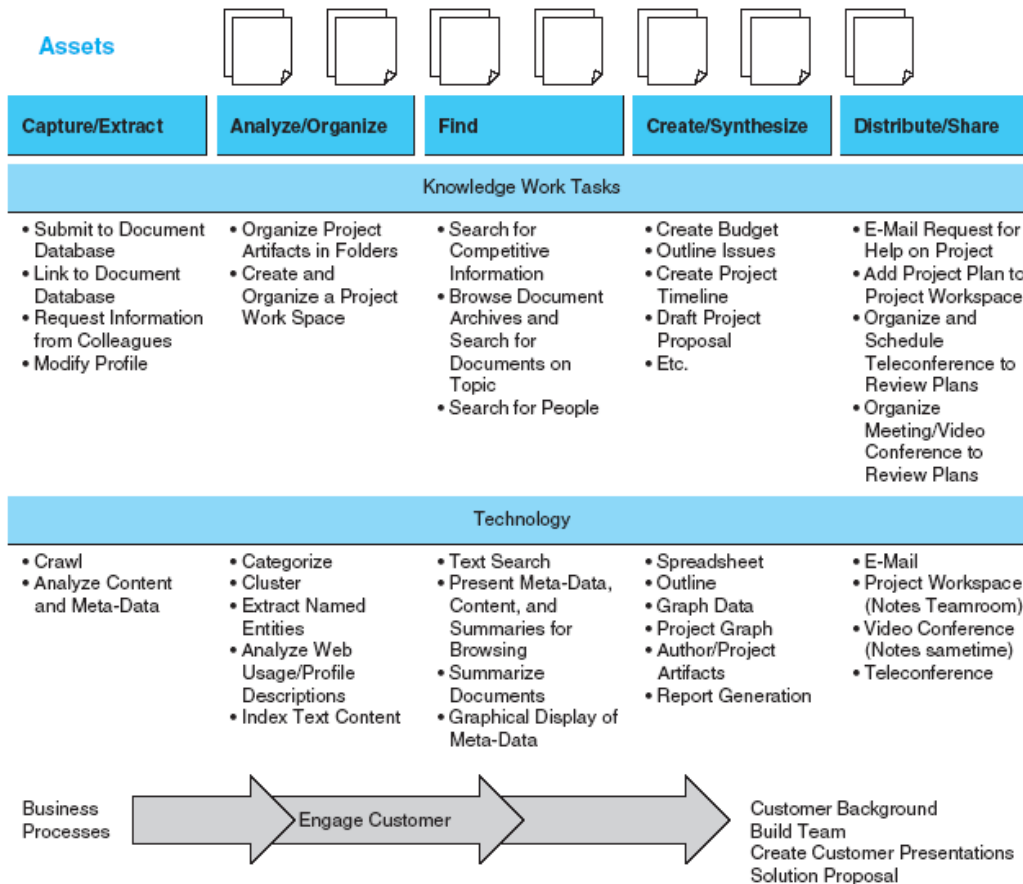
- **knowledge portal**

  A single-point-of-access software system intended to provide timely access to information and to support communities of knowledge workers

- **information intelligence**

  Information, data, knowledge, and semantic infrastructure that enable organizations to create more business applications

Knowledge Management and E-Commerce

EXHIBIT 8.6 Knowledge Work Tasks with Examples of Supporting Technology

Assets

Capture/Extract	Analyze/Organize	Find	Create/Synthesize	Distribute/Share

Knowledge Work Tasks

Capture/Extract	Analyze/Organize	Find	Create/Synthesize	Distribute/Share
• Submit to Document Database • Link to Document Database • Request Information from Colleagues • Modify Profile	• Organize Project Artifacts in Folders • Create and Organize a Project Work Space	• Search for Competitive Information • Browse Document Archives and Search for Documents on Topic • Search for People	• Create Budget • Outline Issues • Create Project Timeline • Draft Project Proposal • Etc.	• E-Mail Request for Help on Project • Add Project Plan to Project Workspace • Organize and Schedule Teleconference to Review Plans • Organize Meeting/Video Conference to Review Plans

Technology

Capture/Extract	Analyze/Organize	Find	Create/Synthesize	Distribute/Share
• Crawl • Analyze Content and Meta-Data	• Categorize • Cluster • Extract Named Entities • Analyze Web Usage/Profile Descriptions • Index Text Content	• Text Search • Present Meta-Data, Content, and Summaries for Browsing • Summarize Documents • Graphical Display of Meta-Data	• Spreadsheet • Outline • Graph Data • Project Graph • Author/Project Artifacts • Report Generation	• E-Mail • Project Workspace (Notes Teamroom) • Video Conference (Notes sametime) • Teleconference

