

# Imagine Your E-commerce Presence (1 of 3)

- What's the idea? The vision includes:
  - Mission statement
  - Target audience
  - Intended market space
  - Strategic analysis
  - Marketing matrix
  - Development timeline
  - Preliminary budget

# Imagine Your E-commerce Presence (2 of 3)

- Where's the money?
  - Business model(s)
  - Revenue model(s)
- Who and where is the target audience?
  - Demographics, lifestyle, consumption patterns, etc.
- What is the ballpark? Characterize the marketplace
  - Size, growth, demographics, structure

# Imagine Your E-commerce Presence (3 of 3)

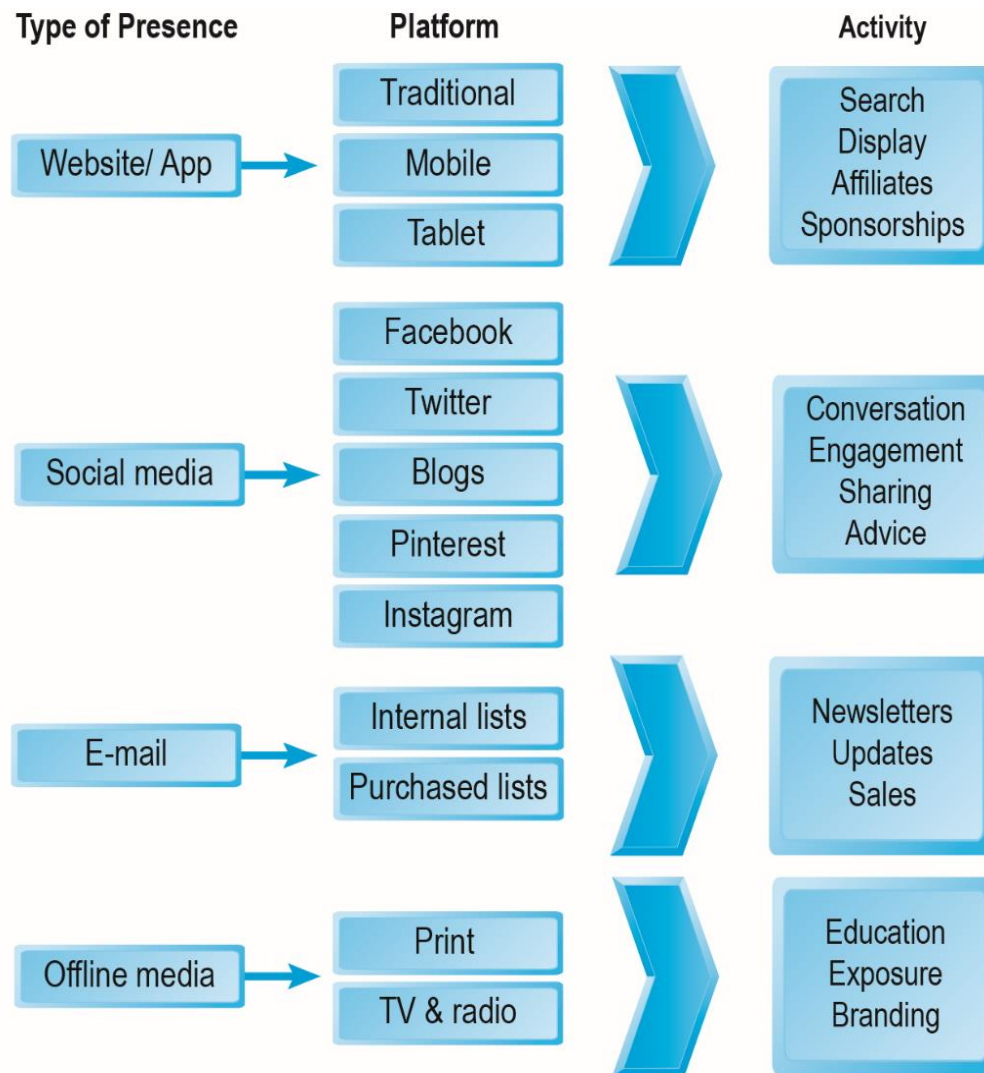
- Where's the content coming from?
- Know yourself—SWOT analysis
- Develop an e-commerce presence map
- Develop a timeline: Milestones
- How much will this cost?
  - Simple websites: up to \$5000
  - Small web startup: \$25,000 to \$50,000
  - Large corporate site: \$100,000+ to millions

