

ADM2372
Prof: JOHN PALMER

Week 3, Lecture 1

Agenda



□ 1) BUSINESS AND THE INTERNET

- Disruptive Technology
- Evolution of the Internet
- Web 2.0
- The Future – Web 3.0
- Accessing Internet Information
- Providing Internet Information

□ 2) E-BUSINESS

- E-Business Basics
- Advantages of E-Business
- E-Business Models
- Organizational Strategies for E-Business
- E-Business Benefits and Challenges
- New Trends in E-Business: E-Government and M-Commerce



Opening Case Review



BUSINESS AND THE INTERNET

Disruptive Technology

- How can a company like Polaroid go bankrupt?
- **Digital Darwinism** – implies that organizations which cannot adapt to the new demands placed on them for surviving in the information age are doomed to extinction.



Disruptive versus Sustaining Technology



- What do steamboats, transistor radios, and Intel's 8088 processor all have in common?
 - ▣ ***Disruptive technology*** – a new way of doing things that opens new markets and destroys old ones.
 - ▣ ***Sustaining technology*** – Produces improvements to products that customers are eager to buy.

Disruptive versus Sustaining Technology

Fortune 500 Rank	Company	Expected Returns on New Investment	Expected Returns on Existing Investments
53	Dell Computer	78%	22%
47	Johnson & Johnson	66	34
35	Procter & Gamble	62	38
6	General Electric	60	40
32	Sears Roebuck	8	92
37	AOL Time Warner	8	92
3	General Motors	5	95
81	Phillips Petroleum	3	97

Disruptive versus Sustaining Technology

Figure 3.2

Company	Disruptive Technology
Apple	iPod, iPhone, iPad
Charles Schwab	Online brokerage
Hewlett-Packard	Microprocessor-based computers, ink-jet printers
IBM	Minicomputers; personal computers
Intel	Low-end microprocessors
Intuit	QuickBooks software; TurboTax software; Quicken software
Microsoft	Internet-based computing; operating system software; SQL and Access database software
Oracle	Database software
Quantum	3.5-inch disks
Sony	Transistor-based consumer electronics

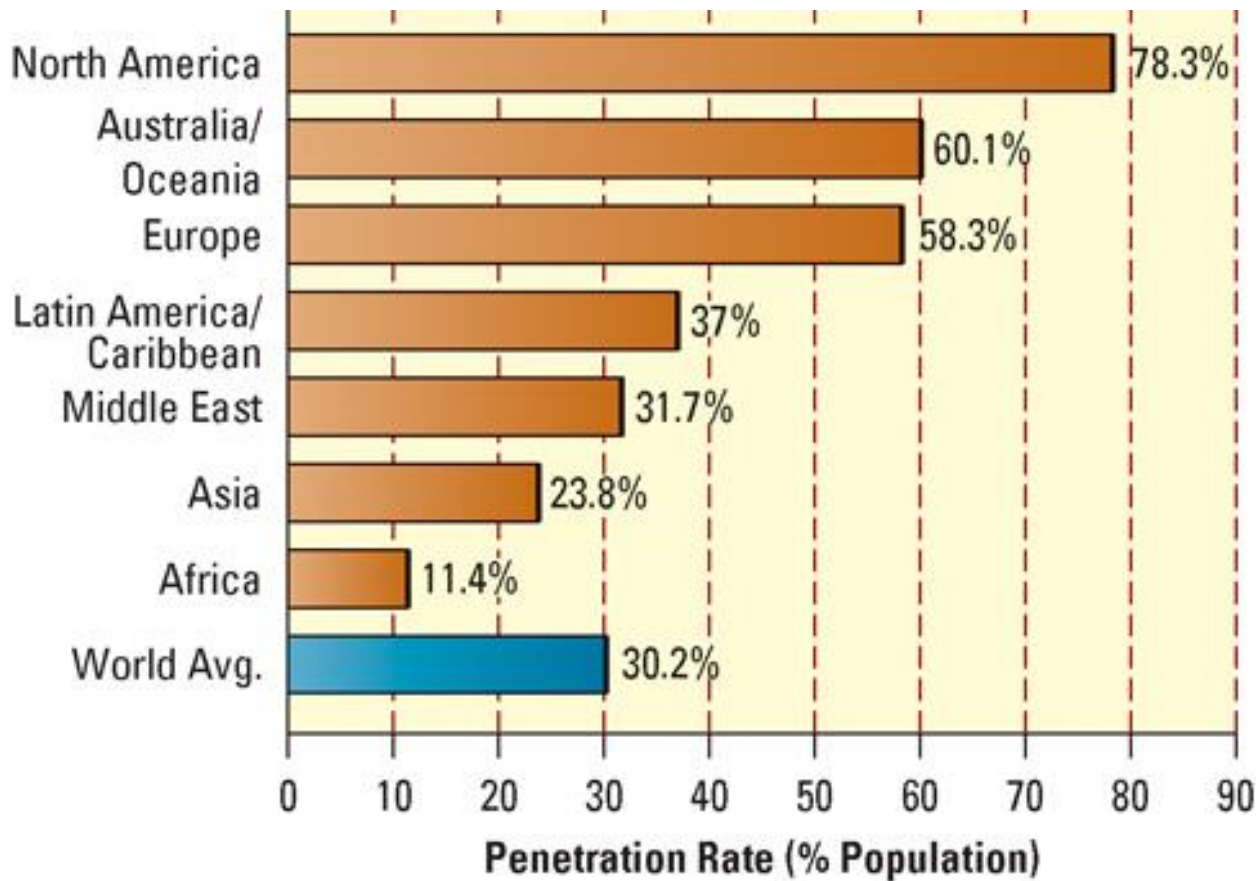
The Internet—Disruptive Business Technology



- One of the biggest forces changing business is the Internet.
- Organizations must be able to transform as markets, economic environments, and technologies change.
- Focusing on the unexpected allows an organization to capitalize on the opportunity for new business growth from a disruptive technology.

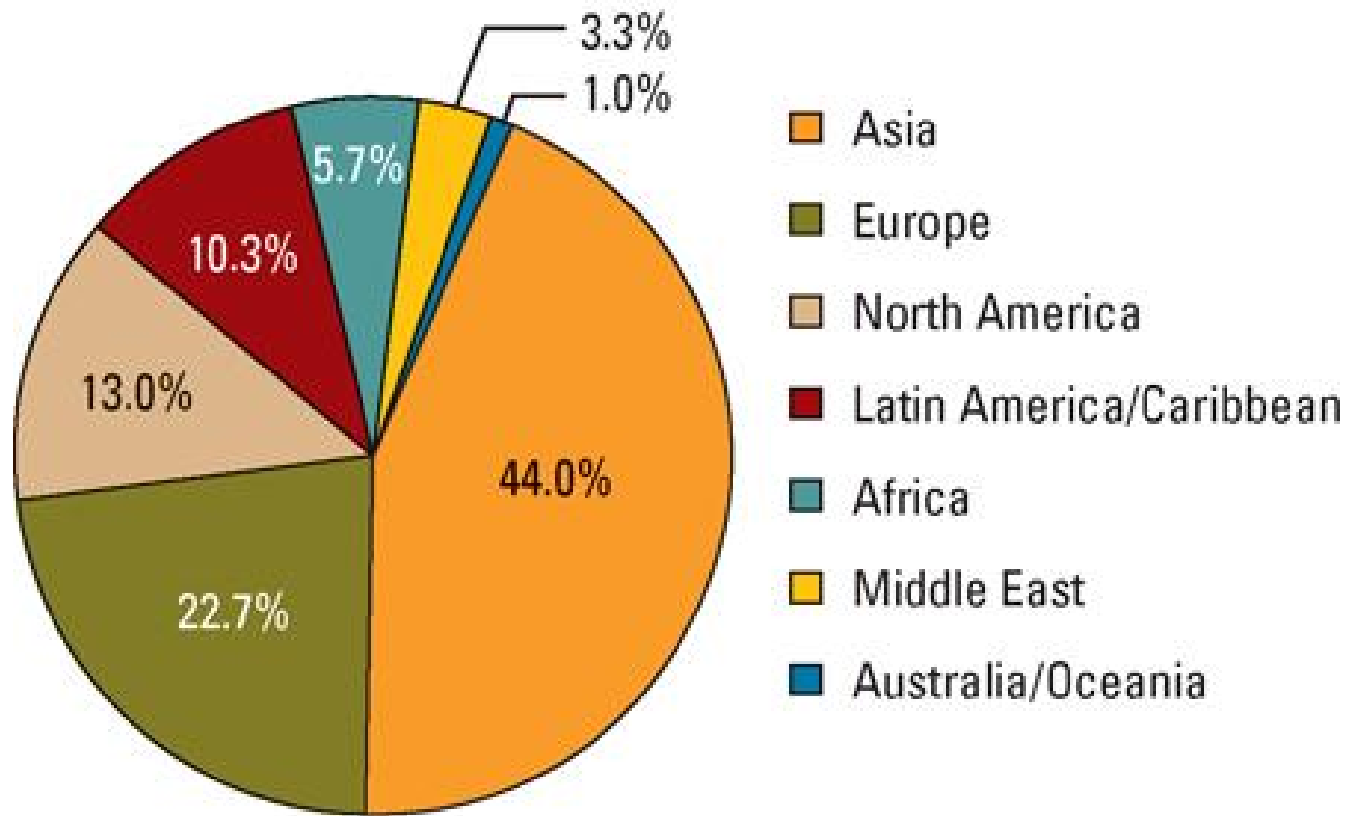
The Internet—Disruptive Business Technology

