



Website Life Cycle

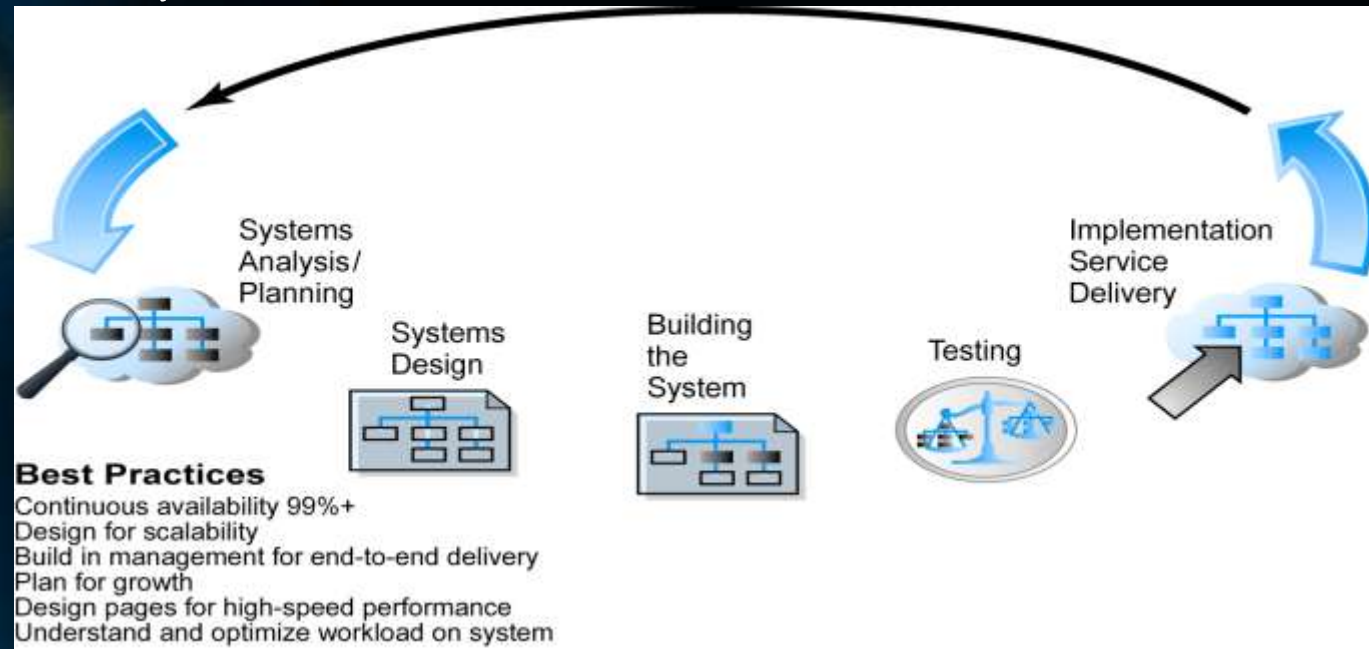


Pendahuluan

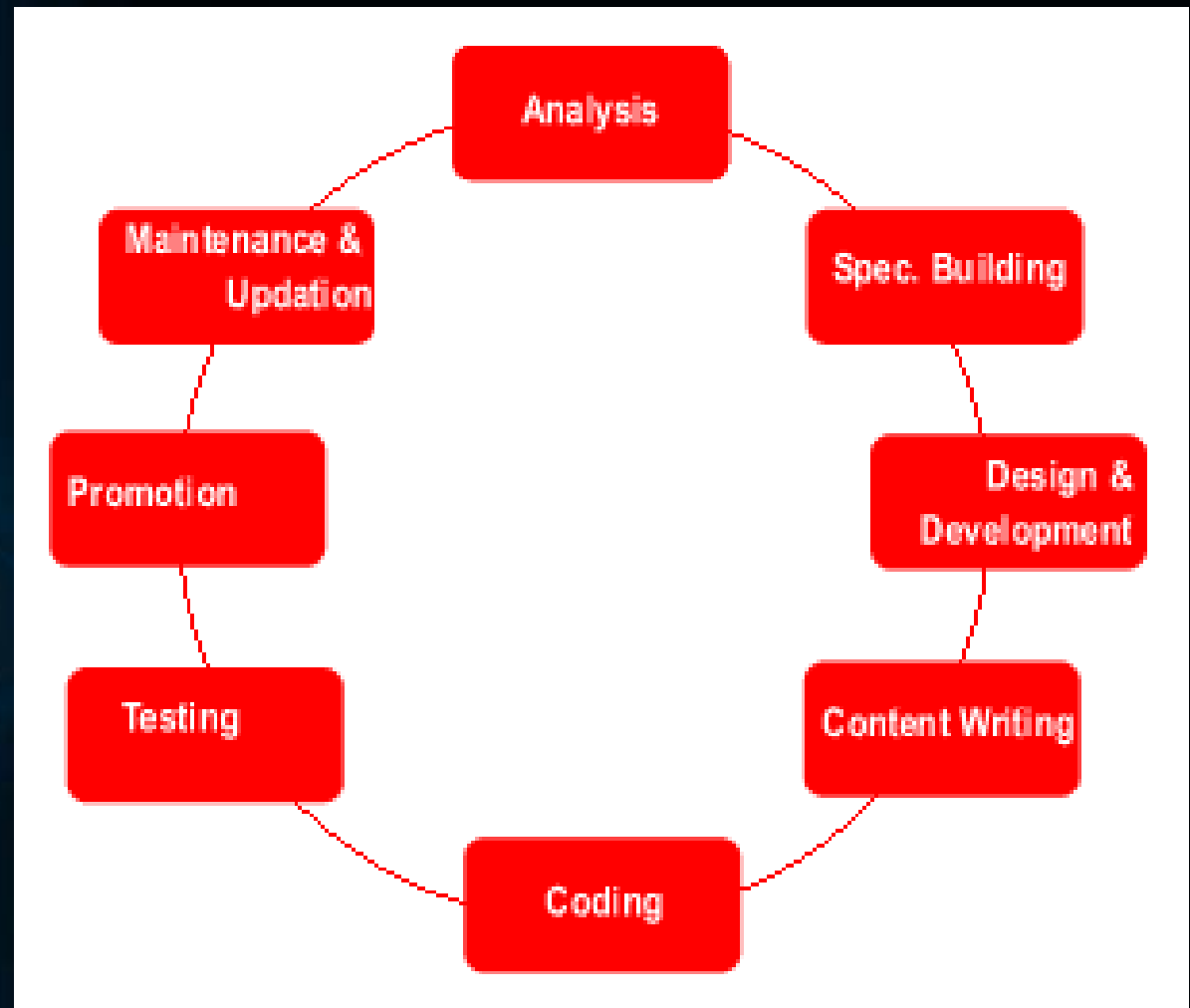
- **Dua hal penting tantangan manajemen dalam membangun situs e-commerce:**
 - Mengembangkan tujuan bisnis yang jelas
 - Mengetahui bagaimana teknologi yang tepat dalam mencapai tujuan
- **5 hal pokok yang perlu dipertimbangkan dalam membangun website:**
 - SDM dan kemampuan organisasinya
 - Hardware
 - Software
 - Telekomunikasi
 - Desain Situs

