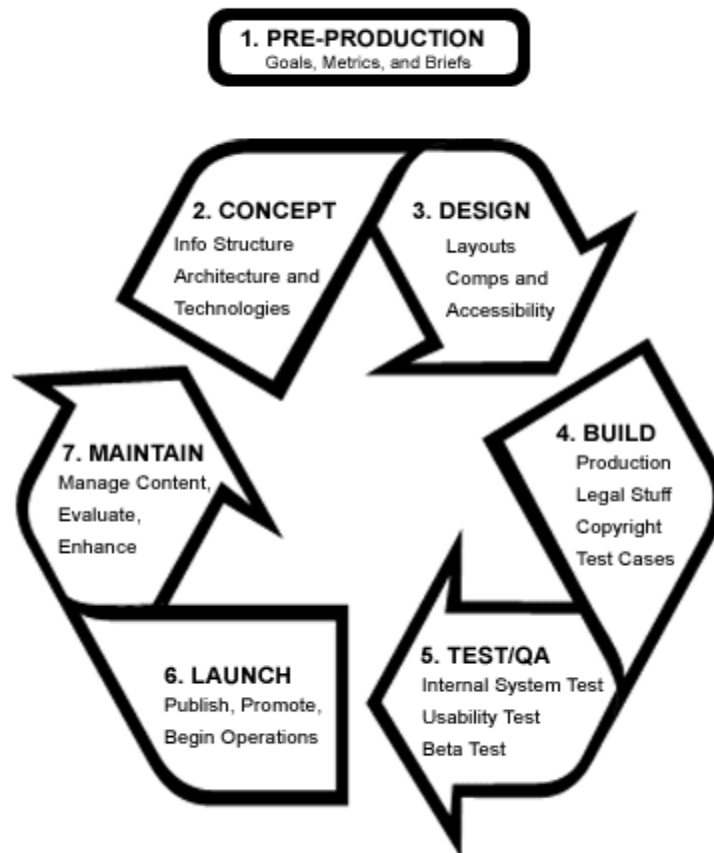


DEVELOPMENT PROCESS LIFE CYCLE

OAKTREEWEB uses three (3) development process documents that are essential to deploying quality software applications for the web and meets the needs of the business. These documents insure that a systematic approach is used during each phase to meet the product or application functional objectives and specifications, costs, and scheduled delivery dates with acceptable quality when deployed.

The “**Web Development Process**” consists of 7 phases illustrated in the chart below and is used for all web site and web applications development regardless of project size.

DEVELOPMENT PROCESS LIFE CYCLE Continuous Improvement Process



Source: Development Process www.oaktreeweb.com

Critical to the success of all the development activities is the definition and execution of “Client Responsibilities” and “Developer Responsibilities” as a unified team.

Each of the seven (7) phases is discussed further and it is noted that these are guidelines that can have additions or in some cases a conscious omission of activity if that is judged allowable by all parties having review or approval responsibility.

1. PRE-PRODUCTION

The Pre-Production Phase begins with the identification of a requirement for a software application for the desk-top, network or Internet that meets a business need. The process includes objective quantification of the product metrics, a business estimate of costs, and target completion dates that will satisfy the defined business objectives. This phase concludes with a document called “Objectives” or “Application Brief” and consists of a summary of the key metrics and figures to support a decision to move forward with the development of the application. This Phase also includes a “Management Plan (approval process, change process, quality measures and criteria)”, “Project Schedules” and “Project Resource Plan (human resources, software, hardware, etc.)”

(Develop, Review, and Approve Deliverable – Application Brief/Objectives)

Checklist:

- Mission Statement and Vision
- Measurable Goals and Objectives
- Audience Definition and Requirements
- Definition of Information Content and begin creating a content delivery plan
- Competitive review & site evaluations
- Budget requirements & commitment
- Web Site Application Brief/Specifications (Objectives,Proposal,Features)
- Proposal approved, domain name acquired/parked, and ISP/CSP/ASP committed
- Build Project Team, Set Detail Schedules, Metrics & Responsibilities

2. CONCEPT

The Conceptualization Phase begins with the definition of the application components and web site information infrastructure. The information structure is the most important initial element of the project as the rest of the site elements and navigation objects (headers, footers, and sidebars, etc.) depend on this key element. Typical user scenarios aid in the development of the information structure and architecture of the overall application or web site. Specific pages, templates, style or standards manual outline, theme, styles, fonts, and color palettes are developed at this stage. Technologies, graphics requirements and concepts, and multimedia use are enumerated here as well. The result is an information structure chart and accompanying descriptions of the above support information.

