Security Strategies in Web Applications and Social Networking

Chapter 2

From Brick-and-Mortar to E-commerce to E-business Transformation

# Learning Objective and Key Concepts

Learning Objective

- Analyze the impact of the Internet and Web applications on the business world.

Key Concepts

- Challenges associated with the shift from traditional to online business models
- E-business problem-solving and strategies
- Changes in the risk landscape as business moves online

Brick-and-Mortar vs. E-commerce

B&M

- Physical storefront
- In-person or phone sales

E-commerce

- Web store
- Web sales
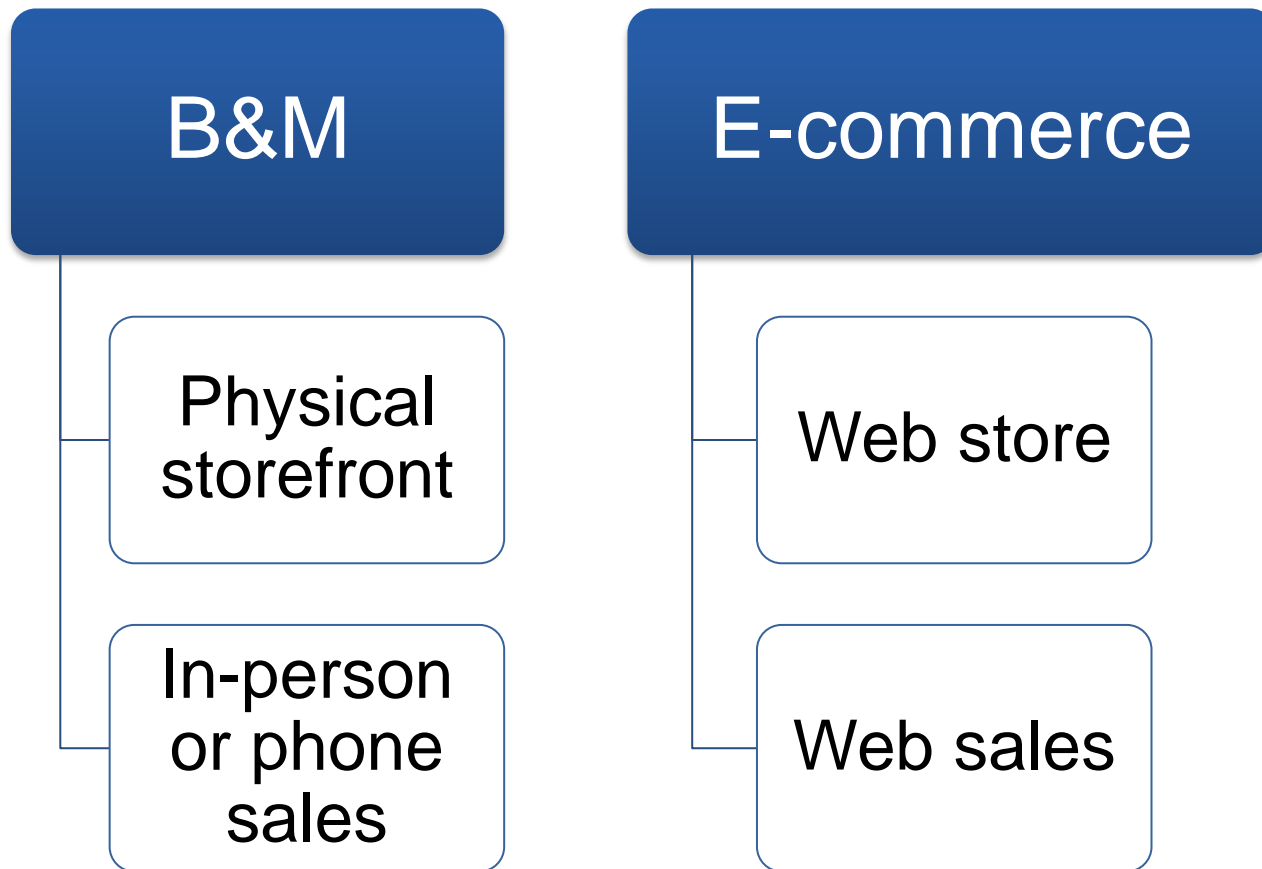
Business Drivers

Growth

Efficiency

Revenue Expansion

Customer Service

Customer Base Expansion

Growth

- Web presence is a must for business today
- Potential customers use the Web to find information about products and services
- Easy-to-use and informative Web site to expand a company's services.