SDLC

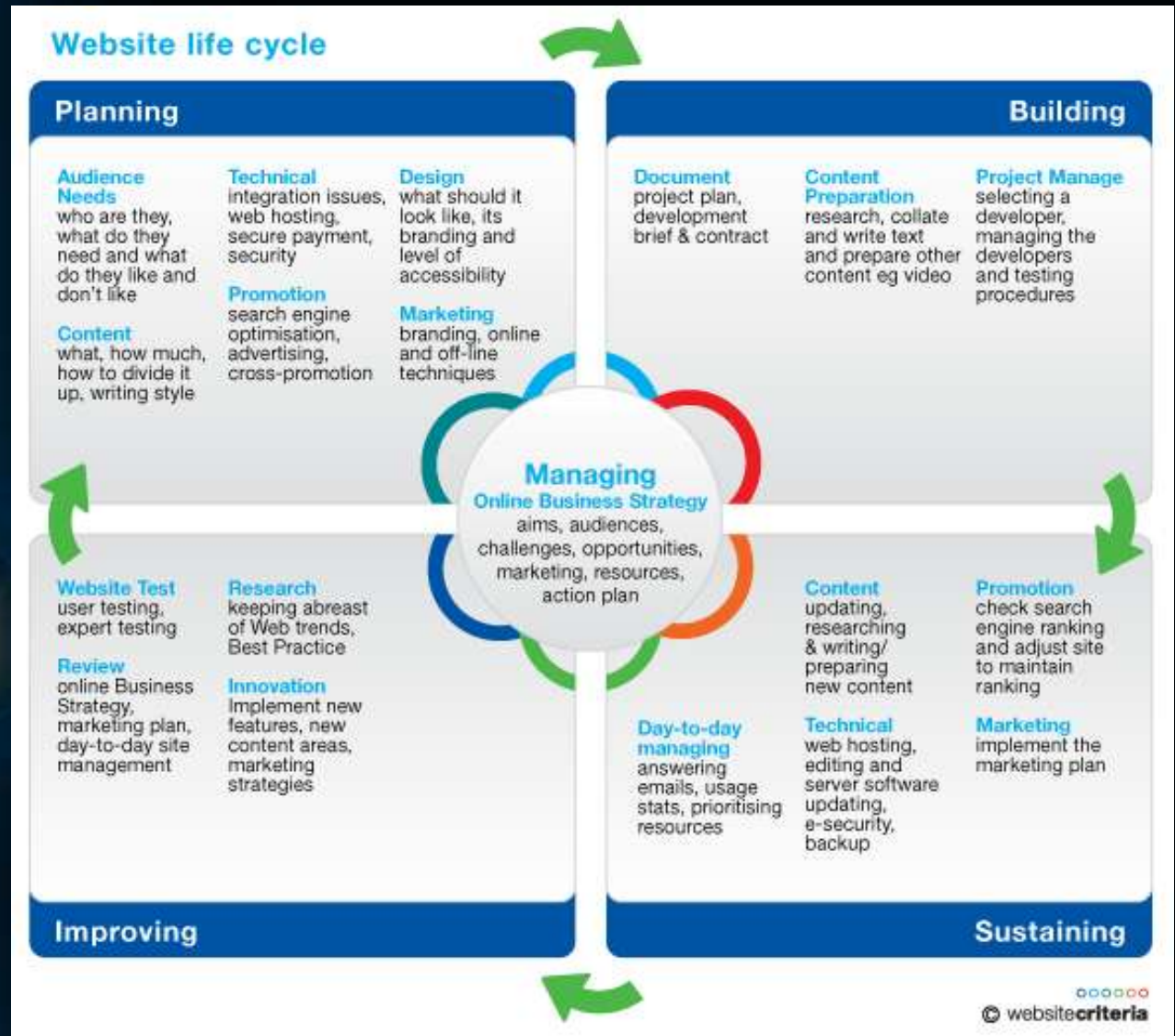
- **Systems Development Life Cycle (SDLC)**
Adalah metodologi untuk memahami tujuan suatu sistem bisnis yang akan dibangun.
- **5 langkah utama SDLC, meliputi :**
 - Systems analysis/planning
 - Systems design
 - Building the system
 - Testing
 - Implementation