Figure 3.3 World Internet Penetration (March, 2011)



The Internet—Disruptive Business Technology

Figure 3.4 World Internet Users (March, 2011)



The Internet – Disruptive Business Technology

The Internet has impacted almost every industry:

Auto	AutoTrader.ca is Canada's used car marketplace listing millions of cars from private owners and dealers.
Publishing	Anyone can be a published author! Lulu.com offers self-publishing and print-on-demand services.
Financial Services	Nearly every public e-finance business makes money. Processing on-line mortgage applications is over 50% cheaper for customers.
Retail	On-line retail sales in Canada were \$15.1 billion in 2009.

Evolution of the Internet



- The Internet began as an emergency military communications system operated by the U.S. Department of Defense.

- Gradually the Internet moved from a military pipeline to a communication tool for scientists to businesses.
 - ▣ **Internet** – computer networks that pass information from one to another using common computer protocols.
 - ▣ **Protocol** – standards that specify the format of data as well as the rules to be followed during transmission.

Evolution of the Internet



- ***World Wide Web (WWW)*** – a global hypertext system that uses the Internet as its transport mechanism
- ***Hypertext transport protocol (HTTP)*** – the Internet standard that supports the exchange of information on the WWW

Evolution of the Internet

Figure 3.6 Reasons for World Wide Web Growth

- The microcomputer revolution made it possible for an average person to own a computer.
- Advances in networking hardware, software, and media made it possible for business PCs to be inexpensively connected to larger networks.
- Browser software such as Microsoft's Internet Explorer and Netscape Navigator gave computer users an easy-to-use graphical interface to find, download, and display Web pages.
- The speed, convenience, and low cost of email have made it an incredibly popular tool for business and personal communications.
- Basic Web pages are easy to create and are extremely flexible.
- Smart phones and other mobile devices that create easy, anywhere access.

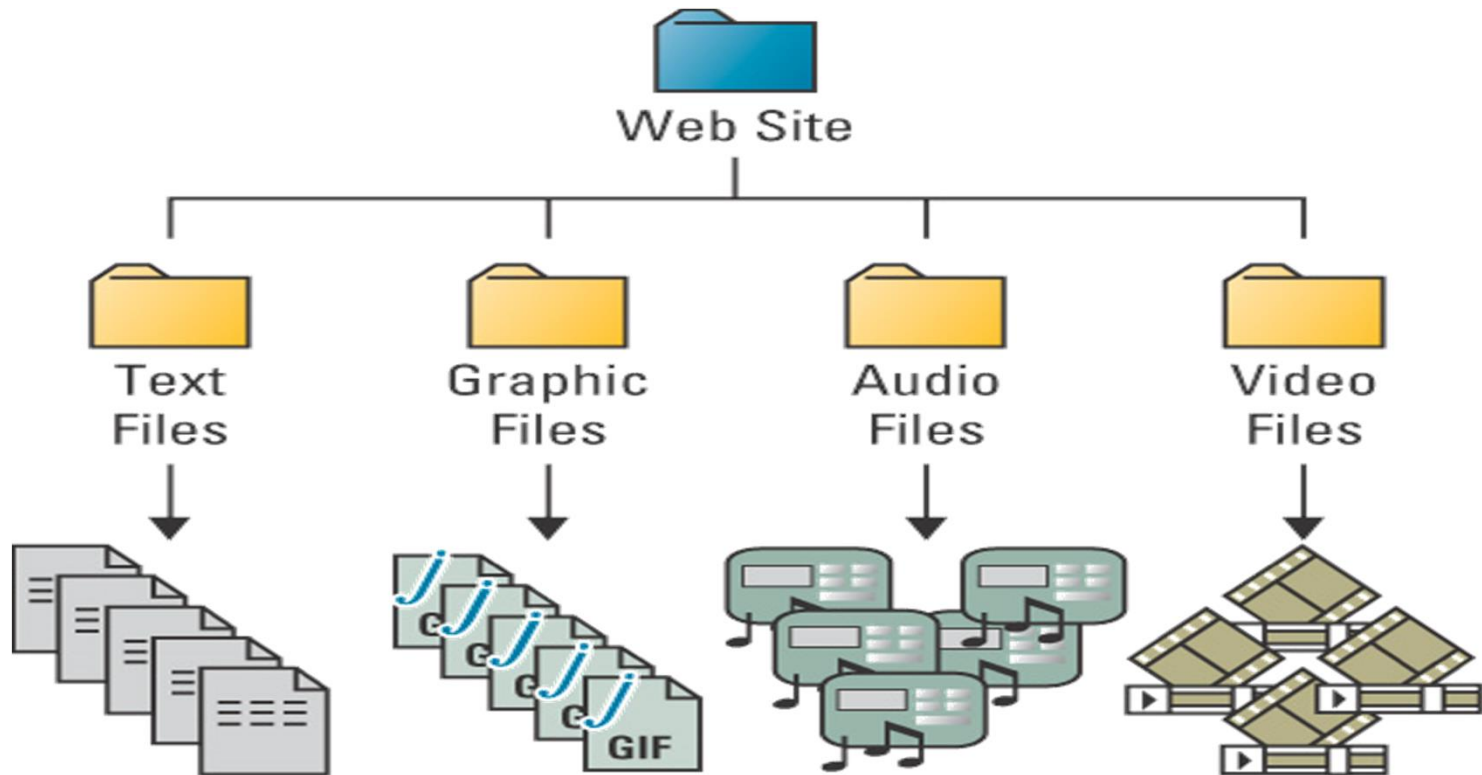
Evolution of the Internet



- The Internet's impact on information:
 - Easy to compile.
 - Increased richness.
 - Increased reach.
 - Improved content .

Evolution of the Internet

- File formats offered over the WWW



Evolution of the Internet



- The Internet makes it possible to perform business in ways not previously imaginable.
- It can also cause a gap between winners and losers in the game of business:
 - **Digital divide** – when those with access to technology have great advantages over those without access to technology.

Web 2.0



- **Web 2.0** is a set of economic, social, and technology trends that collectively form the basis for the next generation of the Internet.

