

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

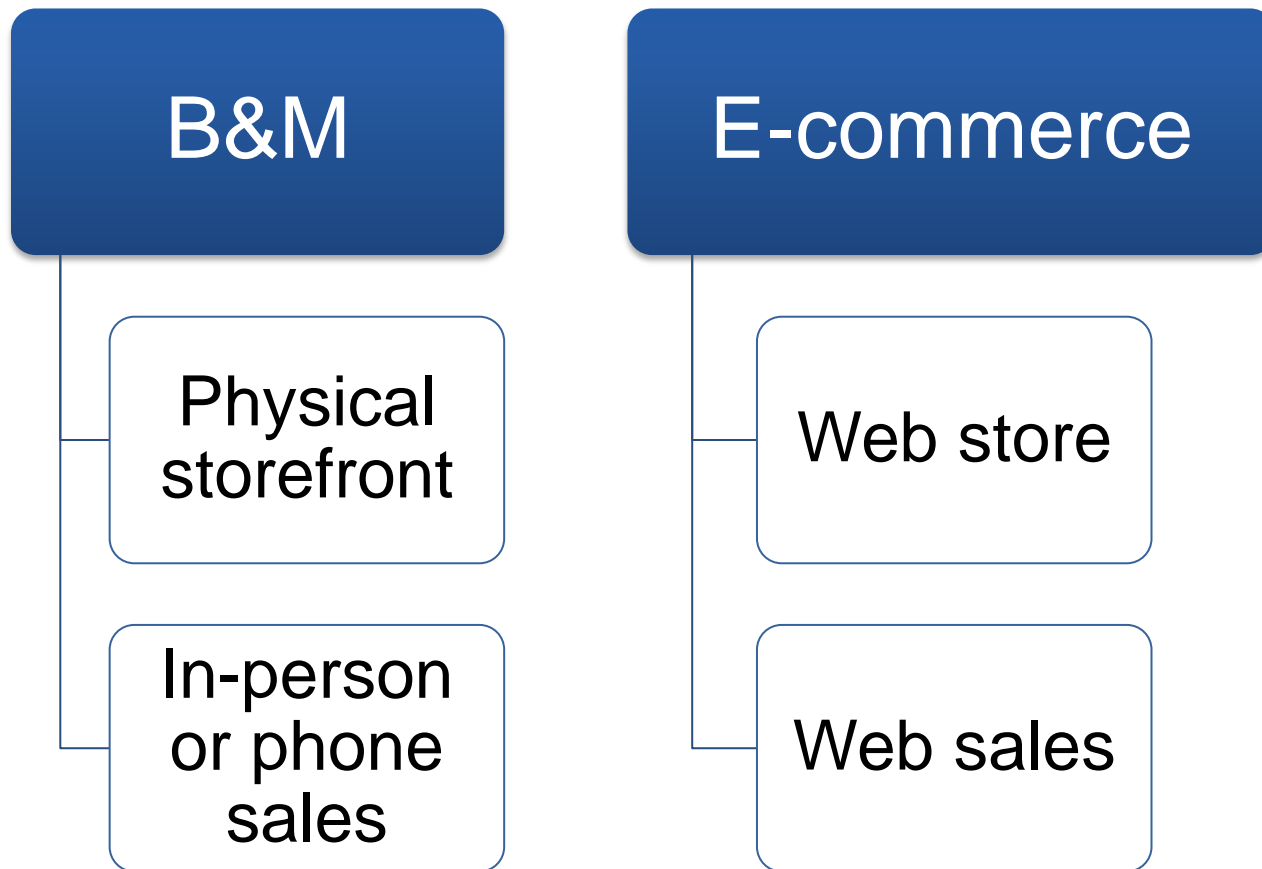
Learning Objective

- 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



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

Google Analytics is a freemium web analytics service offered by oogle that tracks and reports website traffic, currently as a platform inside the Google Marketing Platform brand. Google launched the service in November 2005 after acquiring Urchin.

helps profile our visitors. who goes to checkout and not make purchase

who visits once and never comes back

helps us better make business decisions and develop online presence

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. so that it shows up in Google search on first page
- 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 ex. advertising, blogs, inserting links to other popular websites
- 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

RAID (Redundant Array of Independent Disks, originally Redundant Array of Inexpensive Disks) is a data storage virtualization technology that combines multiple physical disk drive components into one or more logical units for the purposes of data redundancy, performance improvement, or both.

