

BUS 168 - Chapter 4

Building an E-commerce Presence: Web Sites, Mobile Sites, and Apps

Imagine Your E-commerce Presence

- **What's the idea?**
 - ❖ Vision
 - ❖ Mission statement
 - ❖ Target audience
 - ❖ Intended market space
 - ❖ Strategic analysis
 - ❖ Internet marketing matrix
 - ❖ Development timeline and preliminary budget

- **Where's the money?**
 - ❖ Business model(s):
 - Portal, e-tailer, content provider, transaction broker, market creator, service provider, community provider
 - ❖ Revenue model(s):
 - Advertising, subscriptions, transaction fees, sales, and affiliate revenue.

- **Who and where is the target audience?**
 - ❖ Describing your audience
 - Demographics
 - ❖ Age, gender, income, location
 - Behavior patterns (lifestyle)
 - Consumption patterns (purchasing habits)
 - Digital usage patterns
 - Content creation patterns (blogs, Facebook)
 - Buyer personas

- **Characterize the marketplace**
 - ❖ Demographics
 - ❖ Size, growth, changes
 - ❖ Structure
 - Competitors
 - Suppliers
 - Substitute products

- **Where is the content coming from?**
 - ❖ Static or dynamic?

- **Know yourself—SWOT analysis**
- **Develop an e-commerce presence map**
- **Develop a timeline: Milestones**

- **How much will this cost?**
 - ❖ Simple Web sites: up to \$5000
 - ❖ Small Web start-up: \$25,000 to \$50,000
 - ❖ Large corporate site: \$100,000+ to millions

Building an E-commerce Presence: A Systematic Approach

- **Most important management challenges:**
 - ❖ Developing a clear understanding of business objectives
 - ❖ Knowing how to choose the right technology to achieve those objectives

Pieces of the Site-Building Puzzle

- **Main areas where you will need to make decisions:**
 - ❖ Human resources and organizational capabilities
 - Creating a team with the skill set needed to build and manage a successful site
 - ❖ Hardware/software
 - ❖ Telecommunications
 - ❖ Site design

The Systems Development Life Cycle

- **Methodology for understanding business objectives of a system and designing an appropriate solution**
- **Five major steps:**
 - ❖ Systems analysis/planning
 - ❖ Systems design
 - ❖ Building the system
 - ❖ Testing
 - ❖ Implementation

System Analysis/Planning

- **Business objectives**
 - ❖ List of capabilities you want your site to have
- **System functionalities**
 - ❖ List of information system capabilities needed to achieve business objectives
- **Information requirements**
 - ❖ Information elements that system must produce in order to achieve business objectives

Systems Design: Hardware and Software Platforms

- **System design specification**
 - ❖ Description of main components of a system and their relationship to one another
- **Two components of system design:**

- ❖ Logical design
 - Data flow diagrams, processing functions, databases
- ❖ Physical design
 - Specifies actual physical, software components, models, etc.

In-House vs. Outsourcing

- **Outsourcing: Hiring vendors to provide services involved in building site**
- **Build own vs. outsourcing**
 - ❖ Build your own requires team with diverse skill set; choice of software tools; both risks and possible benefits
- **Host own vs. outsourcing**
 - ❖ **Hosting:** Hosting company responsible for ensuring site is accessible 24/7, for monthly fee
 - ❖ **Co-location:** Firm purchases or leases Web server (with control over its operation), but server is located at vendor's facility

Testing, Implementation, and Maintenance

- **Testing**
- **Implementation and maintenance**
 - ❖ Maintenance is ongoing
 - ❖ Maintenance costs: Similar to development costs
 - ❖ Benchmarking

Simple vs. Multi-tiered Web Site Architecture

- **System architecture**
 - ❖ Arrangement of software, machinery, and tasks in an information system needed to achieve a specific functionality
- **Two-tier**
 - ❖ Web server and database server
- **Multi-tier**
 - ❖ Web application servers
 - ❖ Backend, legacy databases

Web Server Software

- **Apache**
 - ❖ Leading Web server software (66% of market)
 - ❖ Works with UNIX, Linux OSs
- **Microsoft's Internet Information Server (IIS)**
 - ❖ Second major Web server software (16% of market)
 - ❖ Windows-based

Site Management Tools

- **Basic tools**
 - ❖ Included in all Web servers, e.g.:
 - Verify that links on pages are still valid
 - Identify orphan files
- **Third-party software for advanced management**
 - ❖ Monitor customer purchases, marketing campaign effectiveness, etc.
 - ❖ WebTrends Analytics 10, Google Analytics

Dynamic Page Generation Tools

- **Dynamic page generation:**
 - ❖ Contents stored in database and fetched when needed
- **Advantages**
 - ❖ Enables use of content management system (CMS)

Application Servers

- **Web application servers**
 - ❖ Provide specific business functionality required for a Web site
 - ❖ Type of middleware
 - Connects traditional corporate systems to customers
 - ❖ Single-function applications being replaced by integrated software tools that combine all functionality needed for e-commerce site

E-commerce Merchant Server Software

- **Provides basic functionality for sales**
 - ❖ Online catalog
 - List of products available on Web site
 - ❖ Shopping cart
 - Allows shoppers to set aside, review, edit selections, and then make purchase
 - ❖ Credit card processing
 - Typically works in conjunction with shopping cart
 - Verifies card and puts through credit to company's account at checkout

Merchant Server Software Packages

- **Integrated environment that includes most of functionality needed**
- **Three general ranges of price and functionality**
 - ❖ Basic: free, open source
 - ❖ Midrange
 - ❖ High-end

Building Your Own E-commerce Site

■ **Options for small firms**

- ❖ Hosted e-commerce sites, e.g., Yahoo's Merchant Solutions
 - Site building tools
 - E-commerce templates
- ❖ Open-source merchant server software
 - Enables you to build truly custom sites
 - Requires programmer with expertise, time

The Hardware Platform

■ **Underlying computing equipment needed for e-commerce functionality**

■ **Right-sizing your hardware platform: the demand side**

- ❖ Number of simultaneous users

■ **Right-sizing your hardware platform: the supply side**

- ❖ Vertical scaling—improve individual components
- ❖ Horizontal scaling—share load with more computers

Other E-commerce Site Tools

■ **Web site design: Basic business considerations**

- ❖ Enabling customers to find and buy what they need

■ **Tools for Web site optimization**

- ❖ Search engine optimization
 - Metatags, titles, content
 - Identify market niches, localize site
 - Offer expertise
 - Links
 - Search engine ads
 - Local e-commerce

Tools for Interactivity and Active Content

- **CGI (Common Gateway Interface)**
- **ASP (Active Server Pages)**
- **Java, Java Server Pages (JSP), and JavaScript**
- **Web 2.0 design elements**

Developing a Mobile Web Site and Building Mobile Applications

■ **Three types of m-commerce software**

- ❖ Mobile Web site
 - Responsive web design
- ❖ Mobile Web app
- ❖ Native app

■ **Planning and building mobile presence**

- ❖ Use systems analysis/design to identify unique and specific business objectives

Developing a Mobile Web Presence

- **Design considerations**
 - ❖ Platform constraints: Smartphone/tablet
- **Performance and cost**
 - ❖ Mobile Web site
 - Least expensive
 - ❖ Mobile app
 - Can utilize browser API
 - ❖ Native app
 - Most expensive; requires more programming