Web 2.0

Web 1.0 to Web 2.0 was a change in the way users used the Internet:

Figure 3.8

	Web 1.0	Web 2.0
	DoubleClick	--> Google AdSense
	Ofoto	--> Flickr
	Akamai	--> Bittorrent
	Mp3.Com	--> Napster
	Britannica Online	--> Wikipedia
	Personal Websites	--> Blogging
	Evite	--> Upcoming.Org And EVDB
	Domain Name Speculation	--> Search Engine Optimization
	Page Views	--> Cost Per Click
	Screen Scraping	--> Web Services
	Publishing	--> Participation
	Content Management Systems	--> Wikis
	Directories (Taxonomy)	--> Tagging ("Folksonomy")
	Stickiness	--> Syndication

Mashups

- **Mashup** – Website or Web application that uses content from more than one source to create a completely new product or service
 - **Application programming interface**
 - **Mashup editor**



Web 3.0

- **Web 3.0** – Based on “intelligent” Web applications using natural language processing, machine-based learning and reasoning, and intelligence applications
- **Semantic Web** – Structuring data so web pages describe things in a way that computers can “understand” and, thus, find, share and integrate ideas more effectively for people.



Web 3.0



- The Semantic Web encompasses one or more of the following:
 - ▣ Transforming the web into a database.
 - ▣ An Evolutionary Path to artificial intelligence.
 - ▣ The realization of the semantic Web and SOA (service –oriented architecture)
 - ▣ Evolution toward 3D.

Accessing Internet Information



- Four tools for accessing Internet information
 1. **Intranet** – internalized portion of the Internet, protected from outside access, for employees
 2. **Extranet** – an intranet that is available to strategic allies
 3. **Portal** – Web site that offers a broad array of resources and services
 4. **Kiosk** – publicly accessible computer system that allows interactive information browsing

Providing Internet Information



- Three common forms of service providers
 1. **Internet service provider (ISP)** – provides individuals and other companies access to the Internet
 2. **Online service provider (OSP)** – offers an extensive array of unique Web services
 3. **Application service provider (ASP)** – offers access over the Internet to systems and related services that would otherwise have to be located in organizational computers

Providing Internet Information

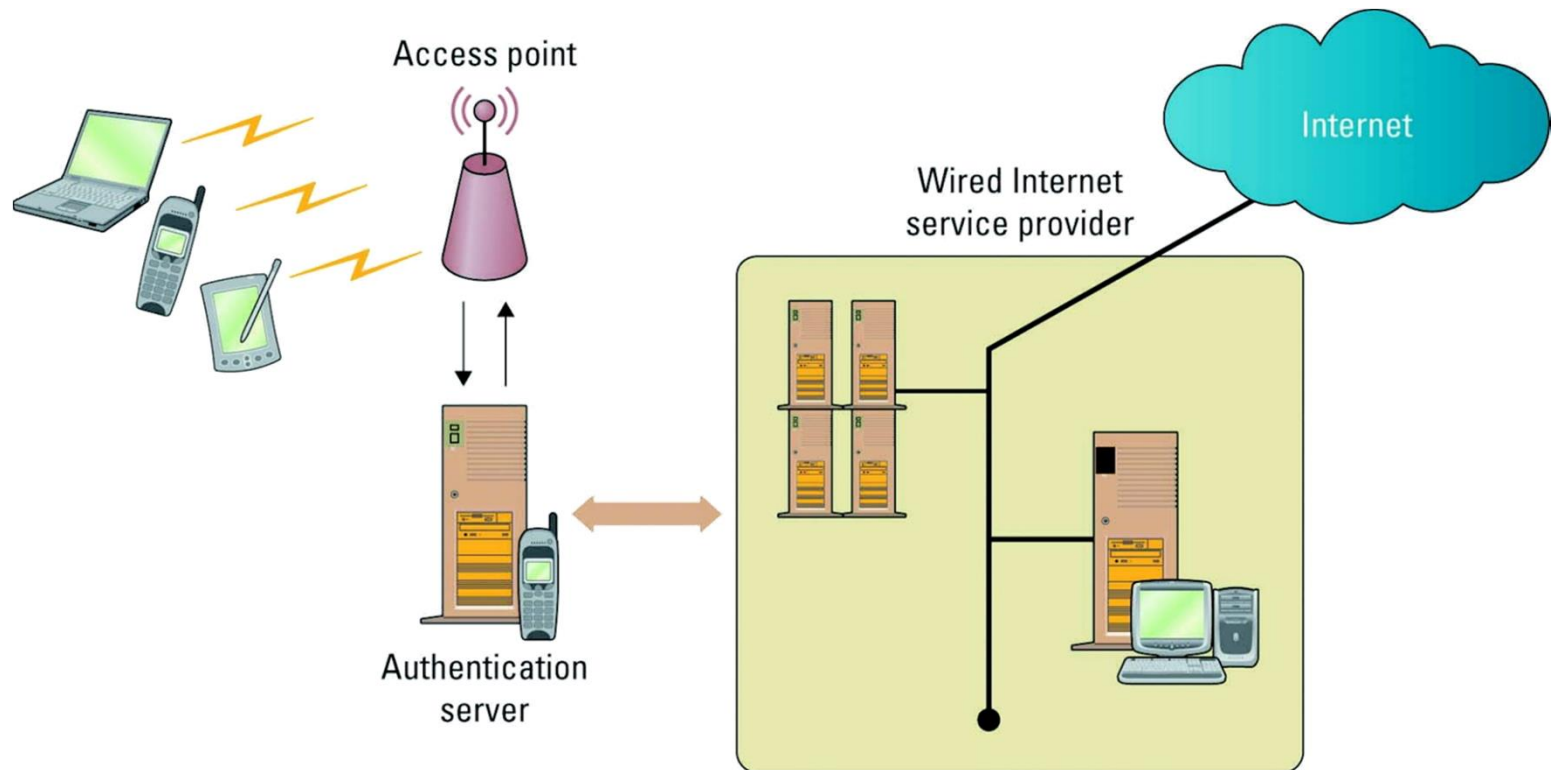


- Common ISP services include:
 - Web hosting
 - Hard-disk storage space
 - Availability
 - Support

Providing Internet Information

Wireless Internet service provider (WISP)

Figure 3.10



Providing Internet Information



- ISPs, OSPs, and ASPs use ***service level agreements (SLA)*** which define the specific responsibilities of the service provider and set the customer expectations

Top ISPs, OSPs, & ASPs

Figure 3.11

Company	Description	Specialty
ACS www.agilera.com	Application service provider	Managing ERP solutions with a focus on SAP
ADP Employease www.employease.com	Online service provider	Human resource applications services
Concur www.concur.com	Online service provider	Integrates B2B procurement of travel services and integrated travel expenses
Intacct http://us.intacct.com	Online service provider	Online general ledger service
LivePerson www.liveperson.com	Online service provider	Real-time chat provider
Navisite www.navisite.com	Application service provider	High-tech manufacturing, distribution, health care applications
NetLedger www.netsuite.com	Online service provider	Web-based accounting platform, ERP, and CRM
RightNow www.rightnow.com	Online service provider, Internet service provider	Suite of customer service applications
Salesforce.com www.salesforce.com	Online service provider	Suite of customer cloud applications
Salesnet www.salesnet.com	Online service provider	Suite of sales force automation products and services

Opening Case Questions



1. How have social networking sites used technology to change how people communicate with each other?
2. Do you consider Facebook, Twitter, and LinkedIn forms of disruptive or sustaining technology?