# Figure 3.1: SWOT Analysis



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# Figure 3.2: E-commerce Presence Map



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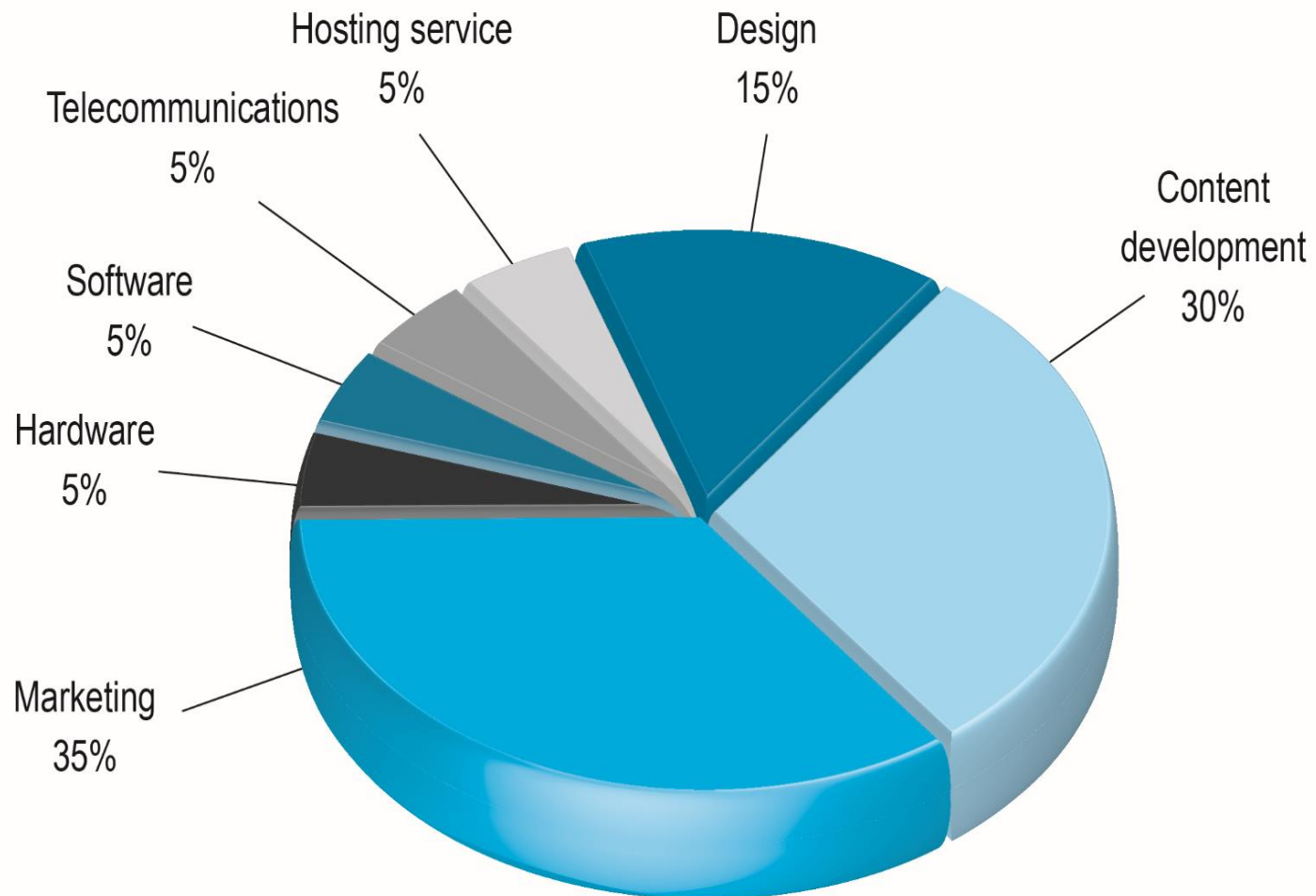
# Figure 3.2: E-commerce Presence Timeline