The Life Cycle Steps



Website Life Cycle



1. System Analysis/Planning:

- *Business objectives*
Kesesuaian web dengan tujuan utama bisnis.
- *System functionalities*
Kemampuan web untuk menunjang sistem bisnis.
- *Information requirements*
Informasi yang dibutuhkan dalam web.

TABLE 4.1

SYSTEM ANALYSIS: BUSINESS OBJECTIVES, SYSTEM FUNCTIONALITY, AND INFORMATION REQUIREMENTS FOR A TYPICAL E-COMMERCE SITE

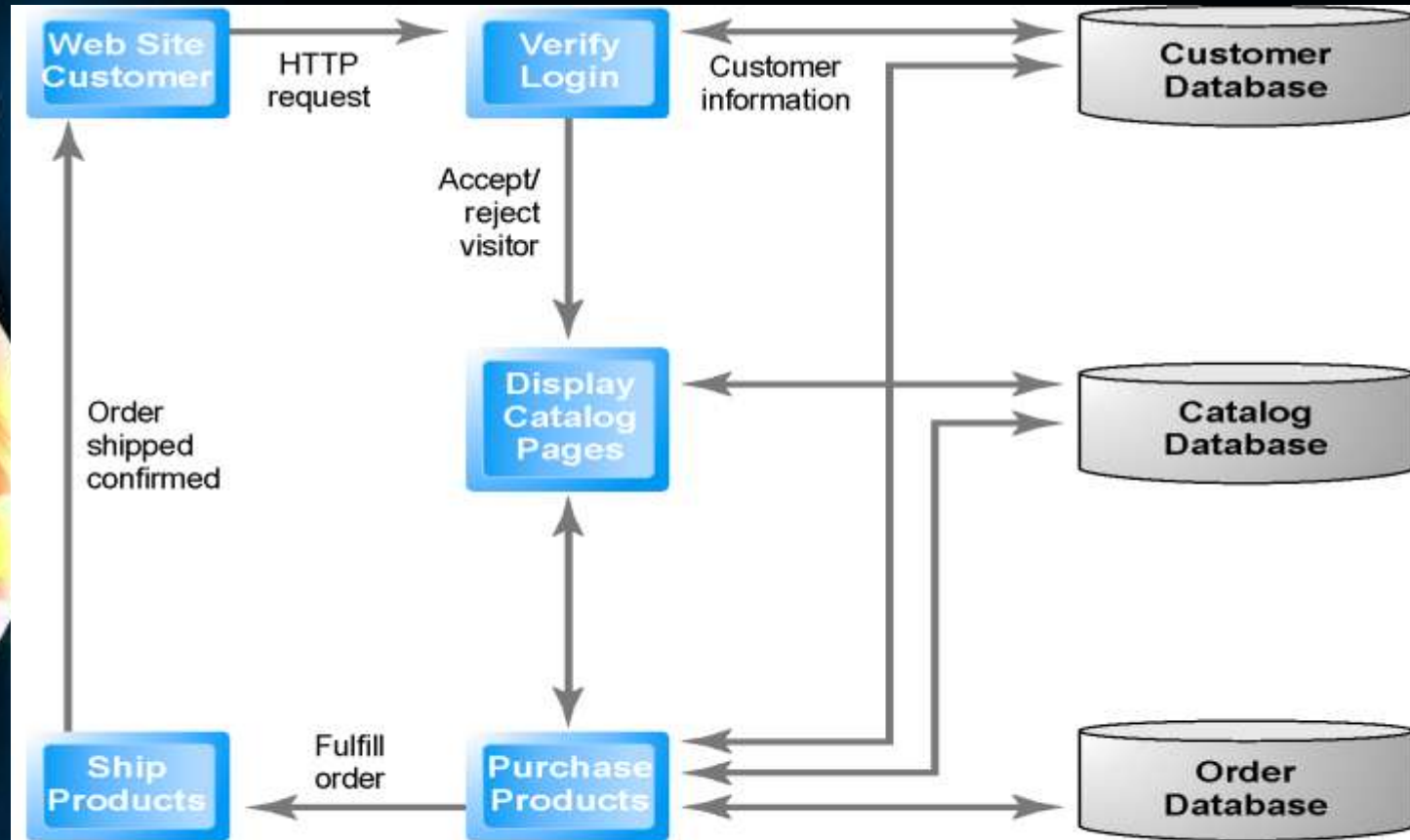
BUSINESS OBJECTIVE	SYSTEM FUNCTIONALITY	INFORMATION REQUIREMENTS
Display goods Provide product information (content)	Digital catalog Product database	Dynamic text and graphics catalog Product description, stocking numbers, inventory levels
Personalize/customize product	Customer on-site tracking	Site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



2. System Design: *Hardware dan Software Platforms*

- Spesifikasi Desain Sistem
Deskripsi komponen utama sistem dan hubungannya dengan komponen lainnya.
- Desain Sistem dapat dipecah dalam dua bagian:
 - *Logical design*
 - Dataflow diagram mendeskripsikan aliran informasi pada site, proses yang harus dilakukan, database yang digunakan
 - Mendeskripsikan keamanan dan emergency backup systems, pengendalian yang harus digunakan.
 - *Physical design*, translate dari logical design ke komponen fisik.