E-BUSINESS

E-business Basics

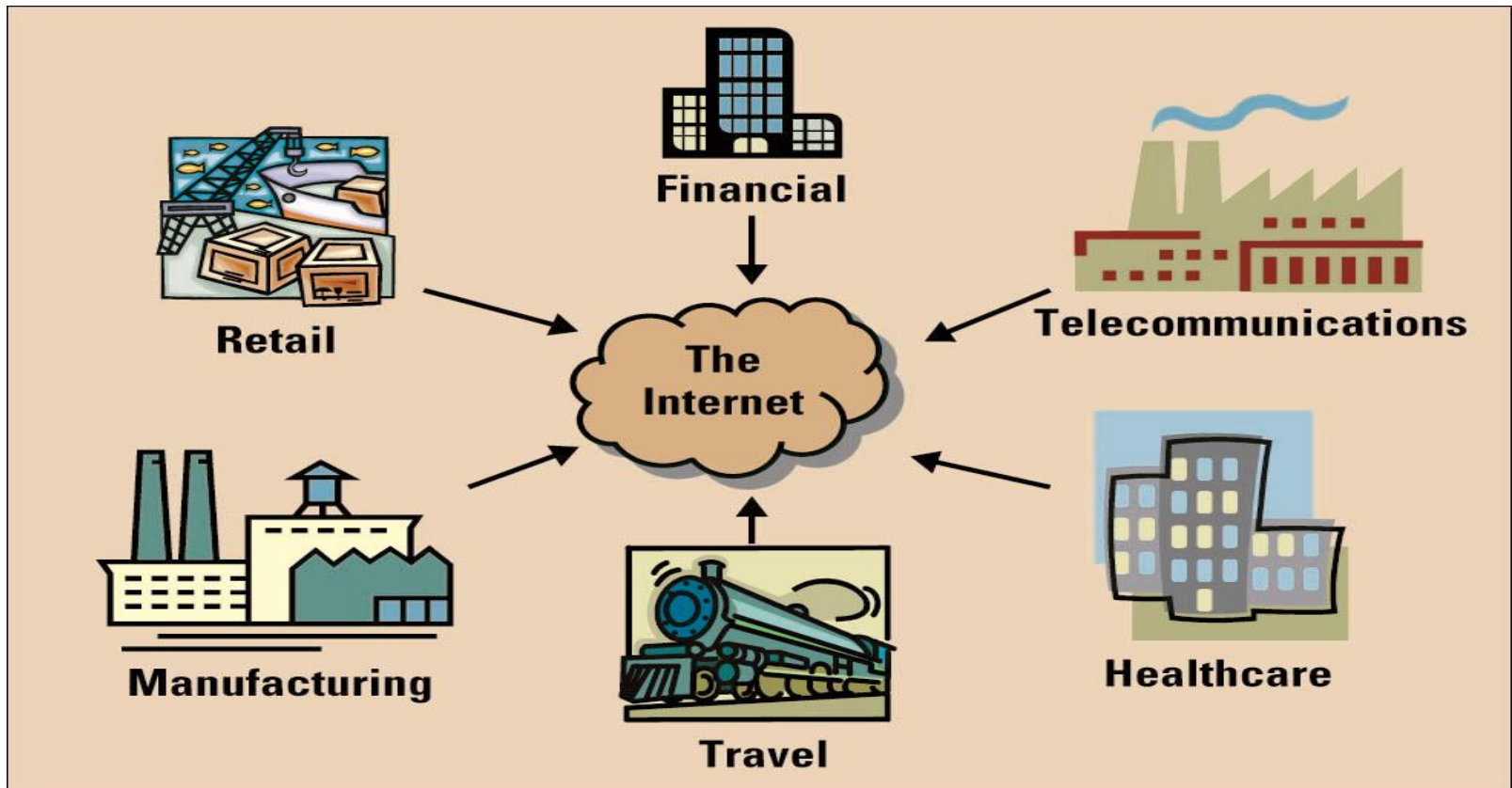


- How do e-commerce and e-business differ?
 - **E-commerce** – the buying and selling of goods and services over the Internet
 - **E-business** – the conducting of business on the Internet including not only buying and selling, but also serving customers and collaborating with business partners

E-business Basics

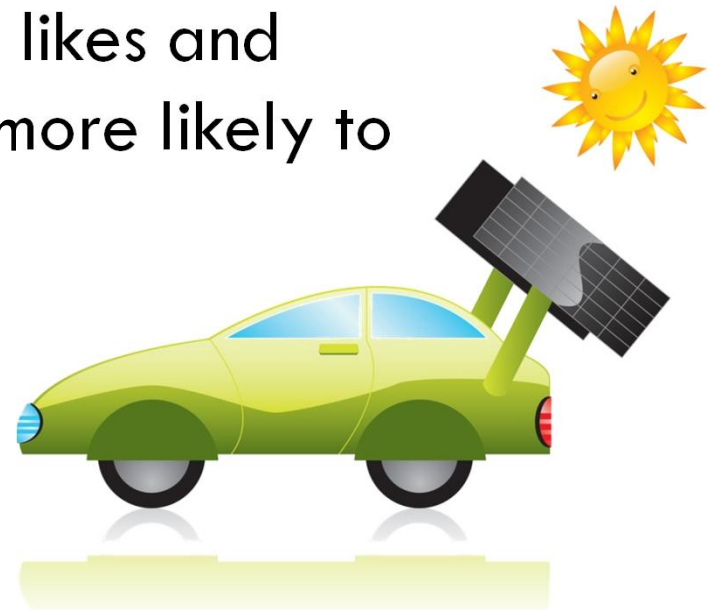
Industries Using E-Business

Figure 3.12



Opening New Markets

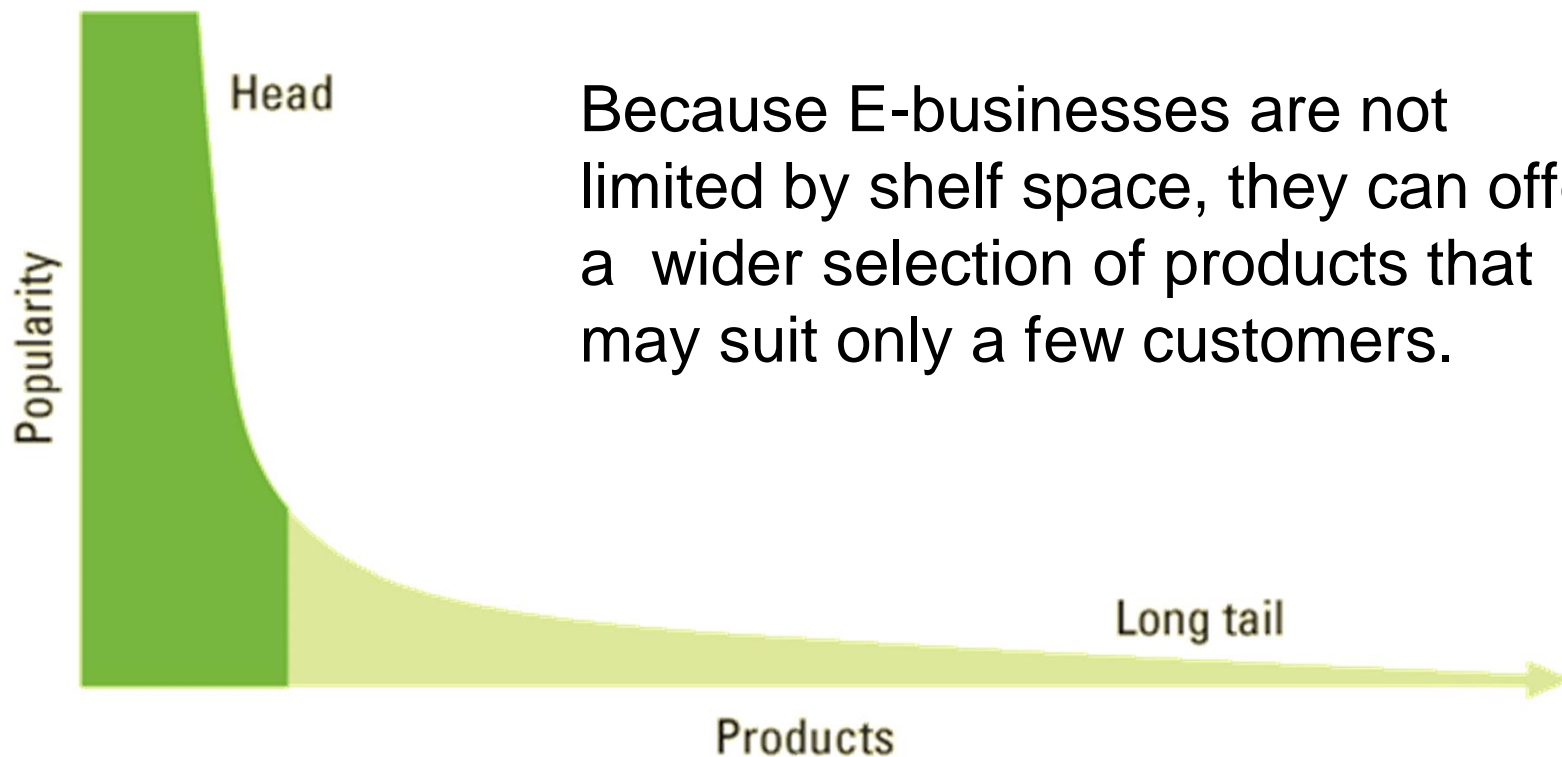
- **Mass customization** – The ability of an organization to tailor its products or services to the customers' specifications
- **Personalization** – Occurs when a company knows enough about a customer's likes and dislikes that it can fashion offers more likely to appeal to that person