**TABLE 3.1**

**E-COMMERCE PRESENCE TIMELINE**

| PHASE                                | ACTIVITY  | MILESTONE                         |
|--------------------------------------|---|-----------------------------------|
| Phase 1: Planning                    | Envision e-commerce presence; determine personnel   | Mission statement                 |
| Phase 2: Website development         | Acquire content; develop a site design; arrange for hosting the site                            | Website plan                      |
| Phase 3: Web implementation          | Develop keywords and metatags; focus on search engine optimization; identify potential sponsors | A functional website              |
| Phase 4: Social media plan           | Identify appropriate social platforms and content for your products and services                | A social media plan               |
| Phase 5: Social media implementation | Develop Facebook, Twitter, and Pinterest presence   | Functioning social media presence |
| Phase 6: Mobile plan                 | Develop a mobile plan; consider options for porting your website to smartphones                 | A mobile media plan               |

# E-commerce Presence – Website Budget



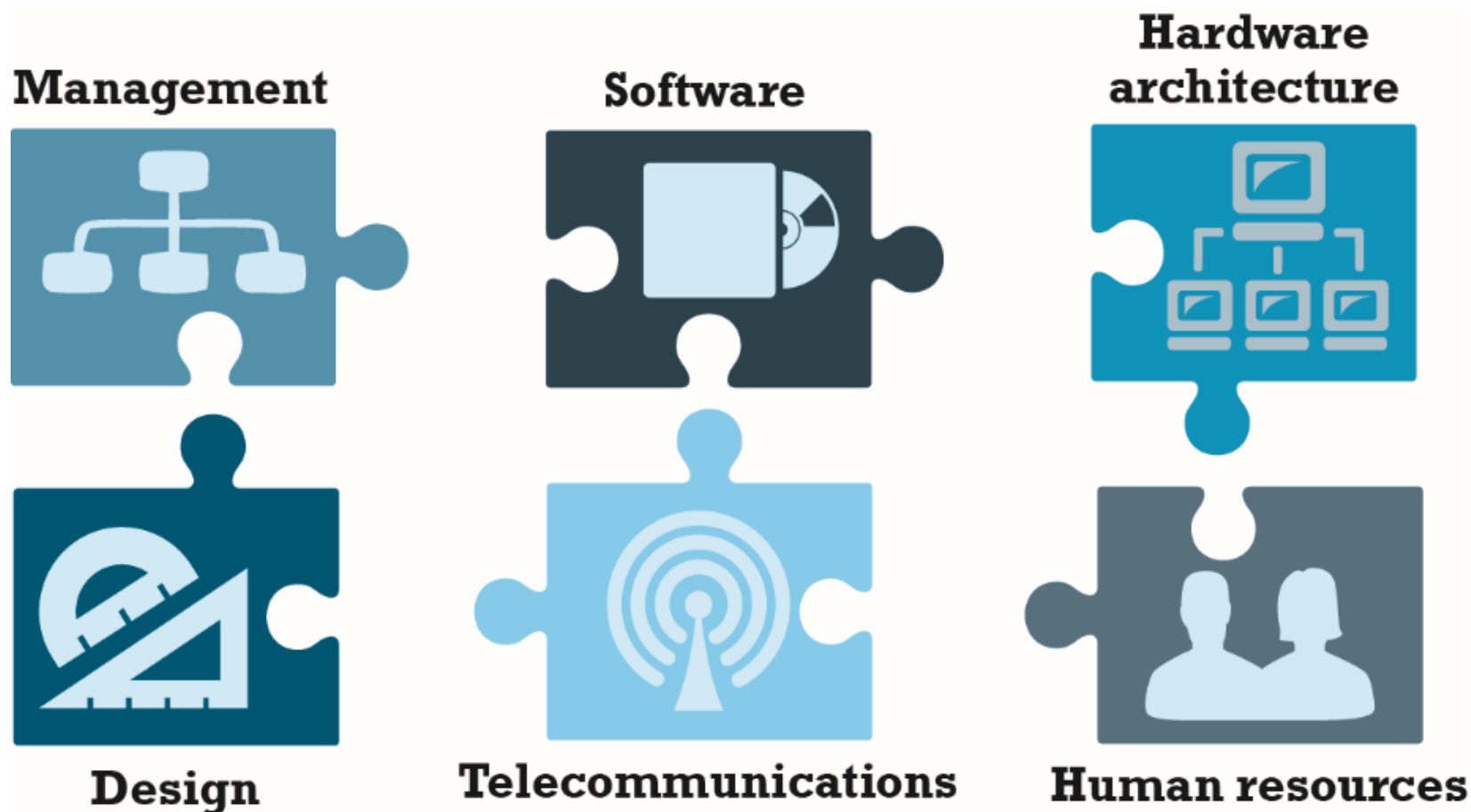
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# Building an E-commerce Site: A Systematic Approach