Efficiency

- The Web makes some business processes easier and more efficient.
- Tie your inventory database to a Web interface.
- Real-time inventory updates to streamline ordering and customer delivery.
- Web presence can save on printing and mailing sales fliers and product lists.

Revenue Expansion

- Reliability and availability are key factors for e-business.
- Robustness of the Web or e-mail server and its ability to continue service in the event of failure.
- Accessible 24 hours a day.
- Downtime equates to a loss in sales and loss of customers.

Customer Service

- Building a Web-enabled customer service strategy
- Web chats, instant messaging (IM), forums, social networks, and e-mail.
- Use these forms of communications to meet the expectations of modern consumers.
- Engage customers more dynamically with technologies they like.

Customer Base Expansion

- Use Internet marketing
- Acquisition is critical (visitors are potential customers)
- Use of acquisition consultants who specialize in driving traffic to corporate Web sites

Business Challenges

Planning

Customer Management

Internet Marketing Strategy

Creating New Revenue Streams

Enhancing Customer Service

High Availability

Planning

- Market research — Research the competition's Web sites.
- Business plan — Have a detailed business plan with sales projections, budgets, goals, and actions.
- Domain name — Reflects your business and identifies it in URL.
- Target market — Target demographic, web surfing habits, income.
- Advertising budget — Have a realistic marketing budget.
- Distribution — Establish distribution channels, optimize shipping costs and payment methods.
- Revenue stream — Do you sell goods, services, advertising?
- Data management — Have a published policy about how customer information will be gathered, stored, and secured.
- Return policy — Establish a return policy and state it clearly.
- IT support — In-house or outsource IT support.
- Customer service — Methods could differ from offline stores.

Customer Management

- Acquisition—Attracting visitors to your site
- Conversion—Getting visitors to perform a desired action on the site, such as a purchase
- Retention—Drawing customers back for future business

Internet Marketing Strategy

- Participate related forums building relationships with people that could extend the customer base.

- Submit articles to e-zines and drive traffic to the site with article links.

- Issue online press releases for new products or services.

- Develop a social networking site for like-minded people.

- Develop a blog.

- Develop a link exchange program with related Web sites.

- Use click-based advertising on related sites.

- Develop instructional videos and post them on Web.

- Register the bookmarks of your business online with companies such as delicious.com.

Creating New Revenue Streams

- Advertising — Common way to increase revenue for popular sites.

- Subscription revenue — Requires quality and original content that customers cannot easily find for free.

- Products and service revenue —Products can be virtual, downloadable, or a physical product that requires shipping.

- Commission revenue—Commission revenue is made from paid marketing alliances and affiliate marketing.

Enhancing Customer Experience

- Reply to customer queries quickly.
- Define customer service policies and stick to them.
- Be open, friendly, and approachable.

High Availability

- Hardware failures --- (RAID) hard disks, multiple memory, and failover servers.
- Software failures — Hardening applications using the latest service packs.
- Virus infection — Constant updates on the checkers.
- Denial of service (DOS) attack —Use secure protocols.
- Infrastructure failure — Use redundant infrastructure equipment.
- Power outage — Use uninterruptible power supplies (UPSs).
- Natural disasters — Have an alternate remote network location.

E-business Transformation Strategies

Know your target demographic

Develop appropriate marketing strategies

Create a marketing budget

Monitor traffic and visitor trends

E-business Transformation Strategies (Cont.)

- Create a customer support plan

- Devise a method of client contact

- Determine your primary marketing technique

Traffic Acquisition

Who is your target market? Women? Children under 12? Doctors? Sports fans over 25?

- Isolate the demographic
- Design a site that meets the needs of the demographic

The language, tone, and feel of a site will be different if marketing to snowboarders than to seniors. The site is designed around the demographic with its unique needs and expectations in mind.