Opening New Markets

- **The Long Tail** – Refers to the tail of a typically sales curve

Figure 3.13

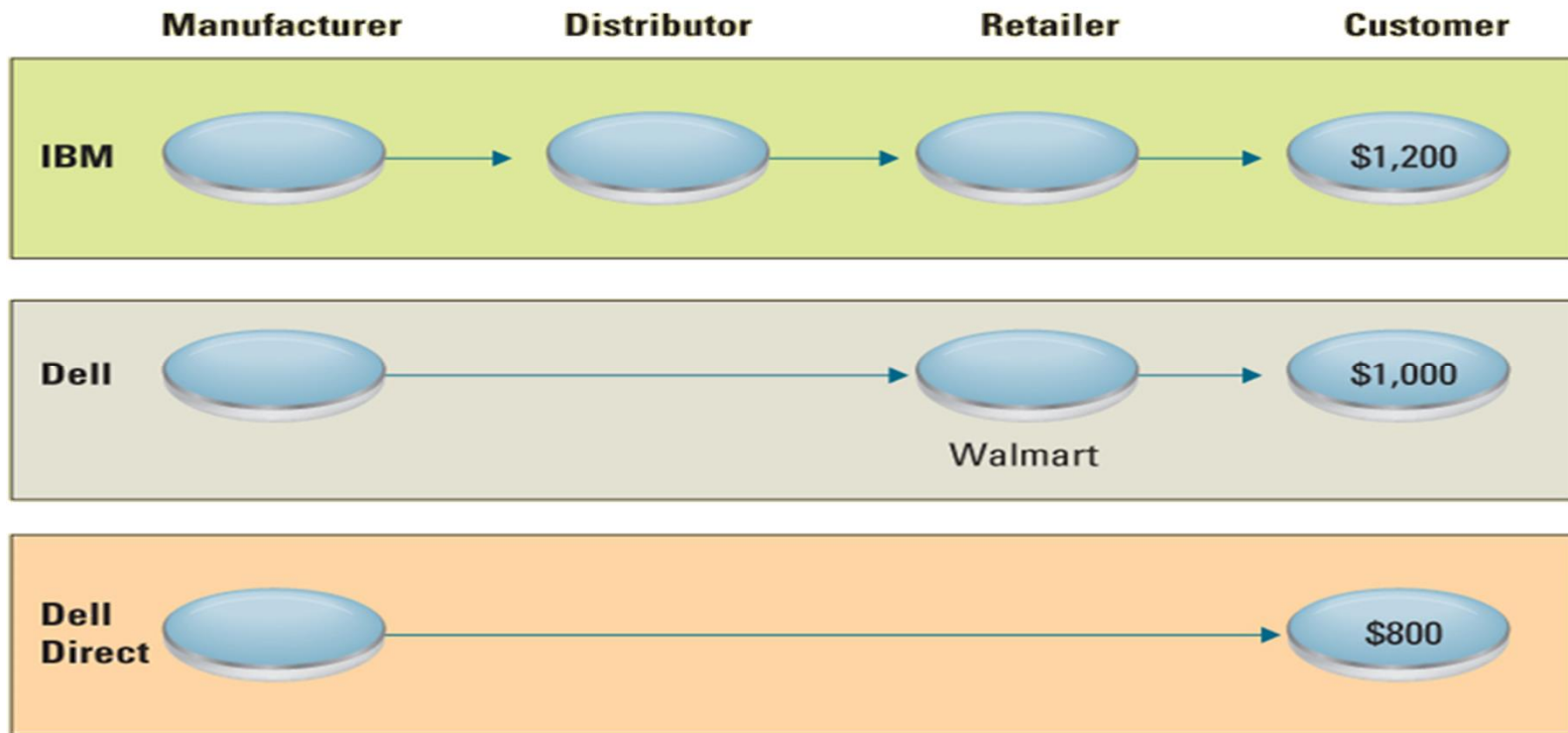


Because E-businesses are not limited by shelf space, they can offer a wider selection of products that may suit only a few customers.

Opening New Markets

Business Value of Disintermediation

Figure 3.14



Opening New Markets

- **Intermediary** – Agents, software, or businesses that provide a trading infrastructure to bring buyers and sellers together
 - **Disintermediation**
 - **Re-intermediation**
 - **Cybermediation**



Further Advantages of E-business



- **Reducing Costs**—Business processes that take less time and human effort.
- **Improving Operations**—Communications customized to meet consumer needs and available 24/7.
- **Improving Effectiveness**—Web sites must increase revenue and new customers and reduce service calls
- **Interactivity metrics** measure E-business success: number of repeat visits, times spent on site and number of pages viewed among other activities.

Further advantages of the Web

- Improving Effectiveness through E-business marketing
 - Associate (Affiliate) programs
 - Banner Ads
 - Tracking Click-throughs
 - Cookies
 - Pop-up ads
 - Viral marketing

<http://www.youtube.com/watch?v=MgxgYL5P4z4>

Measuring Website Success

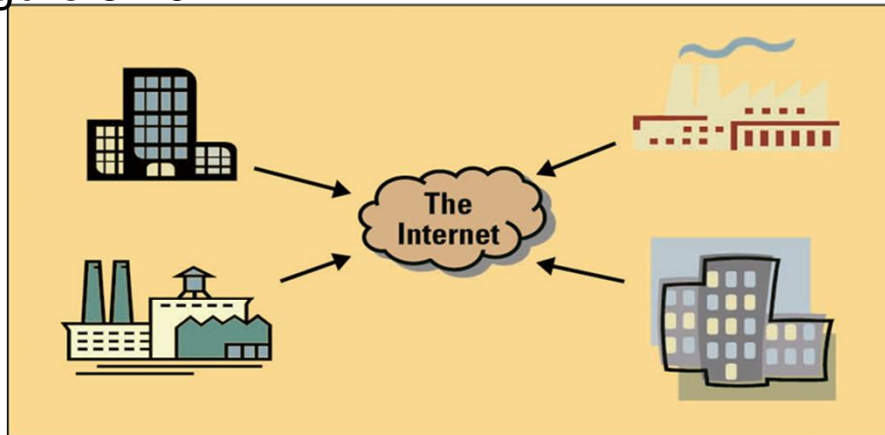


- **Stickiness**—visit duration time.
- **Raw Visit Depth**—total Web page exposures per session.
- **Unidentified visitor**—no information about visitor is available.
- **Unique visitor**—recognized and counted once in a period of time.
- **Identified visitor**—can be tracked across multiple web visits.
- **Hits**—A single request made by a visitor to view a web page.