- Most important management challenges:
  1. Developing a clear understanding of business objectives
  2. Knowing how to choose the right technology to achieve those objectives
- Main factors to consider
  - Management
  - Hardware architecture
  - Software
  - Design
  - Telecommunications
  - Human resources



# E-commerce Presence – Important Factors

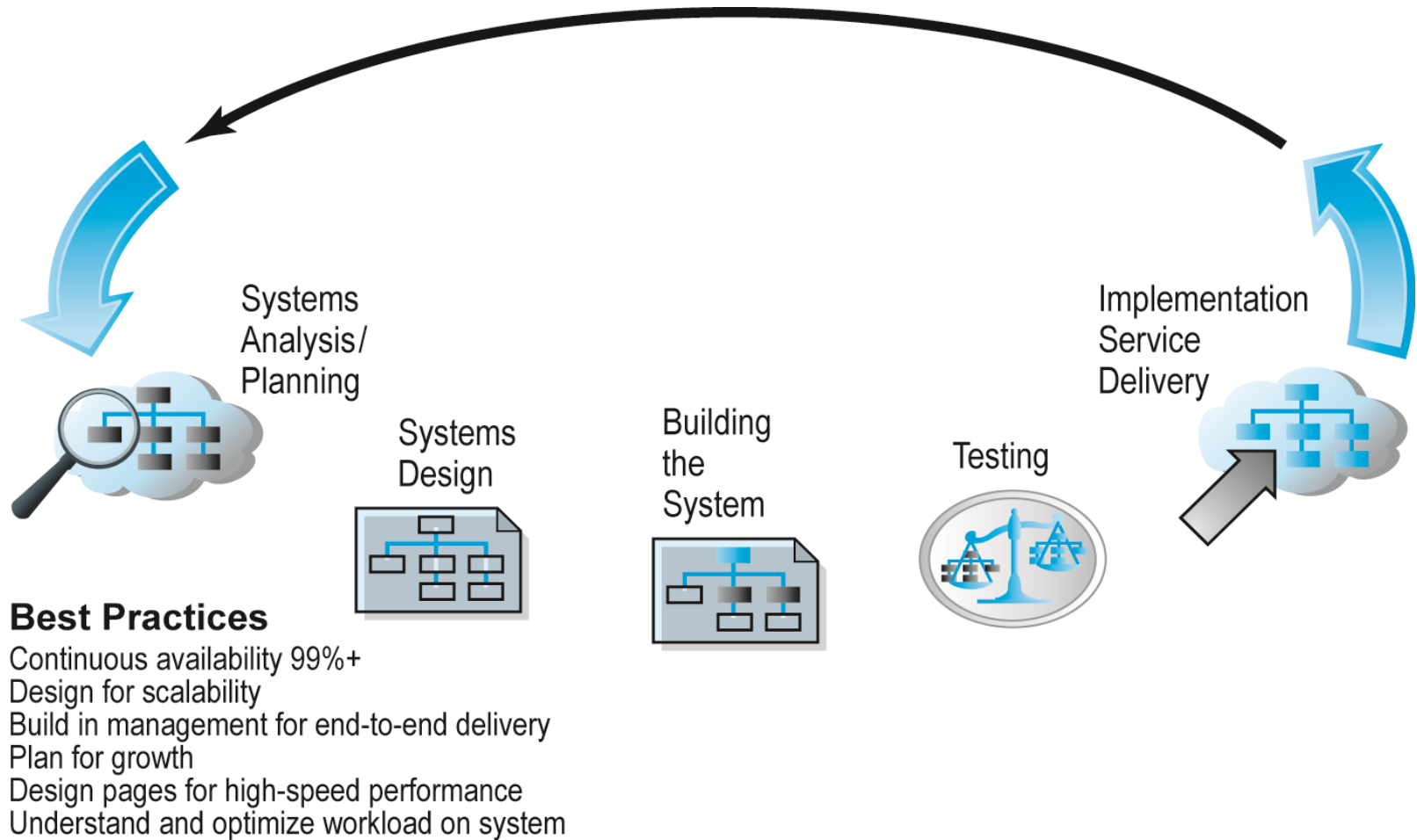


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# Planning: The Systems Development Life Cycle

- 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

# Figure 3.5: Website Systems Development Life Cycle



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# 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

## Table 3.2: System Analysis, Business Objectives, System Functionalities, and Information Requirements for a Typical E-commerce Site (1 of 2)

| BUSINESS OBJECTIVE                | SYSTEM FUNCTIONALITY         | INFORMATION REQUIREMENTS  |
|-----------------------------------|------------------------------|---|