Business Processes → Engage Customer → Customer Background / Build Team / Create Customer Presentations / Solution Proposal

Knowledge Management and E-Commerce

- **Online Advice and Consulting**
  - Medical advice
  - Management consulting
  - Legal advice
  - Gurus and answers to queries
  - Financial advice
  - Other advisory services

Knowledge Management and E-Commerce

- **Employees' Knowledge Networks and Expert Advice within Organizations**
  - **expert location systems**

    Interactive computerized systems that help employees find and connect with colleagues who have expertise required for specific problems—whether they are across the country or across the room—in order to solve specific, critical business problems in seconds
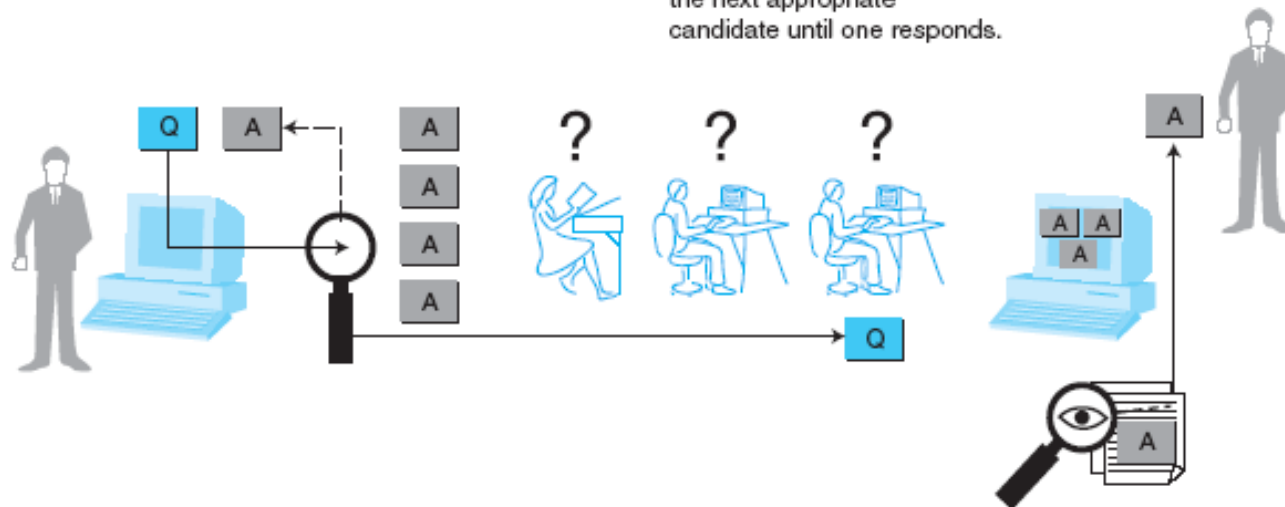
Knowledge Management and E-Commerce

EXHIBIT 8.7 How Expert Location Systems (Save) Work

Step 1:
An employee submits a question into the expertise location management system.

Step 2:
The software searches its database to see if an answer to the question already exists. If it does, the info (research reports, spreadsheets, etc.) is returned to the employee. If not, the software searches documents and archived communications for an "expert."

Step 3:
Once a qualified candidate is located, the system asks if he is able to answer a question from a colleague. If so, he submits a response. If the candidate is unable (perhaps he is in a meeting or otherwise indisposed), he can elect to pass on the question. The question is then routed to the next appropriate candidate until one responds.

Step 4:
After the response is sent, it is reviewed for accuracy and sent back to the querist. At the same time, it is added to the knowledge database. This way, if the question comes up again, it will not be necessary to seek real time assistance.