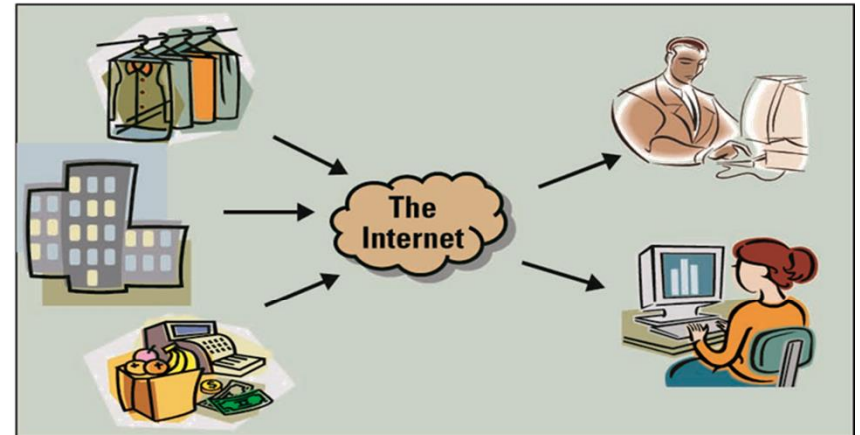
E-business Models

Figure 3.20

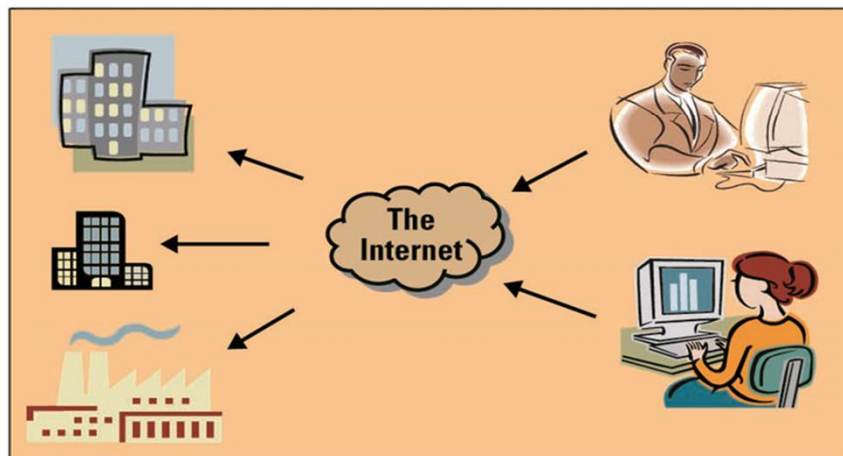
Business-to-Business (B2B)



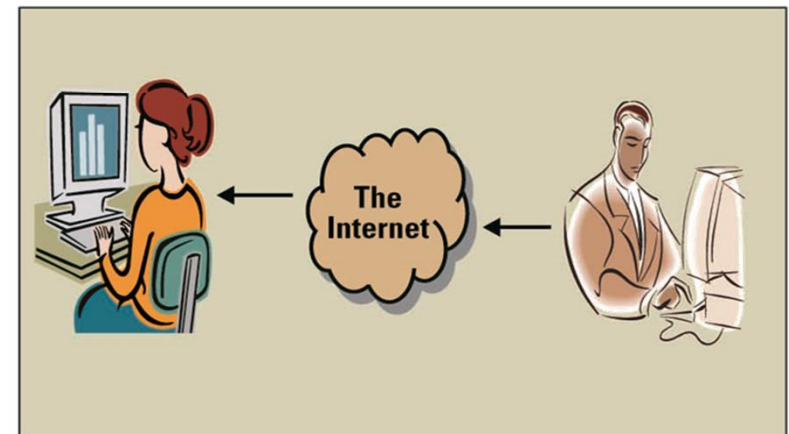
Business-to-Consumer (B2C)



Consumer-To-Business (C2B)



Consumer-To-Consumer (C2C)



Business Models

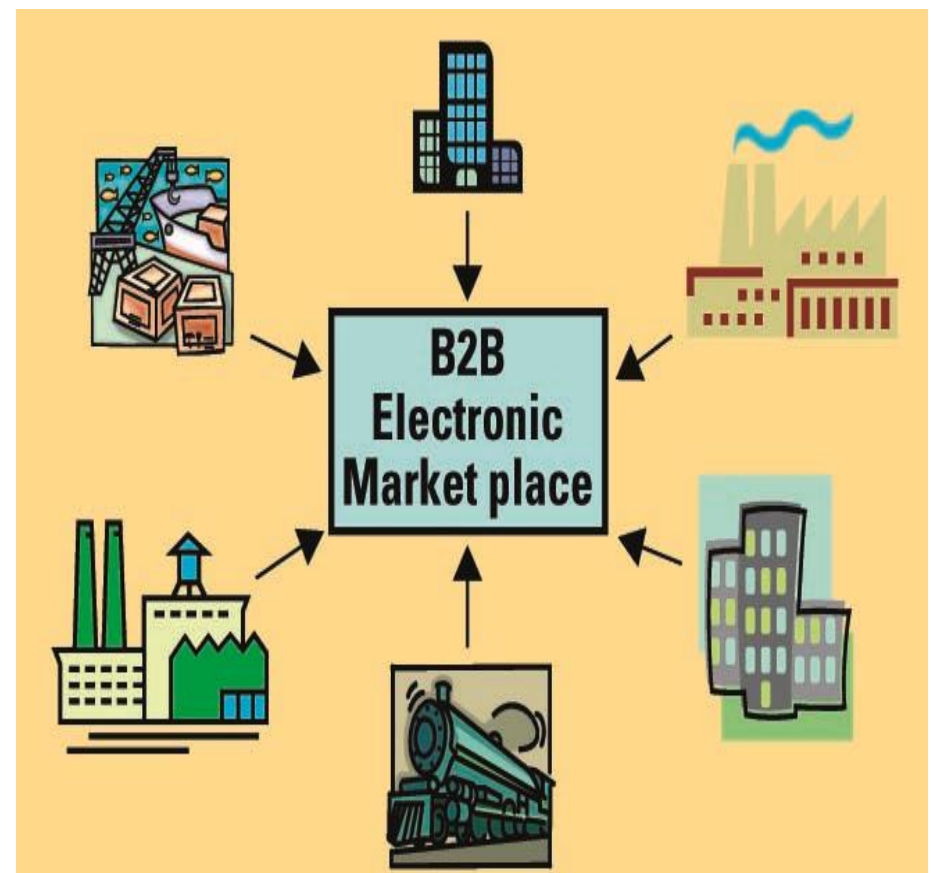
- **Types of Businesses:**
 - Brick and Mortar—Physical store, no Web site.
 - Pure-play (virtual) business—Web site only.
 - Click and Mortar—Physical store and Web site.

- **E-auctions** are a successful E-business model.
 - **Forward Auction**—Seller offers to many buyers who bid and the highest bid wins.
 - **Reverse Auction**—Buyer specifies product or service and lowest seller bid wins contract.

Business-to-Business (B2B)

- **Electronic marketplace (e-marketplace)** – interactive business communities providing a central market where multiple buyers and sellers can engage in e-business activities

Figure 3.21



Business-to-Consumer (B2C)



- **Common B2C e-business models include:**
 - **e-shop** – a version of a retail store where customers can shop any time without leaving their home
 - Also called **e-store** or **e-tailing**
 - **e-mall** – consists of a number of e-shops; it serves as a gateway through which a visitor can access other e-shops

Marketing



- E-business' success in direct selling is evidenced by growth of the Internet sales of Dell Inc., eBay, Indigo and Travelocity.
- Innovative approaches are changing the face of retailing:
 - ▣ For Example: Sears installed Skype-enabled screens into 10 of its fashion outlets so that buyers could remotely show their friends potential clothing choices.