| Display goods                     | Digital catalog              | Dynamic text and graphics catalog   |
| Provide product information       | Product database             | Product description, stocking numbers, inventory levels   |
| Personalize/customize product     | Customer on-site tracking    | Site log for every customer visit; data mining capability to identify common customer paths and appropriate responses |
| Engage customers in conversations | On-site blog; user forums    | Software with blogging and community forum functionality  |
| Execute a transaction             | Shopping cart/payment system | Secure credit card clearing; multiple payment options   |
| Accumulate customer information   | Customer database            | Name, address, phone, and e-mail for all customers; online customer registration                                      |

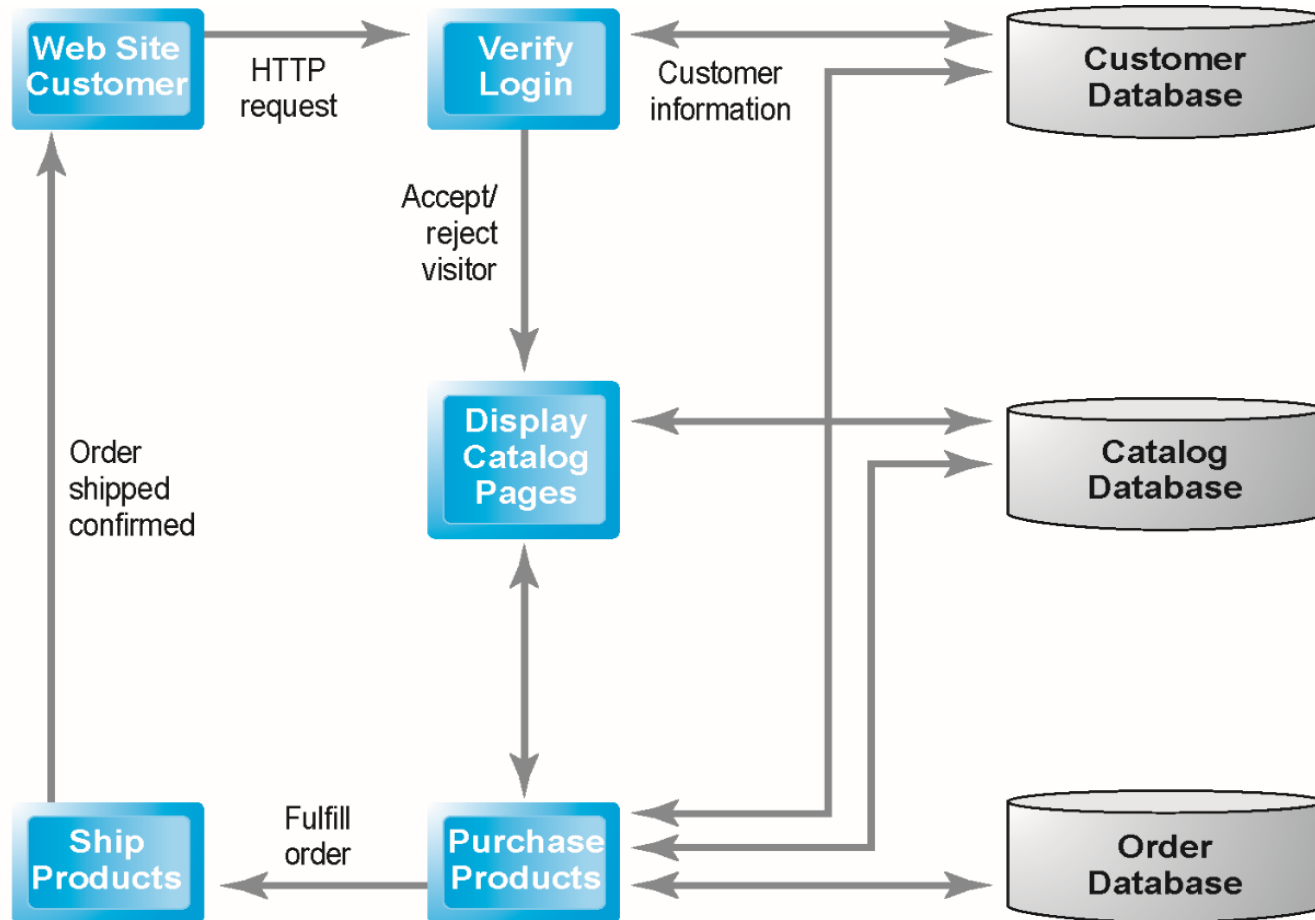
## Table 3.2: System Analysis, Business Objectives, System Functionalities, and Information Requirements for a Typical E-commerce Site (2 of 2)