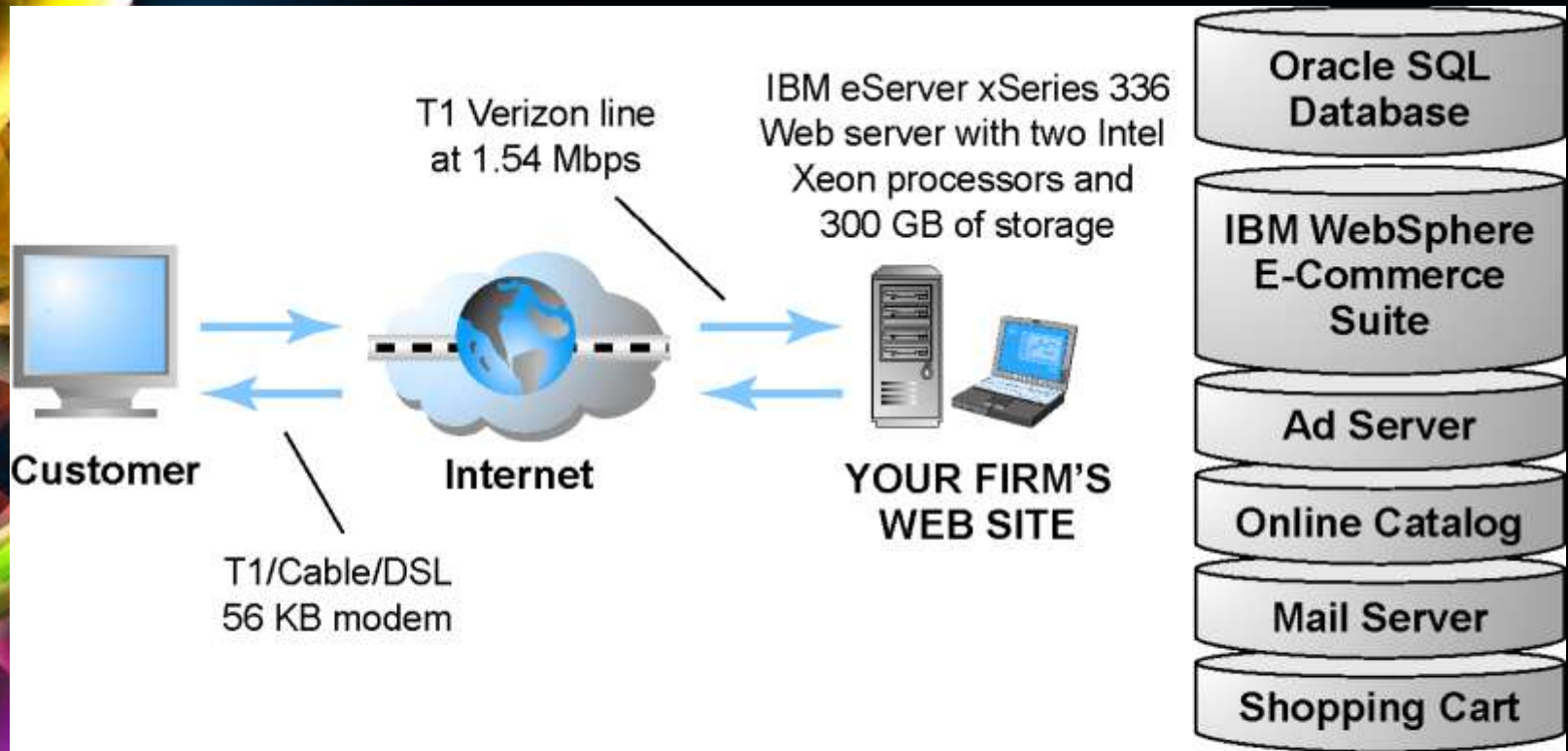
2. System Design: *Hardware dan Software Platforms*



(a) Simple Data Flow Diagram

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

2. System Design: *Hardware dan Software Platforms*



(b) Simple Physical Design

A physical design describes the hardware and software needed to realize the logical design

3. Building the System: In-House versus Outsourcing

- In-House, membuat sendiri website yang dibutuhkan, memilih software tools; dengan segala resiko dan keuntungannya
- Outsourcing, merekrut outside vendor untuk menyediakan servis dan membangun site
- Untuk kedua cara tersebut, penempatan web server dilakukan :
 - Hosting company, perusahaan bertanggung jawab untuk site access selama 24/7
 - Co-location, perusahaan membeli atau menyewa web server dengan merawat sendiri, tetapi server diletakkan pada vendor

3. Building the System: In-House versus Outsourcing

		BUILDING THE SITE	
		In-house	Outsource
HOSTING THE SITE	In-house	COMPLETELY IN-HOUSE Build: In Host: In	MIXED RESPONSIBILITY Build: Out Host: In
	Outsource	MIXED RESPONSIBILITY Build: In Host: Out	COMPLETELY OUTSOURCED Build: Out Host: Out

3. Building the System: In-House versus Outsourcing

Spectrum of Tools untuk membangun website E-commerce.