Financial Services



- Online consumer payments include:
 - Financial cybermediary
 - Electronic cheque
 - Electronic bill presentment and payment (EBPP)
 - Digital wallet

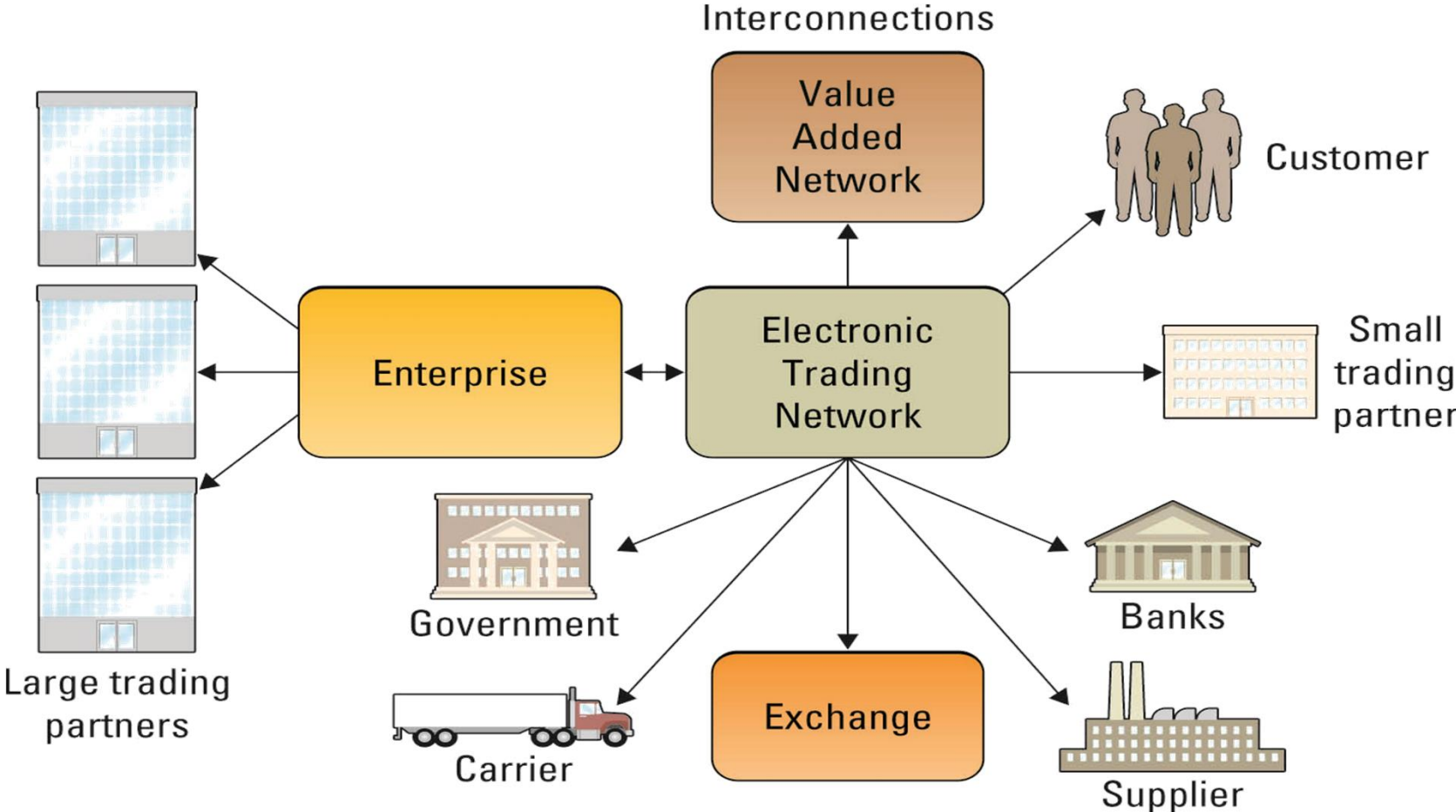
Financial Services



- Online business payments include:
 - Electronic data interchange (EDI)
 - Value-added network (VAN)
 - Financial EDI (financial electronic data interchange)

Financial Services

Figure 3.27



Procurement



- **Maintenance, repair, and operations (MRO) materials** (also called *indirect materials*) – materials necessary for running an organization but do not relate to the company's primary business activities
 - **E-procurement** - the B2B purchase and sale of supplies and services over the Internet
 - **Electronic catalogue** - presents customers with information about goods and services offered for sale, bid, or auction on the Internet

Customer Service



- Customer service is the business process where the most human contact occurs between a buyer and a seller
- E-business strategists are finding that customer service via the Web is one of the most challenging and potentially lucrative areas of e-business
- The primary issue facing customer service departments using e-business is consumer protection

E-business Challenge—Security



- E-business security
 - Encryption
 - Secure socket layer (SSL)
 - TLS (Transport Layer Security)
 - Secure electronic transaction (SET)

E-business Challenges



E-business challenges include among others:

- ❑ **Protecting consumers**—Against unsolicited, illegal or harmful goods, invasion of privacy, cyber fraud
- ❑ **Leveraging existing systems**—Effectively integrating innovative systems with existing systems.
- ❑ **Increasing liability**--Identity theft, privacy, and the Internet's global reach means dealing with laws of many countries.
- ❑ **Providing security**—Protection of consumer and business information and data assets.
- ❑ **Taxation Rules**—Adhering to often new rules

E-business Benefits



E-business benefits include:

- ▣ Highly accessible
- ▣ Increased customer loyalty
- ▣ Improved information content
- ▣ Increased convenience
- ▣ Increased global reach
- ▣ Decreased cost

E-marketplace Revenue Models

Figure 3.32

Revenue Models	Benefits	Challenges
Transaction fees	<ul style="list-style-type: none"> ■ Can be directly tied to savings (both process and price savings) ■ Important revenue source when high level of liquidity (transaction volume) is reached 	<ul style="list-style-type: none"> ■ If process savings are not completely visible, use of the system is discouraged (incentive to move transactions offline) ■ Transaction fees likely to decrease with time
Licence fees	<ul style="list-style-type: none"> ■ Creates incentives to do many transactions ■ Customization and back-end integration leads to lock-in of participants 	<ul style="list-style-type: none"> ■ Upfront fee is a barrier to entry for participants ■ Price differentiation is complicated
Subscription fees	<ul style="list-style-type: none"> ■ Creates incentives to do transactions ■ Price can be differentiated ■ Possibility to build additional revenue from new user groups 	<ul style="list-style-type: none"> ■ Fixed fee is a barrier to entry for participants
Fees for value-added services	<ul style="list-style-type: none"> ■ Service offering can be differentiated ■ Price can be differentiated ■ Possibility to build additional revenue from established and new user groups (third parties) 	<ul style="list-style-type: none"> ■ Cumbersome process for customers to continually evaluate new services
Advertising fees	<ul style="list-style-type: none"> ■ Well-targeted advertisements can be perceived as value-added content by trading participants ■ Easy to implement 	<ul style="list-style-type: none"> ■ Limited revenue potential ■ Overdone or poorly targeted advertisements can be disturbing elements on the Web site

E-government



- **E-government** - involves the use of strategies and technologies improve the delivery of services and enhance the quality of interaction between the citizen-consumer within all branches of government.
- Federal government portal, www.canada.gc.ca, connects citizens, immigrants, visitors and others to all government public communication.