| BUSINESS OBJECTIVE                    | SYSTEM FUNCTIONALITY  | INFORMATION REQUIREMENTS   |
|---------------------------------------|---|--|
| Provide after-sale customer support   | Sales database  | Customer ID, product, date, payment, shipment date   |
| Coordinate marketing/advertising      | Ad server, e-mail server, e-mail, campaign manager, ad banner manager | Site behavior log of prospects and customers linked to e-mail and banner ad campaigns          |
| Understand marketing effectiveness    | Site tracking and reporting system                                    | Number of unique visitors, pages visited, products purchased, identified by marketing campaign |
| Provide production and supplier links | Inventory management system   | Product and inventory levels, supplier ID and contact, order quantity data by product          |

# 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, and so on

# Figure 3.6(a): Logical Design for a Simple Website



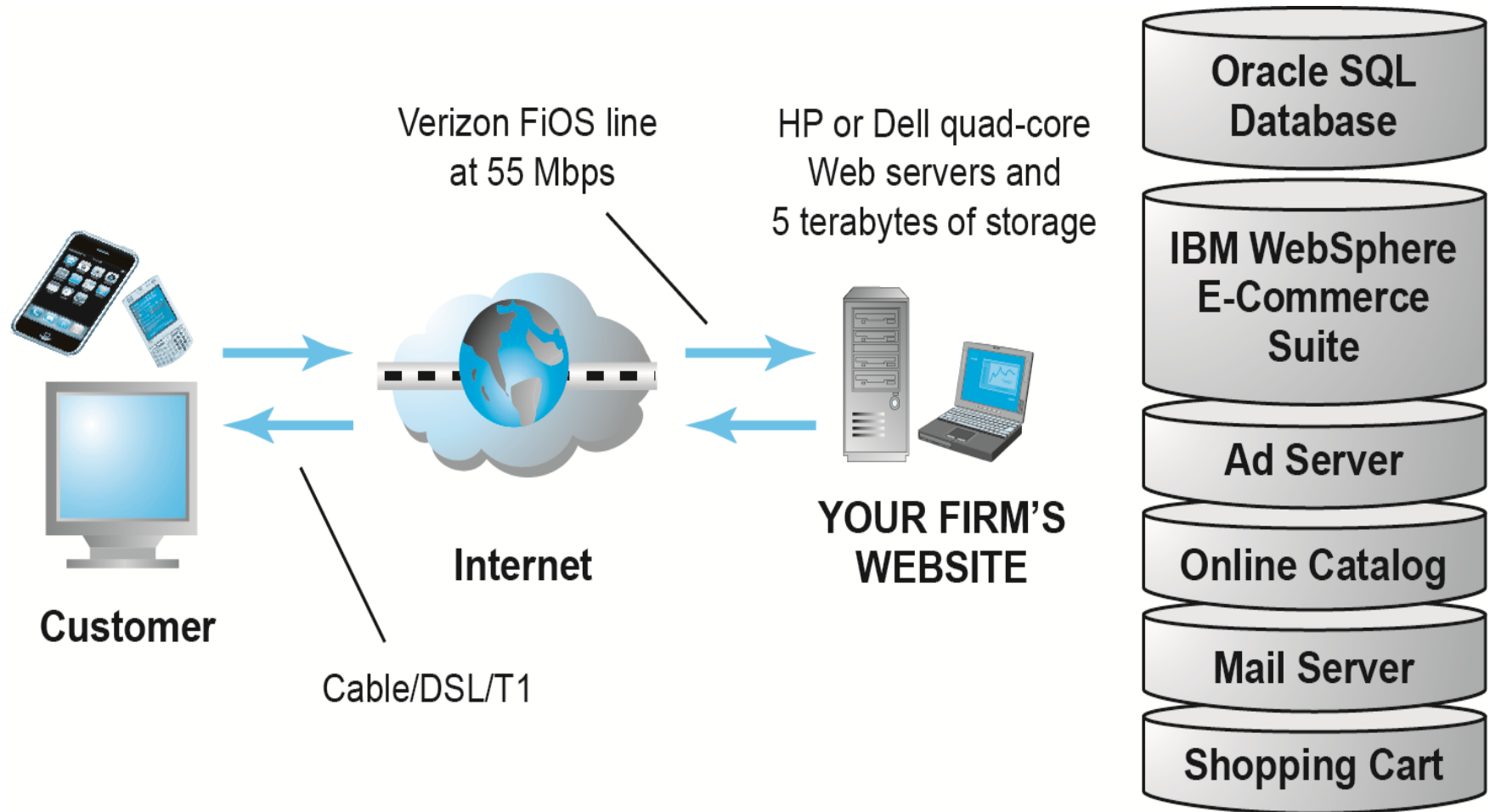
**(a) Simple Data Flow Diagram**

This data flow diagram describes the flow of information requests and responses for a sample Web site

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# Figure 3.6(b): Physical Design for a Simple Website