Build From Scratch


HTML
Dreamweaver
FrontPage
CGI Scripts
SQL Database

Use Packaged Site Building Tools

Microsoft Commerce Server
IBM Websphere
OpenMarket

Use Pre-Built Templates

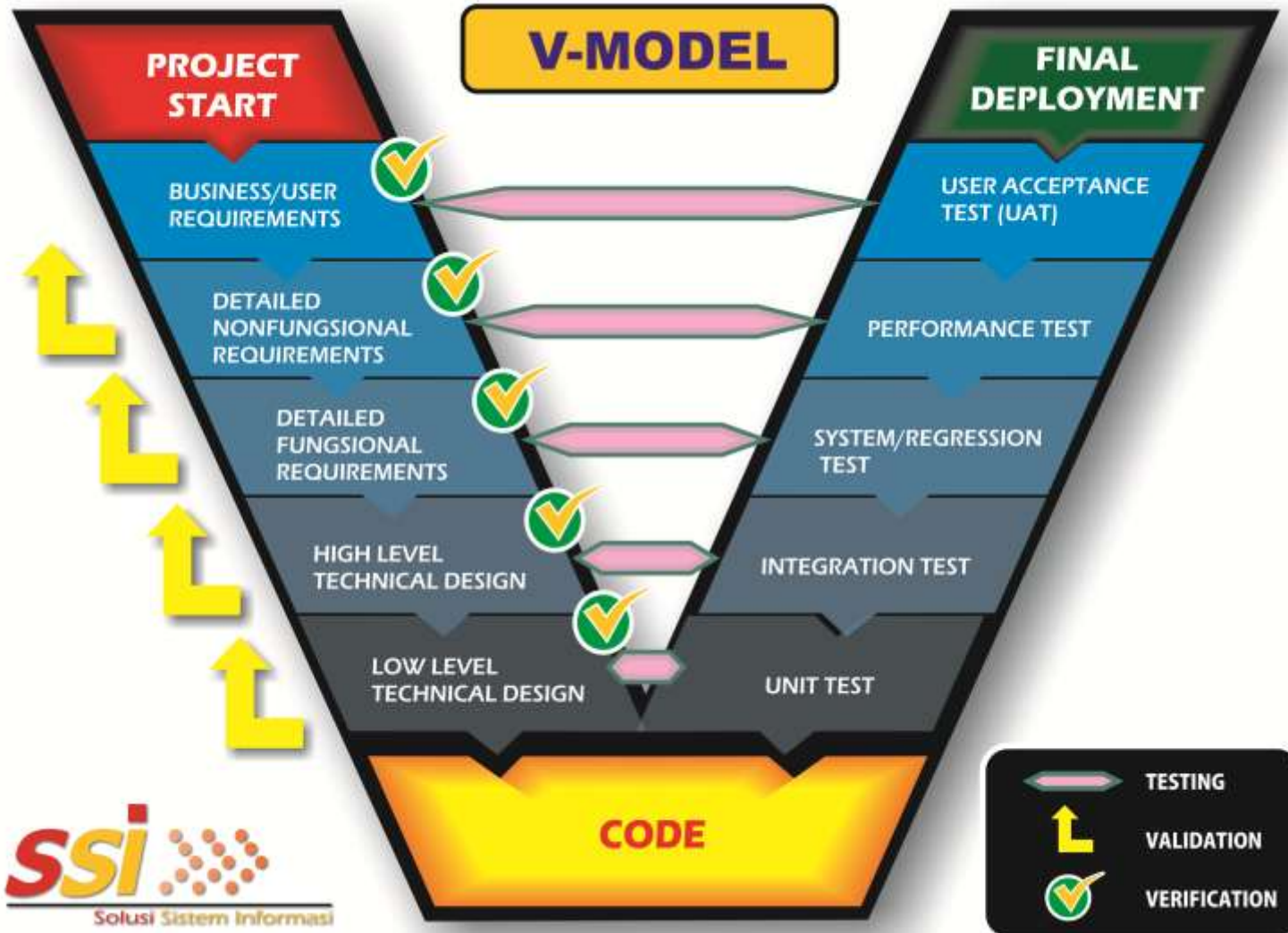
BigStep
Yahoo! Stores



4&5. *Testing, Implementation dan Maintenance*

- *Testing* meliputi *unit testing*, *system testing*, dan *acceptance testing*.
- Implementation dan maintenance:
 - Perawatan berkelanjutan, 20% waktu untuk debugging code dan merespon emergency situations, 20% merubah laporan, data files dan menghubungkan ke databases; dan 60% untuk administrasi umum dan membuat perubahan dan peningkatan sistem
 - Benchmarking, membandingkan site dengan milik kompetitor terhadap kecepatan respon, kualitas layout dan disain.