E-government

Figure 3.33

	Business	Consumer (constituent)	Government
Business	B2B canbiotech.com	B2C canadiantire.ca	B2G lockheedmartin.com
Consumer (constituent)	C2B priceline.com	C2C ebay.ca	C2G hamiltoncatch.org
Government	G2B canadabusiness.gc.ca	G2C servicecanada.gc.ca	G2G aupe.org

M-commerce

- **Mobile commerce** - the ability to purchase goods and services through a wireless Internet-enabled device

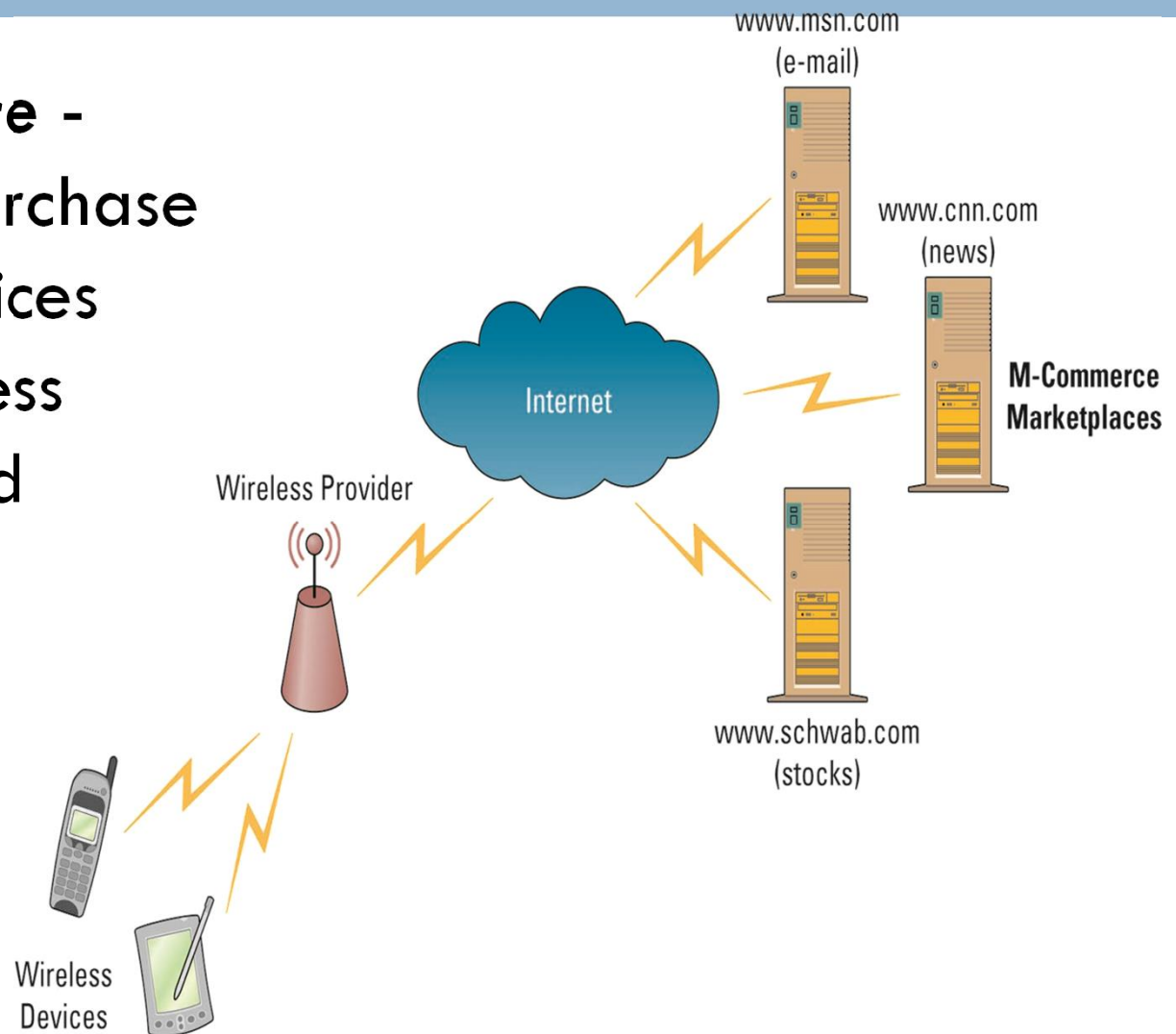


Figure 3.35

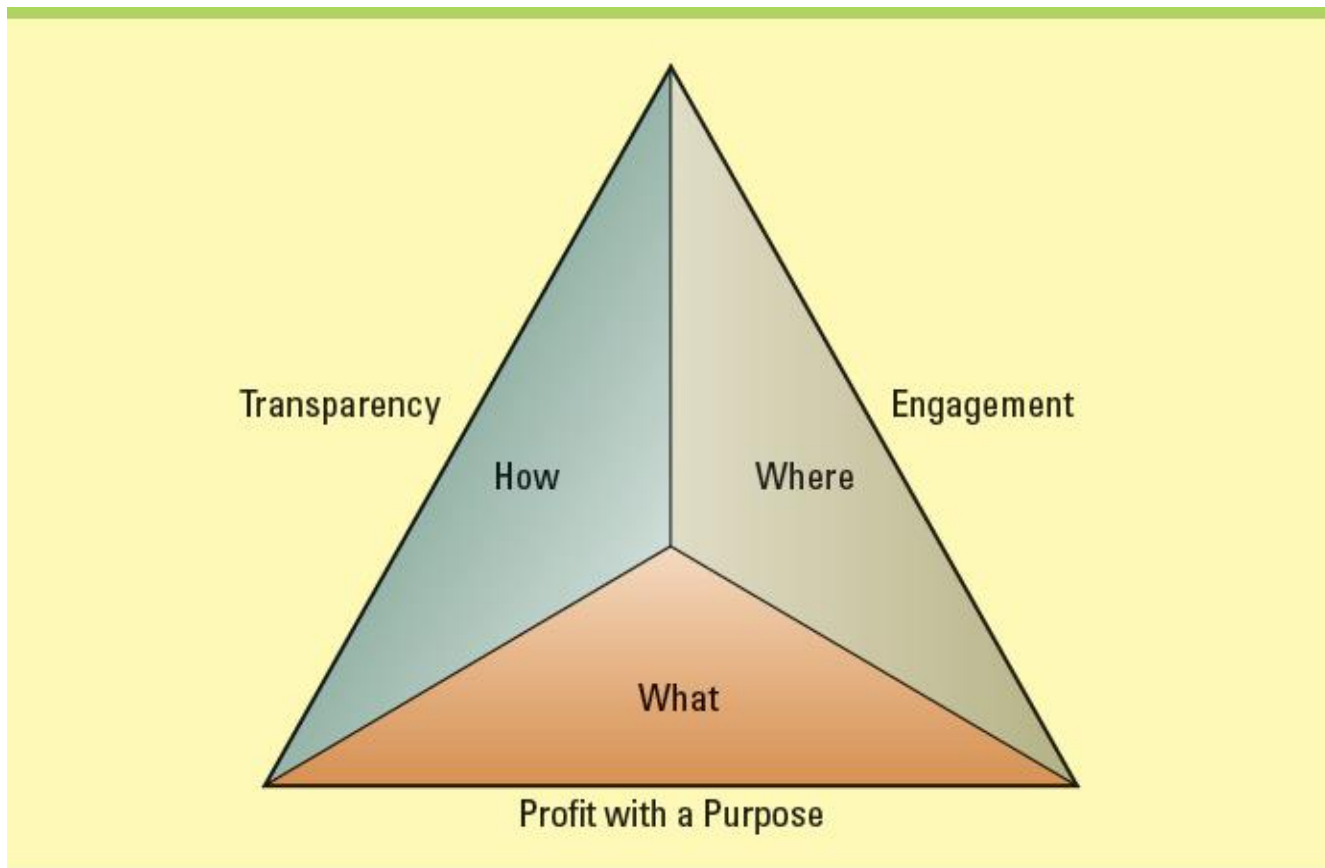
Social Media & Business



- Companies advertise on Facebook, with their own pages on Facebook, active on Twitter.
- Companies are advised to integrate social media in business communications, use social customer support, provide leadership and expertise through social media, and that social media can drive reputation.

The New Trust Architecture

Figure 3.36



Questions?



For next class



- Read Case 1: Canadian Tire
 - In-class group case study

- Remember to read Chapter 4