Knowledge Management and E-Commerce

- **desktop search**

  Search tools that search the contents of a user's or organization's computer files rather than searching the Internet. The emphasis is on finding all the information that is available on the user's PC, including Web browser histories, e-mail archives, and word-processor documents, as well as in all internal files and databases

Customer-to-Customer E-Commerce

- **customer-to-customer (C2C)**
  E-commerce model in which consumers sell directly to other consumers
- **C2C Auctions**
- **Classified Ads**
- **Personal Services**
- **C2C Exchanges**
- **Selling Virtual Properties**
- **Support Services for C2C**

Peer-to-Peer Networks and Applications

- **peer-to-peer (P2P)**

  A network architecture in which workstations (or PCs) share data and processing with each other directly rather than through a central server; can be used in C2C, B2B, and B2C e-commerce

Peer-to-Peer Networks and Applications

EXHIBIT 8.8   Peer-to-Peer Networks

Windows XP + Proxy Software

Windows 2000

Windows XP

Printer

Hub or Switch

Modem
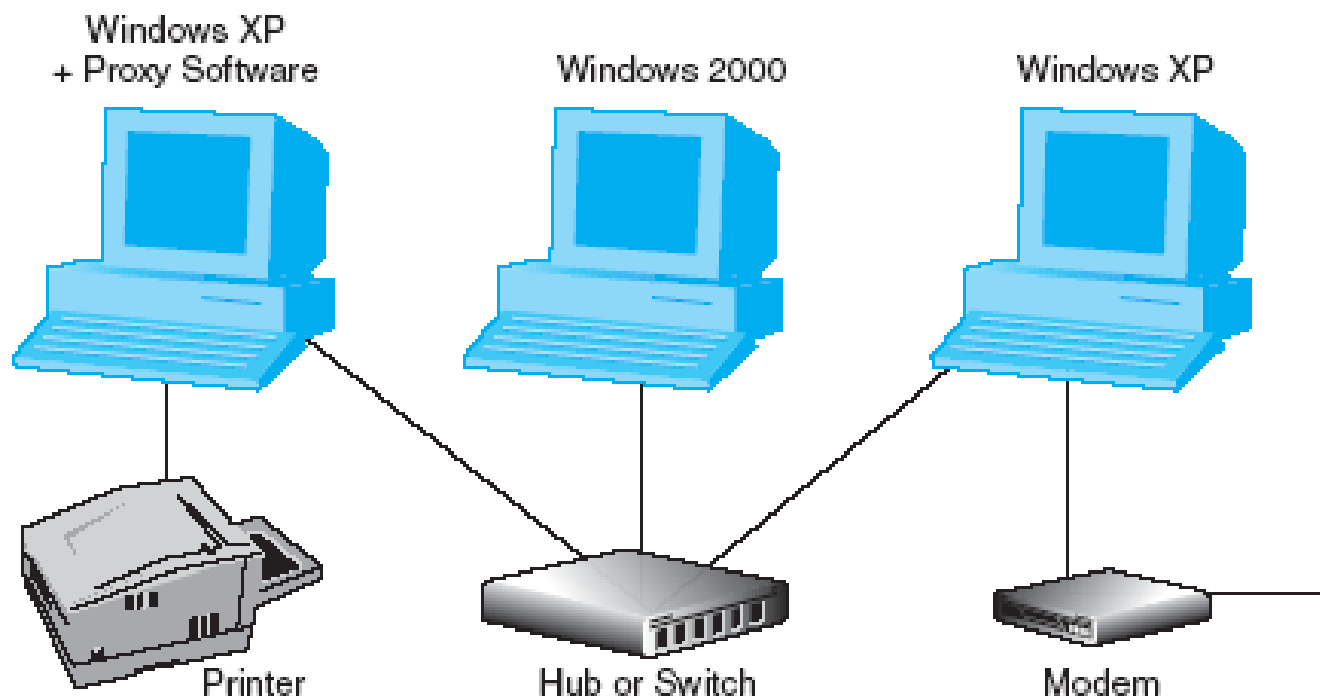
Peer-to-Peer Networks and Applications

- **Models of P2P Applications**
  - Collaboration
  - Content distribution
  - Business process automation
  - Distributed search

Peer-to-Peer Networks and Applications

- **C2C P2P Applications**
  - Napster—the file-sharing utility
  - Other file-sharing programs
  - Other commercial P2P applications in C2C
    - Lending
    - Bartering

Peer-to-Peer Networks and Applications

- **Intrabusiness P2P Applications**
- **B2B P2P Applications**
  - Groove Networks
  - Hilgraeve' ChopChute
  - Biz2Peer
  - Blue Tiger Networks
  - Consilient
- **B2C P2P Applications**

Managerial Issues

1. Can we blog for business?
2. Are there e-learning and e-training opportunities?
3. Can we capitalize on C2C?
4. How well are we managing our knowledge?
5. What are the e-government opportunities?