V-MODEL



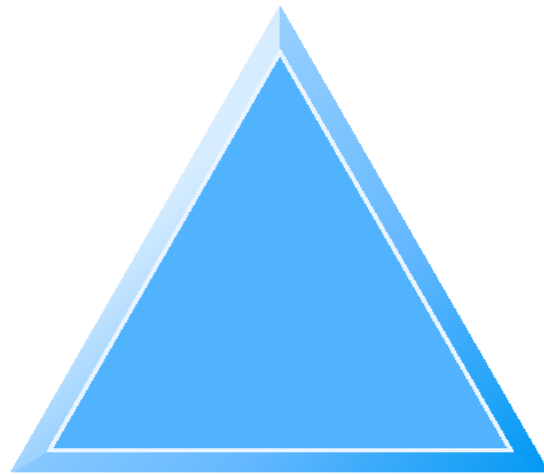
Faktor-Faktor dalam Optimasi Website

Page Delivery

Content delivery networks
Edge caching
Bandwidth

Page Generation

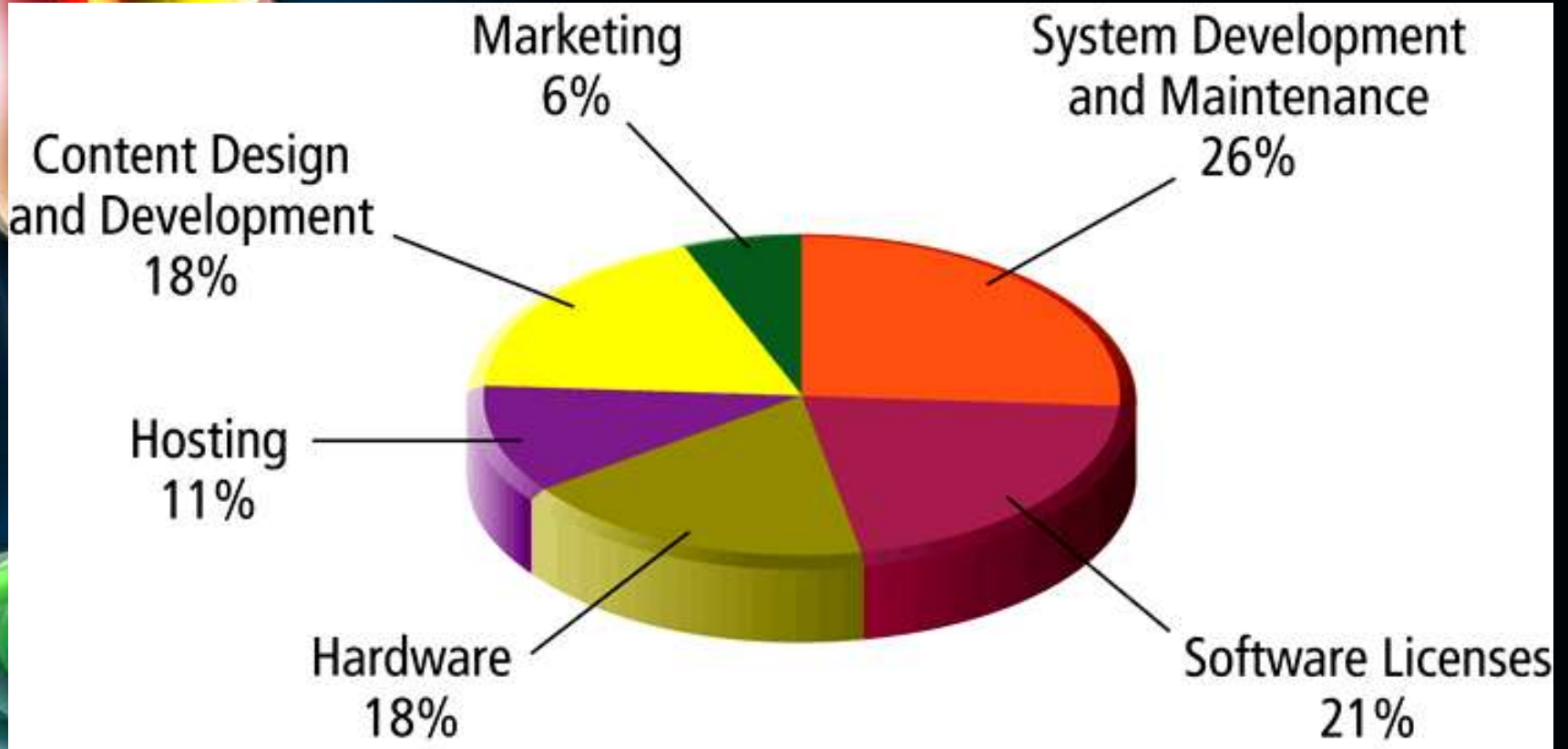
Server response time
Device-based accelerators
Efficient resource allocation
Resource utilization thresholds
Monitoring site performance



Page Content

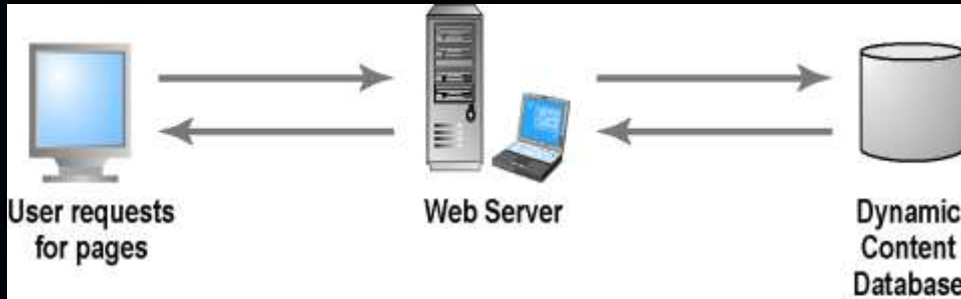
Optimize HTML
Optimize images
Site architecture
Efficient page style

Komponen Anggaran Website



Website Architecture

Two & Multi Tier Web Site Architecture.