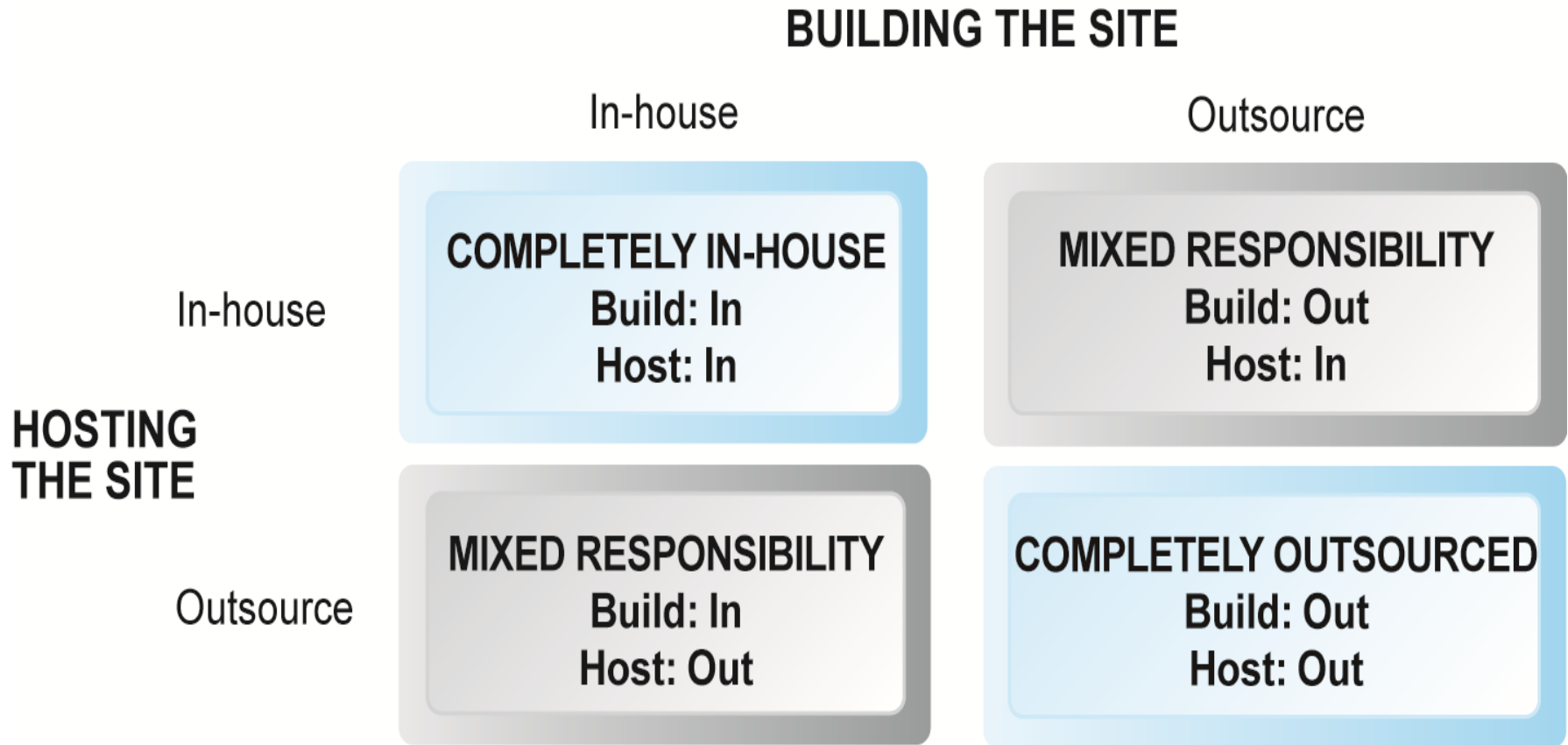


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# Building the System: In-house versus Outsourcing

- 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

# Figure 3.7: Choices in Building and Hosting



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# E-commerce Presence – Spectrum of Tools

*Least expensive*

*Most expensive*



**Use prebuilt  
templates**

Yahoo Aabaco Small Business  
Shopify  
WordPress  
Google Sites



**Build from  
scratch**

HTML/HTML5  
CGI scripts  
SQL databases  
Dreamweaver CC  
Visual Studio



**Use packaged  
site-building tools**

Sitecore Commerce Server  
IBM WebSphere

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# Testing the System

- Testing