- Identify demographically appropriate marketing avenues

There are many ways to market online. For example, a senior poker enthusiast is more likely to see an advertisement on a poker-related Web site than on Facebook.

Internet Marketing Strategies

- Pay-per-click (PPC) revenue model
- Affiliate marketing
- Banner advertising
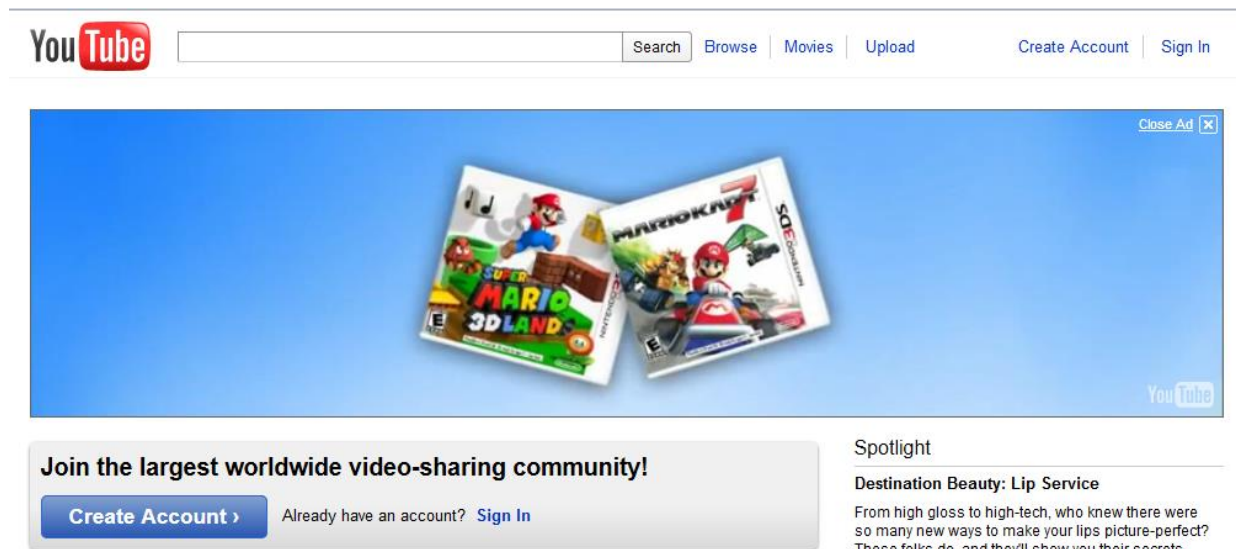
Internet Marketing Strategies (Cont.)

- E-mail distribution lists and e-mail blasting
- Lead-generation Web sites
- SEO marketing

Risks

- Being connected to the Internet means being connected to the world and all the good and bad things that it implies.

- E-businesses, by definition, are allowing others to access their organizations in a way that presents risks.

- These businesses must consider the implications of allowing this access.

Threats

- Web sites are prone to:
  - Attacks from crackers, hackers, terminated employees, competitors, and others
  - Scrutiny from customers, competitors, "society", government organizations, and others

Mistakes

- No visitor tracking — Use visitor tracking tools such as Google Analytics.

- Poor site design --- Visitors don/t convert to customers.

- Confusing check-out procedures — Analytic software could identify if visitors leave at checkout.

Vulnerabilities

Domain	Common Vulnerabilities
User	Weak passwords Authenticating in public places
Workstation	Public computers with unknown security
LAN	Accessing content from public networks and Wi-Fi hotspots

Vulnerabilities

Domain	Common Vulnerabilities
LAN-to-WAN	Domain-poorly configured firewalls and routers
WAN	Internet service provider (ISP) reputability and security
Remote Access	Security on Web servers, proxies, and users' browsers
System/ Application	This is an obvious, specific concern in e-business!

Privacy

Customer privacy is a critical concern for e-businesses:

- E-commerce applications house personal and private information about customers.

- Customer credit card information is received, processed, and stored on e-business systems.

Summary

- Challenges associated with the shift from traditional to online business models
- E-business problem-solving and strategies
- Changes in the risk landscape as business moves online