(a) Two-tier Architecture

In a two-tier architecture, a Web server responds to requests for Web pages and a database server provides backend data storage.

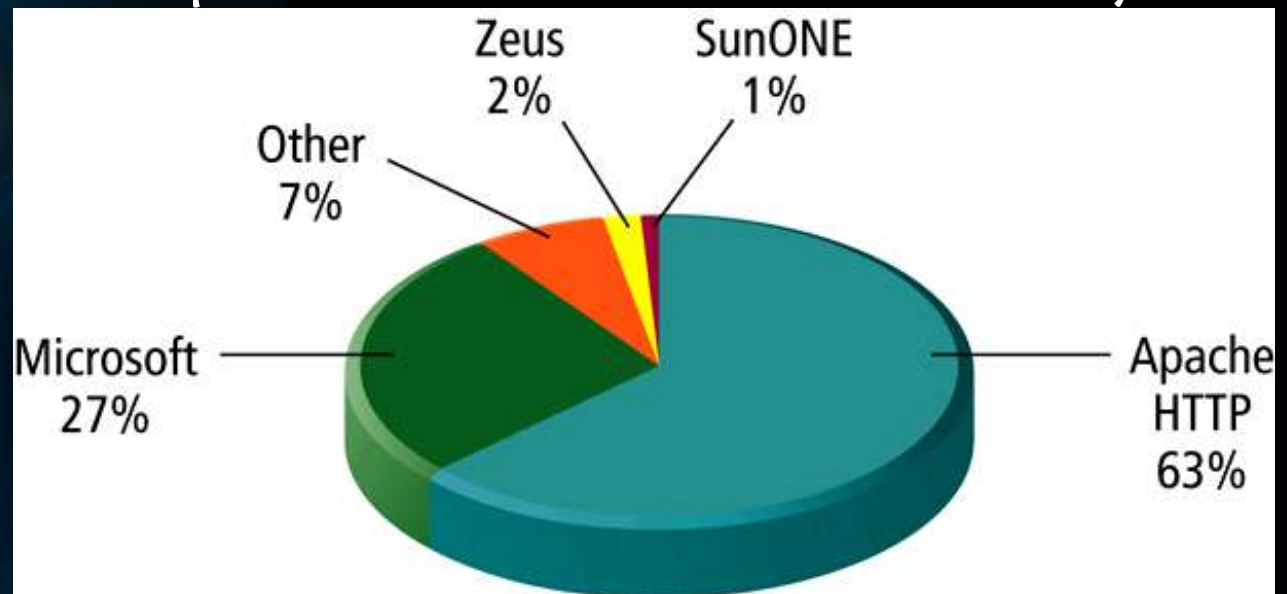


(b) Multi-tier Architecture

In a multi-tier architecture, a Web server is linked to a middle-tier layer that typically includes a series of application servers that perform specific tasks, as well as to a backend layer of existing corporate systems.

Web Server Software

- Semua situs e-commerce membutuhkan *basic Web server software* untuk menjawab permintaan HTTP dari para customer
 - Apache adalah *a leading Web server software*; bekerja dibawah sistem operasi UNIX.
 - Microsoft's Internet Information Server (IIS) merupakan *Web server software* lainnya.



Basic Functionality Provided by Web Servers

TABLE 4.3

BASIC FUNCTIONALITY PROVIDED BY WEB SERVERS

FUNCTIONALITY	DESCRIPTION
Processing of HTTP requests	Receive and respond to client requests for HTML pages
Security services (Secure Sockets Layer)	Verify username and password; process certificates and private/public key information required for credit card processing and other secure information
File Transfer Protocol	Permits transfer of very large files from server to server
Search engine	Indexing of site content; keyword search capability
Data capture	Log file of all visits, time, duration, and referral source
E-mail	Ability to send, receive, and store e-mail messages
Site management tools	Calculate and display key site statistics, such as unique visitors, page requests, and origin of requests; check links on pages

Application Servers

TABLE 4.4

APPLICATION SERVERS AND THEIR FUNCTION

APPLICATION SERVER	FUNCTIONALITY
Catalog display	Provides a database for product descriptions and prices
Transaction processing (shopping cart)	Accepts orders and clears payments
List server	Creates and serves mailing lists and manages e-mail marketing campaigns
Proxy server	Monitors and controls access to main Web server; implements firewall protection
Mail server	Manages Internet e-mail
Audio/video server	Stores and delivers streaming media content
Chat server	Creates an environment for online real-time text and audio interactions with customers
News server	Provides connectivity and displays Internet news feeds
Fax server	Provides fax reception and sending using a Web server
Groupware server	Creates workgroup environments for online collaboration
Database server	Stores customer, product, and price information
Ad server	Maintains Web-enabled database of advertising banners that permits customized and personalized display of advertisements based on consumer behavior and characteristics
Auction server	Provides a transaction environment for conducting online auctions
B2B server	Implements buy, sell, and link marketplaces for commercial transactions