(Develop, Review, and Approve Deliverable – Information Infrastructure and Technologies)

Checklist:

- Overall structure of site, **information infrastructure/architecture**
- User interface & navigation, ease of use and typical scenarios navigating through the web site
- Specific pages defined, style manual outline
- Define theme, style, color palette, fonts
- Technologies, graphic design & multimedia (see online examples)

Example Information Infrastructure/Architecture – Business Web Site Content:

Home Page

1. Instantly identify what the site is about (for example top 5 news items, links)
2. Show images of products on sale
3. Guide posts and site directed/suggested paths thru the site
4. Place critical page elements “above the fold”

5. "Tag" line in lieu of "Welcome"
6. Offer Subscriptions accompanied with "Benefits and Frequency"

Company Profile/About Us/ Corporate Information

(Note: This section is one of the most "trust" enhancing elements of the web site)

1. History/Mission/Capability Statement
2. Management Team/Executive Profiles
3. Strategic Partners and Alliances
4. Investor Relations/Information/Reports
5. Community Affairs/Volunteer Initiatives
6. Jobs/Employment/Career Opportunities
7. News Room/Press Releases/What's New
8. Survey & Polls

Products/ Business Services

1. Products by Category
2. Products A-Z
3. Products by Industry
4. Services
5. Brochure download
6. Portfolio/Clients/Case Studies
7. FAQs

Customer Support/Help Desk/ Customer Care/Technical Support

1. Software Forums/Discussion Web
2. Knowledgebase
3. Downloads/Product Updates
4. FAQs
5. Links/Resources/Exchange
6. Newsletter Sign up

News/Events

1. News/What's New
2. Press Releases
3. Online Newsletter/Subscriptions
4. Articles/White Papers
5. Trade Shows and Associations
6. Events Calendar

Contact Us

1. Contact (E-mail – General Information, Sales, Support, Employment, addresses, telephone, Fax, web sites)
2. Regional Contacts
3. Worldwide Contacts
4. Reseller Opportunities
5. Partners and Alliances/Affiliates

Education

1. Seminars
2. Tutorials
3. Training and Classes
4. Community Forums
5. Links and resources

Notices/Legal Statements

1. Privacy Policy
2. Terms of Use/Legal

3. Licenses/Agreements/Certifications
4. Credits
5. Awards

Other

1. Site search/web search
2. Web database application
3. User registration/client access/Login
4. Banner ads
5. Search engine submit & promotion
6. Technology (rich media, graphics 3D, textures, animation, JavaScript, date add-ins, other).
7. Copy writing, content creation and management.
8. Business systems (logo, business cards, letterhead, print ad preparation, brochures, business plans, more).

Customer satisfaction is the key to any business success. We provide value to your business that contribute to your ROI objectives, and meets your organization needs. We will exceed your expectations. Guaranteed.

Comments/Notes:

Example Technologies:

- Counter/statistics
- Colorized scrollbars
- data driven menus
- data driven pages
- database driven news
- date time stamp
- directions and map
- dropdown/flyout menus
- e-Business Cards
- events
- FAQs/toggled
- feedback form
- flash movies/intros/training
- forum
- guest book
- news ticker
- photo gallery
- poll/voting survey form
- pop-up e-mail coupon
- pop-up newsletter request
- pop-up windows
- print friendly pages
- Random images
- sliding layers/menus/objects
- syndicated content
- tell-a-friend

- weblog

3. DESIGN

This Phase assume that detailed requirements have been defined to a level such that a technical person can begin to design and layout the details necessary for preparing for the development of the application in the BUILD Phase. Image comps of the pages are created using tools such as Photoshop, Illustrator, or Fireworks. HTML prototypes are prepared for demonstration technology capability of critical elements. Design layouts and grids, storyboards for menus, page headers, footers, sidebars, etc. are prepared and reviewed. Text content, images, sounds, video, and other multimedia are delivered by the responsible content contributor(s). Design targets, browser issues, tools, editors, compatibility issues are resolved during this phase. Compliance for Section 508 is addressed here if that is applicable.