  - Unit testing
  - System testing
  - Acceptance testing

# Implementation and Maintenance

- Systems break down unpredictably
- Maintenance is ongoing
- Maintenance costs: Similar to development costs
  - A \$40K e-commerce site may require \$40K annually to upkeep
- Benchmarking

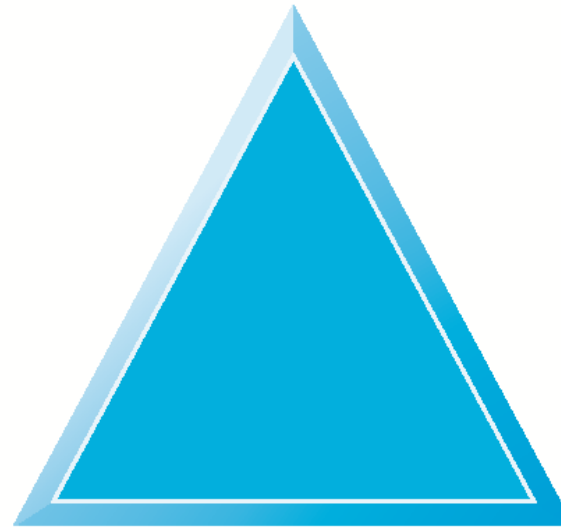
# Figure 3.10: Factors in Website Optimization

## Page Delivery

Content delivery networks  
Edge caching  
Bandwidth

## Page Generation

Server response time  
Device-based accelerators  
Efficient resource allocation  
Resource utilization thresholds  
Monitoring site performance



## Page Content

Optimize HTML  
Optimize images  
Site architecture  
Efficient page style

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