Visitor Profile

TABLE 4.7

VISITOR PROFILE AT TYPICAL E-COMMERCE SITES

VISITOR ACTIVITY

PERCENTAGE OF VISITORS

Browse

76%

Search for content

51%

Shop and purchase goods

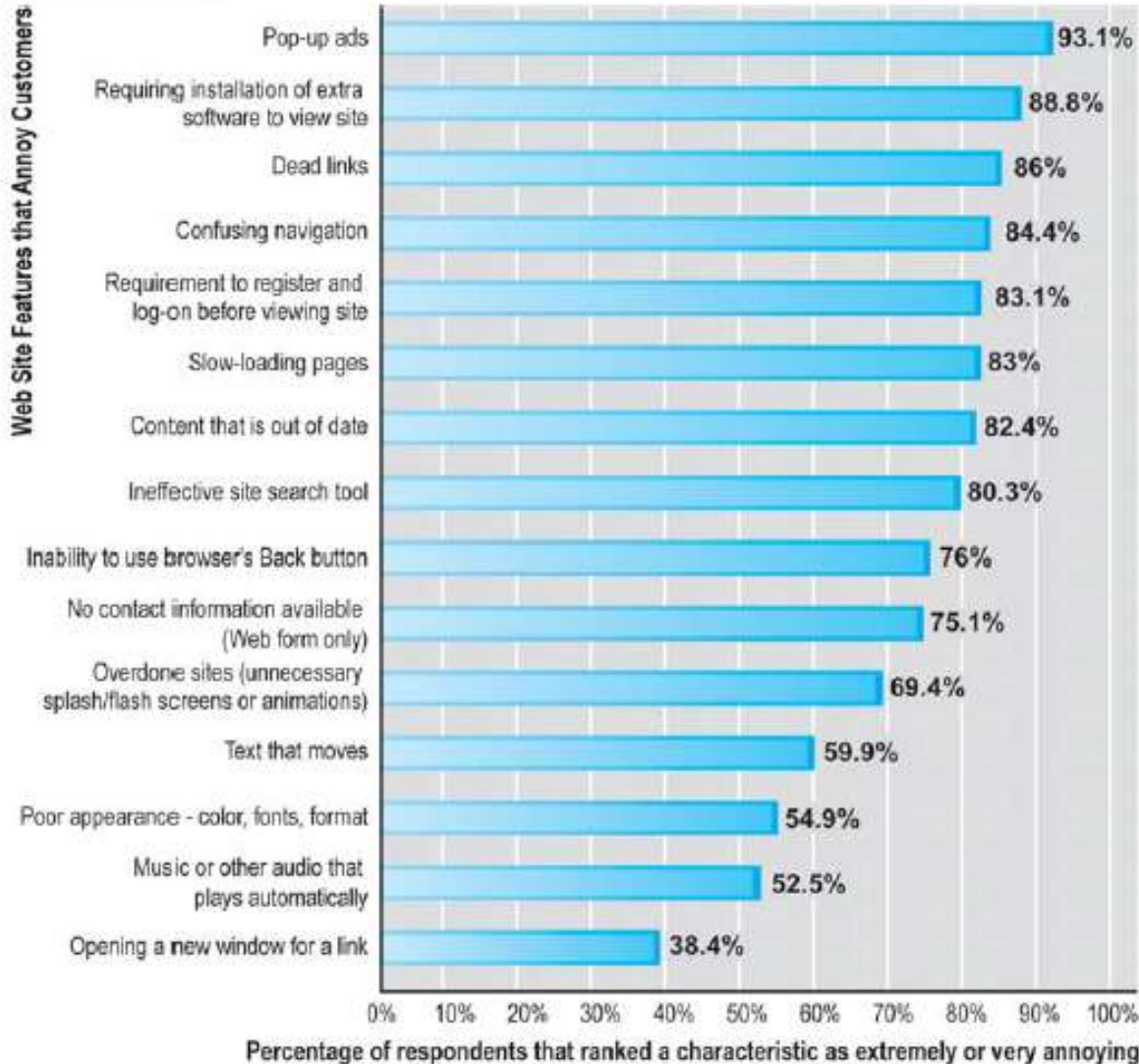
44%

SOURCE: UCLA Internet Report, 2003.

Pertimbangan Bisnis Desain Website

FIGURE 4.17

E-COMMERCE WEB SITE FEATURES THAT ANNOY CUSTOMERS



- Agar kemampuan web site dapat menunjang bisnis, dibutuhkan petunjuk desain dan *software tools* yang dapat digunakan untuk membangun *content & functionality*
- Desain yang sembarangan akan mengakibatkan user yang berkunjung hanya berlalu saja.

kesuksesan Desain Website

TABLE 4.10

THE EIGHT MOST IMPORTANT FACTORS IN SUCCESSFUL E-COMMERCE SITE DESIGN

FACTOR	DESCRIPTION
Functionality	Pages that work, load quickly, and point the customer toward your product offerings
Informational	Links that customers can easily find to discover more about you and your products
Ease of use	Simple fool-proof navigation
Redundant navigation	Alternative navigation to the same content
Ease of purchase	One or two clicks to purchase
Multi-browser functionality	Site works with the most popular browsers
Simple graphics	Avoids distracting, obnoxious graphics and sounds that the user cannot control
Legible text	Avoids backgrounds that distort text or make it illegible