- 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

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- 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

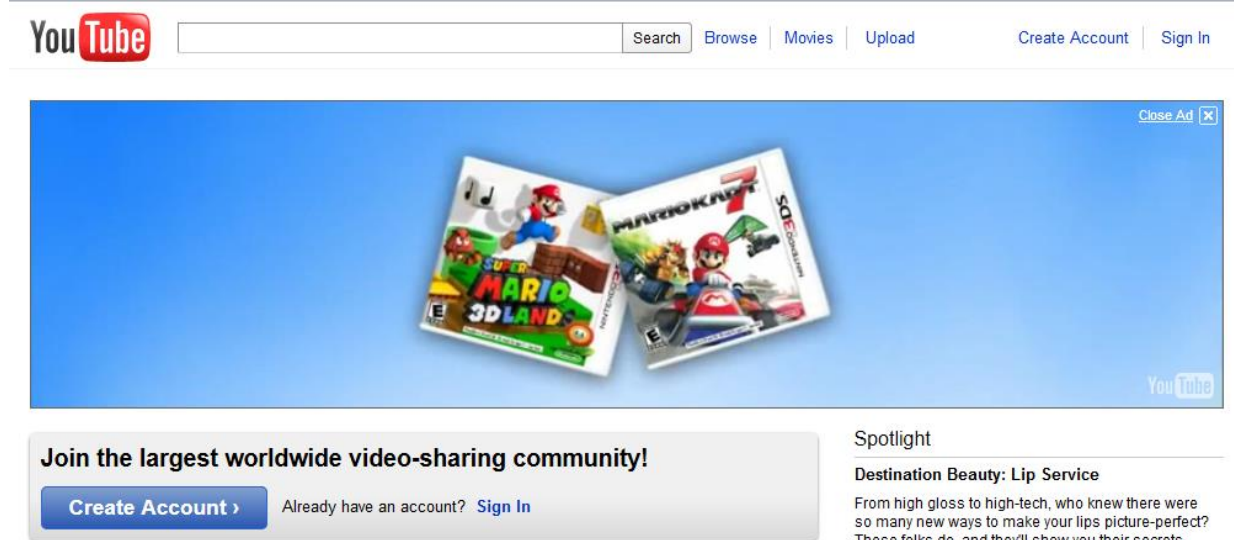
There are many ways to market online. For example, a senior poker enthusiast is more likely to see an advertisement on a poker-related Web site than on Facebook.

Internet Marketing Strategies

- Pay-per-click (PPC) revenue model
- Affiliate marketing
- Banner advertising

Affiliate marketing is a type of performance-based marketing in which a business rewards one or more affiliates for each visitor or customer brought by the affiliate's own marketing efforts.

Banner ads are image-based rather than text-based and are a popular form of online advertising. The purpose of banner advertising is to promote a brand and/or to get visitors from the host website to go to the advertiser's website.



The screenshot shows the YouTube homepage interface. At the top is the YouTube logo, a search bar, and navigation links for Browse, Movies, Upload, Create Account, and Sign In. Below the navigation bar is a large banner advertisement. The banner has a blue background and features two video game boxes: 'Super Mario 3D Land' and 'Mario Kart 7'. In the bottom right corner of the banner is a 'Close Ad' button. Below the banner is a section titled 'Join the largest worldwide video-sharing community!' with a 'Create Account' button and a link for 'Already have an account? Sign In'. To the right of this section is a 'Spotlight' section titled 'Destination Beauty: Lip Service' with a short paragraph of text and a link to the video.

Internet Marketing Strategies (Cont.)

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

In marketing, lead generation is the initiation of consumer interest or enquiry into products or services of a business. Leads can be created for purposes such as list building, e-newsletter list acquisition or for sales leads.

One of the main marketing strategies that can help online retailers build a successful Internet business is search engine optimization (SEO), the process of tailoring your website to the algorithms that search engines use to rank websites based on "signals" that the site emits

The Google logo, featuring its characteristic multi-colored letters (blue, red, yellow, blue, green, red) in a sans-serif font.The bing logo, with the word "bing" in a blue sans-serif font, featuring a small orange dot above the 'i' and a trademark symbol.The YAHOO! logo, with the word "YAHOO!" in a purple, stylized, outlined font, followed by a registered trademark symbol.

Risks

Risk – The potential for loss, damage or destruction of an asset as a result of a threat exploiting a vulnerability.

- 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

Threat – Anything that can exploit a vulnerability, intentionally or accidentally, and obtain, damage, or destroy an asset.

- 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

cannot stop the attacks but need to work around them