(Develop, Review, and Approve Deliverable – Comps, HTML Prototypes and Templates, Resolution of Compatibility and Accessibility issues, specifications if appropriate)

Checklist:

- Build image comps and prototypes
- Conduct Design Review, Storyboard 3x5's
- Layout grid for site style & key pages
- Menus, headers, footers, sidebars, etc
- Text and image files delivered to designer
- Tools, editors, compatibility issues resolution
- Build HTML web page prototypes, review/sign off
- Accessibility design issues reviewed

4. BUILD

This phase uses the specifications of the DESIGN Phase to initiate the development of the application or web site that will result in the usable software for the intended audience defined in the objectives or application brief. An iterative approach can be implemented during this phase to build, test, and review components as appropriate. This includes the design of the databases, population of databases using test data, and verification of formulas for calculations where included in the specifications. Plans for build, test, training, and documentation are developed here. The software/web site applications are unit tested in a systematic way involving intended users where possible.

(Develop, Review, and Approve Deliverable – All code, databases, and documents for this phase, decision to integrate and test)

Checklist:

- Begin Production
- Keywords and descriptive info decided:
 - 15-20 keywords, 25 word description for index, title tag sentence/phrases
 - 3 keywords to optimize for Search Engines (repetition on index page/other)
- Legal review - copyright, privacy and security statements
- Complete Mission Build of Production web site

5. TEST/QA

This phase is used to assemble and integrate all components into one application or completed web site for testing. The entire software/web site is tested by the quality

assurance persons to insure that the requirements in the specification or objectives document are met. This includes insuring that all functions work, performance criteria are met, documentation is complete, clear, and accurate, accessibility compliance and compatibility requirements are met. Meta tag information (key words, descriptions, and search engine food) is inserted in all pages, legal review and notices placed, privacy statements approved, copyright and security information included as agreed and approved. A user "beta test" may be included in this phase just prior to formal launch. Plans and resources should be in place if this test is to be performed.

(Develop, Review, and Approve Deliverable – All code, databases, and documents for this phase, decision to deploy)

Checklist:

- Final Testing Initiated
- Minimum "other" tests completed (MSIE, NN, Opera, AOL, Apple, various monitors resolutions)
- Usability test resources and people committed
- User beta tests in-process/completed, review/sign off for publication
- User feedback and "Scorecards" analyzed/reported/actions completed

6. LAUNCH

This phase is begun when all testing is completed and the application web site has been approved for deployment. The site is launched. All web pages, databases, documentation, CDs, or other information is completed and delivered to the client. The site is submitted to search engines, promotion begins, communications materials produced with the new web information as applicable, and all marketing and promotion activities are initiated. Operations begin that include monitoring statistics and reporting successes and resolutions of any identifiable problems. This phase concludes with a "Post Mortem Review" and a final communications review.

(Develop, Review, and Approve Deliverable – "Post Mortem Review" document, optional)

Checklist:

- Deliver web site and/or publish to server, verify e-mail, instructions to configure e-mail client
- Final payment to Web Designer
- Acceptance review by client
- Submit to search engines
- Begin operations, monitor statistics, reports & reviews
- Begin execution of your Promotion & Marketing Support Plan
(see note below for items that should be included you Marketing Plan)

7. MAINTAIN

In this phase the application web site is in production operation and is monitored for functional, performance, and user acceptance according to the original plans and requirements. Detail statistics can be provided for web applications on a regular schedule for various factors that measure success of the project. If new requirements and enhancements are identified, then the process is re-started at Phase 2 – CONCEPT and the process proceeds as before.

Checklist:

- Negotiate agreement if not in "site creation" agreement
- Monitor site activity, correct errors

- Plan for updates, additions and/or redesign
- Content management - apply scheduled enhancements, additions, newsletters, etc
- Conduct site training as required and/or planned
- Conduct Post Launch Project Review here (if not completed in phase 6 above)

The **“Web Site Application Test Matrix”** is the second process document and consists of a current set of test configurations for use in deciding which platforms, browsers, operating systems, and connections/line speeds are necessary for quality assurance of the web site. To wit, it is a “checklist” of items to consider for testing during the development process to insure that nothing is missed by omission. As the industry and its standards are constantly changing, this matrix is enhanced to provide the most up-to-date test case creation.

The third document is **“Web Site Review Guidelines.”** This document is used as an aid to evaluate the web application or existing web sites for re-design using 10 criteria factors. It is also useful for developing comparisons between competitive web sites for planners who are developing design evaluation criteria for a new project. A summary of the criteria is included in the figure below.

These process technologies are in place to accomplish the business goals of a quality product, within budgeted costs, and achieve the mission goals for the functional organization or customer.

EVALUATION FORM		
	Criteria	Score
1	Design	
2	Content	
3	Navigation & Ease of Use	
4	Graphics & Multimedia	
5	Audience Appropriate	
6	Performance	
7	Good Experience & Aesthetics	
8	Technology	
9	Marketing & Support	
10	Competition	
	Overall Evaluation	